Dear Partisan

The Psychology of Political Hostility

by

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Contents

This is dedicated to Paul and Vessi, whose advice and support throughout this process have been invaluable, Mum whose insistence on denying my flaws gave me strength, and Bulgaria, for giving me the freedom and environment to write this book.

Venture into the wood, my boy,
May the winds disturb your track,
For the sun remains in your employ,
You'll find your own way back.

Preface

Dear reader,

Who are you, I wonder. A scientist? A student? A mother? Uzbek? You're probably nothing like I imagined. Regardless, whether by volition or gunpoint, you made it here. Welcome. Volition is a funny thing. Did you pick up this book because marketing got under your skin? Did you feel an inexplicable compulsion to give it a go? Or was this purely down to you and the rest of the world had no effect? Essentially, that's what this book is about: how much control we really have over what we do and what we think.

The ideas that litter the following pages began when, as a curriculum-writer, I started thinking about and researching how we learn. I became fascinated with how motivation is 'created' and the extent to which it drives learning. We always seem to be really good at things we love, and shit at things we don't, but which causes which.

Despite this curiosity compelling me to study educational psychology, I never really found an answer. Many seemed to agree that interest and motivation were important, but few seemed interested in why or how interest emerged. During this time, another oddity captured my attention: there had been so much good research, yet so little of it found its way into policy. I remember coming across a paper by Carol Ames – a meta-study, a collection of many studies and something we'll be bumping into regularly throughout this journey – emphasising just how important interest was to learning. Despite being written in the early 1990s and cited widely, public education didn't seem to contain any of the wisdom I was being fed. Why not? Why is there such a disconnect between academia and policy? Another rabbit hole opened up beneath me.

My second year of studies took me off-piste. Free time that should have been spent mastering statistics and education research was devoted to economics. Despite entering the world from liberal stage left, I enjoyed economists' insistence on being grounded in what's achievable within the confines of politicians, bureaucracy and budgets. Whereas much of psychology requires keeping one's head safely above the clouds, economics, it seemed, was rooted in the real world. After graduating, I buggered off abroad and took an online economics course. I hated it.

Pure economics, at least within the dominant Neoclassical school, was enormously frustrating. It required a herculean effort to level up my mathematics skillset – something that was already languishing somewhere in cerebral compartment from a forgotten era – which seemed tolerable as long as the effort would one day bear glorious fruit. Nope. It seemed to me that so much of what I was learning was so abstract as to be utterly inapplicable to the real world. Microeconomics, especially, assumed that people were selfish mathematical geniuses, interested exclusively in maximising their material worth. Macroeconomics contained some interesting historical observations – say, the relationship between inflation and the balance of trade – but didn't seem to have much of a clue about why, reducing causes to abstract variables hidden behind complex but vacuous equations. Economics was so dismissive of the cloud-dwelling social sciences that it failed to even try to understand the principal component of all economic systems: people.

My plaintive bitching found catharsis in the bosom of one of my now academic heroes, Daniel Kahneman. A psychologist applying his arts to the world of economics, Kahneman and his colleague, Amos Tversky, had unwittingly established a field that sought to unite the two antagonistic disciples in a dysfunctional marriage that became known as Behavioral Economics. His fantastically-written book, *Thinking Fast and Slow*, extended the idea of dual systems – conscious and unconscious – to the world of economic behaviour, uncovering, along the way, fascinating errors in our day-to-day

thinking that he divided across a variety 'biases' and 'heuristics'. Kahneman also showed that intelligence does not insulate us from idiocy. He climbed down from the ivory tower of academia and wrote with humility, a style of communication that I have attempted to capture in this book. Aside from his intellectual contribution, Kahneman just generally seemed to be a good egg. When receiving criticism from peers on his work, his response (at least in principle) was to suggest collaborating on a study that tested the opposing hypothesis with a view to reaching a peaceful consensus. Academia, like any other human collective, is full of bitter arguments and egos that obscure the path to knowledge. But why can't we all just be friends? This became a thought I couldn't shake. Then Brexit happened.

Skipping over my opinions on the matter at the time, I became more sensitive to the rising vitriol splashed across newspaper headlines and social media comments. Moreover, it didn't *seem* that people were really arguing over the pros and cons. I read Eric Hobsbawm's *Nations and Nationalism since 1780* and Linda Colley's *Britons: Forging the Nation* to try to understand what lay at the heart of disagreement. Nationalism, as I understood it, was a relic of the past. In a world where one group is threatened by another group, forces of spiritual unification help the group become stronger and stave off danger. It seemed that all facets of 21st century human psychology had their roots in ancient history, and that by tracing them back in time, we could gain a better understanding of who we are today.

This idea took root and was inflated further by Jonathan Haidt's *The Righteous Mind*. Could political ideology simply be an extension of personality? I tucked this question away and embarked on a second attempt to find answers, this time in the field of political economy. As I was acquainted with some of the most famous thinkers from across the political spectrum, from Ricardo, to Mill, to Marx, to Schumpeter to Friedman, I found a new framing of debates that persist until today, but I couldn't shake that niggle. If our brains contain machinery both old and new, are they really fit for purpose? Gerd Gigerenzer had challenged behavioral economics for what he labelled a 'bias bias'; the field had become bogged down with fancy names for all the different ways the brain gets things mixed up, and had developed a predisposition for seeing bias everywhere. His alternative was the principle of 'ecological rationality', which posited that we are not irrational, but instead that the rationale we were applying was simply not appropriate for the problems we were facing. At least not always. The world evolves far more quickly than do genes; it stands to reason that we'd be hard-pressed to keep up. Still, whichever side you took in the debate, the brain didn't come out smelling of roses (now there's an image).

The final *coup de grace* was delivered by Daniel Wegner's *The Illusion of Conscious Will*. The pieces came together. None of us really have a clue what we're doing. I was fortunate enough to encounter a supervisor who, for some reason, allowed me to stray widely from the remit of political science and try to tie all these loose ends together in thesis form.

The natural progression would be to move from Master's to PhD but I found it difficult to keep my doodling within the lines. The problem of free will and the brain's ability to cope with democratic participation seemed to demand research from all corners of the academic world. For the most part, PhD students must attach themselves loyally to one discipline, drawing, only if they're lucky, on one or two other disciplines. However, like any good parent, I refused to love economics any more than psychology. Furthermore, it seemed essential to dip into neuroscience, anthropology, evolutionary biology and, when the authority of science waned, philosophy. Realistically, I'd have to abandon most of these threads (not to mention put in a few years of graft as a research assistant). Fuck that. I figured I'd just write a book instead. And here we are.

This book is divided up into three parts. The first deals with history's attempt to get to grip with what I call **agency**, but what you can think of as control over your thoughts and actions. The first two chapters take us on a journey from the ancient Athenian Forum to contemporary televised debates, reviewing Philosophers' take on free will. This will give us some idea as to the areas over which some of the most important battles have taken place. At this point, we turn to more scientific battlegrounds as we discuss irrationality and the 'rationality relativists'; those, such as Gigerenzer, who throw their hands up at the futility of pointing out strings of biases. The notion of 'ecological rationality' is introduced as the most appropriate lens though which to consider the causes of human thought and behaviour.

We then turn our attention to agency's fat controller: **identity**. If free will describes actions that are free from external forces, who or what is in the driving seat exerting control? Who is the 'me' inside our heads? By exploring the various influences acting on our identities, we start to see how our genes and environment conspire to limit the fat controller's hegemony. From identity shaped by who we think we are as individuals, to that shaped by which groups we belong to, we find that we contradict ourselves with alarming frequency. Perhaps most disturbingly, at least for the purposes of this book, this disjunction between the fat controller and our thoughts and actions impacts our approach to political decision-making, rendering democratic participants prone to partisan tendencies.

With this in mind, the third and final part of this book applies our new, holistic understanding of human behaviour to **politics**. Focusing on three key institutions – markets, meritocracy and democracy – we explore how and why history has created social systems in the way they have. When looking at markets, we see how the power of the fat controller is undermined by the billions spent by marketers seeking to shape our wants and desires, despite us quietly whispering to ourselves that we are resistant to such ploys. Following this, we trace the logic of meritocracy throughout history arriving at the present-day definition. Although there is an important element to the idea that the spoils go to the worthy, we will see that our new understanding of agency makes it troublesome to claim worthiness. Finally, the crosshairs quiver over the mighty democracy. Once again, we distinguish the merits of democracy by means of tracing its implementation over time, but, picking up on the sentiments of chapter 8, there are some important questions we have thus far shied away from concerning our competency at deciding the fate of the countries we inhabit.

A few points. Firstly, the research in this book and the discussions that stem from them, are very Western-centric; worse still, they are heavily concentrated between the U.S. and U.K. One reason for this is a matter of practicality – in order for this to be readable, I wanted to really take the time to explain the ideas I was presenting and limit the page count to something that wouldn't scare people off. Another reason is simply my own limitations – I am from a WEIRD[1] country and my exposure to the intellectual history of humanity has been skewed in favour of my fellow WEIRDos. I leave it to those better initiated in areas I have missed to infuse the debate with a richer spectrum of colour. Secondly, it is worth addressing the mischievous nature of subjectivity. I have made a big effort to serve more as a guide through research than an interpreter thereof (with the exception of the last chapter). However, it would be a delicious irony if I wrote a book challenging objectivity without conceding the influence of my own biased little demons. The research I have chosen to present and the way I have framed it are both vulnerable to my own subjective worldview, no matter how

[1] Western Educated Industrialised Rich Democratic

fervently I guard against it. I leave it to you, reader, to locate my blind spots and lay them out for all to see. I only ask that you do so while also remaining vigilant of your own demons.

At its core, this is a book that questions our faith in free will. Although I don't expect those who cherish the notion to relinquish full control by the end, I sincerely hope that the ideas discussed instil in you questions that detract from the usual confidence with which you go about your life. My goal is to inspire both humility – as individuals and as groups – and dialogue – conducted, hopefully, with claws sheathed. At the end of the day, whether we like it or not, we are all in this together.

Yours,
A (recovering) partisan

PART ONE
AGENCY

Chapter 1
Agency from Homer to Hume

It's Ancient Greece. You're one of history's early one-percenters as your family's accumulated wealth allows you to avoid the existential concerns of your hunter-gatherer ancestors and of the contemporary riff raff. As you stroll through paved cities boasting such miraculous inventions as central heating and public education, your liberated mind turns in on itself and begins formulating some of the big questions: Why are we here? How did we get here? What does it all mean? The Greek philosophers assembled in public forums and explored these concepts in painful detail. One question that captured their imaginations, and the imaginations of many others until this day, was that of agency.

Academic texts on a certain topic usually begin with a definition, so in the spirit of science, what is agency? One well-cited definition tells us that agency is "any entity to which mental state can be ascribed"[i]; however, this is so broad as to not really mean much and many researchers employing this as their cue, use it as an excuse to talk about whatever they want to talk about. Given that the term has been associated with a wide range of phenomena such as "selfhood, motivation, will, purposiveness, intentionality, choice, initiative, freedom and creativity"[ii], it may not surprise readers to learn that when I talk about agency in the following pages, I'm interested in the extent to which an individual has control over his/her thoughts and actions[1]. Thus, when you read "agent", think: "person" but with a special focus on that person's free will (or lack thereof). Therefore, throughout this section 'free will', 'free thought' and 'authorship' will be used interchangeably.

This first chapter is designed to be a (superficial) introduction to historical thinking on agency; specifically, how paradigm shifts in philosophy and science have dragged opinions in different directions. I encourage the reader to consider this chapter's philosophers along a free will scale. Many cling desperately to a belief in free will despite the objections they themselves adduce, while others completely abandon freedom while asking their audience to wilfully do the same.

Our first review of agency will take a tour of philosophical thinking that were unable to reap the benefits of modern science. If philosophy isn't your thing, feel free to skip ahead to this chapter's summary. One of my goals with this and the following chapter is to paint a picture of what ideas humans have been, and are still, grappling with as well as the spectrum of conclusions they came to. Our journey starts with Homer.

Figure 1. The free will scale. Where are we?

The Greeks

[1] The term 'thoughts and actions' will make regular appearances throughout this book because this is generally how agency can be detected: what is a person conscious of and what do they do? Of course, the real difficulty is in accurately extracting thought and subsequently aligning it with the motives behind action.

The Iliad is a grim depiction of human beings at war. Those caught up in it, are driven away from mind states that one would associate with humanity, and overtaken by a sense of revenge or power, depending which side of the battle one finds oneself.

> "As the scores to settle mount, each side is further and further anchored in their determination to prevail, to avenge and to destroy...That is how they are locked into an endless cycle of reaction and counter-reaction, each side bent on destroying the other, whatever it takes to do so, that is at whatever cost to themselves."[iii]

As Simone Weil writes: "they ignore the fact that their power is limited and finally they find that things no longer obey them."[iv] This state of mind "regards all difficulties and obstacles with contempt."[v], driven not by methodical calculation, but by the passions that battle brings out; anchored so much to a desired outcome that obstacles to its realisation are nonchalantly waved away. Despite being Greek, Homer is known, in *the Iliad*, to refuse to morally distinguish between the Greeks and Trojans. His narrative is driven by a sympathy towards combatants for being *compelled* to wreak misery on all involved. He does not assign blame based on the depravity of acts, but holds an undefined external power to account, and describes human acts as an inevitable, tragic consequence of the state of war.

Even today, most people recognise that certain thoughts and actions are, what psychiatrists call 'autochthonous' - they seem to arise independently of the mind that perceived them. Yet, despite this, we still cling on to a sense of authorship in order to re-establish that our destinies are exclusively in our hands. The Greeks faced a similar dilemma. In Homer's case, although he excused individuals for crimes committed in war, he did reference man's ability to break the cycle of reaction and counter-reaction through forgiveness and patience. How the reclaiming of free will is to take place, or where the line between determinism and free will lies, isn't clear, but this line of thinking was formalised by the school of *stoicism* that we'll return to later.

Two guys (and of course they were guys – nothing but penis-bearers in this chapter) who saw room to regain control were Democritus and Leucippus. Although advocates of regaining authorship of their lives from irresponsible Gods, their belief in enslavement to causal laws is nicely captured in Leucippus' famous utterance: "Nothing occurs at random, but everything for a reason and by necessity." So the world is determined but we can take back our fates from the gods. Confused yet? Founders of the school of *Atomism*, they were what we would now call 'materialists', which is to say they believed that everything in the universe was reducible to matter (+ energy) – there was no soul, God or thought that transcended the physical world. Democritus worked out a pretty thorough theory of matter, proposing that everything is composed of atoms[2] that are indivisible and swim around in a void. The nature of this swimming could only be driven by some universal laws. We, too, consist of these atoms ergo we, too, are at the mercy of nature's will, not of our own. As this story will be told in stages (paradigms), we can consider our first two Greeks as being the last 'mechanistic' thinkers until the age of Enlightenment, in that they approached the big questions by considering the underlying causes of a phenomenon[vi]. Epicurus found room for free will, suggesting that atoms can swerve from their determined paths, an idea that met with ridicule in his own era but, as we will see in the next chapter, may not be quite so silly in light of quantum mechanics[vii].

Plato represents our first paradigm shift as the Greek philosophers descend into a preoccupation with virtue. In *Phaedrus*, we are first introduced to Plato's conception of will in the form of an

[2] Pub quiz fact: the word atom actually means 'indivisible' in Greek, a term that Ernest Rutherford rendered a misnomer in the early 1900s when he irreverently divided one.

equestrian metaphor. A chariot manned by our charioteer - reason - is pulled by two horses: one black - appetite - and one white - love, each pulling reason in different directions. So far, so reasonable. Through Socrates - Plato's hero and chosen protagonist – we discover that the two horses represent the extent to which one thinks of oneself versus others. Evil and selfishness are synonymous. Applying this principle to agency, Plato insists that only wilful self-criticism can wrestle control of the chariot away from the evil, black horse (Plato was clearly a massive racist); thus, the attainment of free will is the abolishment of ego-centrism. One is free, in the sense of being unconstrained, when one is good. For Plato, morality and free will are inextricably bound, as, without that pesky black horse, reason and good are a "team [that] act together"[viii] allowing the individual to be the "master of themselves"[ix], no longer coerced by an evil monkey on our shoulder.

One interpretation of Plato's argument is that repression of self-serving impulses is tantamount to being free; thus, if you have a wank or buy yourself a Tesco's Finest sandwich, you're an awful human. In *Giorgias*, Callicles addresses this seeming contradiction by suggesting that freedom is the very *absence* of suppressed instincts, and therefore that using bravery to dominate others is true freedom (which is the greatest excuse for tyranny ever). Ah no, says Plato, this is self-indulgence, which renders an individual a slave to his ego. So if the big, bad ego drives self-indulgence, what drives self-control? Virtue, replies Plato. A word of advice, don't ask him what virtue is. You won't get him to shut up about it.

So that's Plato. Now let's move onto our next (presumably) bearded Greek, Aristotle.

In terms of free will, Aristotle struggled with the notion of responsibility, particularly when it comes into conflict with ignorance. In *Nicomachean Ethics*, he separates acting 'with' ignorance from acting 'because of' it. Regarding the former, one may not have access to all the details and so may be compelled by ignorance to act, like trying to figure out how much to pay for a fridge magnet in Morocco – you just have to make peace with being ripped off. In the latter case, he asks us to consider whether the ignorance itself is culpable. Basically, to what extent is ignorance our fault. Aristotle uses the example of a drunk whose ignorance is fed by alcohol, but whose decision to drink is his own. This is an incredibly confusing stance as it asks us to trace every action back to its cause. In today's world, we recognise that alcohol abuse has both genetic and situational causes; therefore, is turning to the bottle a free choice? Shrug emoji.

Although much less forgiving than Plato, Aristotle did reserve sympathy for those evil-doers who do evil "on compulsion or by reason of ignorance which is not self-caused"[x]. In short, his focus on the concept of justice gave him the sense that evil required punishment, and punishment required the recognition of responsibility within the mind of the punished (it's hard to imagine a jury acquitting a defendant pleading: "it was determinism what made me do it"). This conflicted with those instances of loss of will that infect us all. In looking at causes of actions, he generally sided with retribution over forgiveness. " just as he who has let a stone out of his hand cannot recall it, and yet it rested with him to aim and throw it, because the origination was in his power."[xi]

Aristotle almost certainly knew that the throwing of a stone is itself caused – at least in part – by the agent's prior experience of stone-throwing. A person bearing witness to death-by-stoning would have a unique take on the justification of hurling stones. Likewise, a victim of a brutal drive-by stoning may be far less likely to see such an action as acceptable. As Aristotle perhaps vaguely alludes to, there is no such thing as a single causal moment when an agent has full control, and therefore responsibility, over his or her actions. Moreover, both Plato and Aristotle's intent focus on virtue overlooks the fact that morality is in constant flux. It's hard to know how attuned to historical anthropology the Greeks were, and whether historical records allowed them a window into the

comparative depravity of ancient humans, but at least today, when we look at the human history of forced human subjugation, for example, a virtuous man, heralded while alive, would be accused today of reprehensible immorality[3]. This fact, unfortunately, leaves the arguments of our featured Greeks in tatters. Free will hinges on absolute virtue, which has never existed and will likely never come to exist.

Rome and religion

As the Western Roman Empire begins to crumble under its own weight, St. Augustine, once a scummy Pagan, converted to Christianity at 33 years old but is struggling to square some holes. Specifically, how can free will exist in the presence of an omniscient creator? For if God knows everything - past, present and future - these future events cannot be changed and thus free will, that was supposedly granted to all humans by God, cannot exist.

His starting point is phenomenological (from experience): "when I willed or did not will something, I was wholly certain that it was not someone other than I who willed or did not will it."[xii] In other words, "I think therefore I am" (spoiler). However, Augustine struggled with his own demons, often castigating himself for being unable to control "sinful" thoughts[4], leaving him with a sense that not all is willed.

In a similar vein to Plato, Augustine suggests that free will exists when there is a degree of unity in the mind; "when reason rules the irrational emotions". What we can say is that, once again, free will and morality are bound together; or in other words, being free is being a good (13th century) Christian. Given Catholicism's emphasis on binaries - good vs evil; reward vs punishment - Augustine, like Aristotle, was forced into granting free will a place at the table because failing to do so would mean bad deeds would go unpunished and, equally importantly, good actions would go unrewarded. Ultimately, Augustine could not escape the trap he set himself: bad thoughts and actions are not wholly willed, yet we are expected to answer for them. Now look up briefly and consider: is this still true today?

I bet you looked really profound. I hope someone saw you.

Further complicating matters: if God is omnipotent, must these sins also originate from God? God made people, including the capacity for free will, and therefore the capacity to choose evil. Augustine seems to struggle early on with this problem and eventually arrives at the conclusion that God is not to blame for evil, rather it is man's misuse of their free will. However, this does not solve the origination problem: God created free will and thus created the capacity for will to give rise to evil. It seems like a pretty serious design flaw. Although the standard theological response is that the *potential* to choose evil serves as a guide towards righteousness, if A causes B causes C, can B even be considered a cause at all? We'll return to this in the next chapter.

Another problem Augustine grappled with was the challenge put forth by the 'Pelagian Heretics' (as we know, labelling someone a heretic was the ye olde equivalent of calling someone a 'fascist' today: it implied their views were too evil for public consumption. At least we don't murder holders of unsavoury views these days). They reckoned the existence of an omniscient creator was incompatible with free will. A friend of Augustine, Evodius, put it like this: "How can it be that God

[3] Lest we forget that Aristotle believed slaves, with their "slavish nature", to be at the bottom of social echelons, and that children were acceptable bed-mates, given that pederasty was cool in Ancient Greece.
[4] In Confessions, Augustine lays out these sins that range from the egregious theft of a pear to extra-marital sex. Either Augustine was a sickeningly-good dude or he kept the juicy bits to himself. Given what we know about the skewed scruples of the era, my money's with the latter.

has foreknowledge of all future events, and yet we do not sin of necessity? Since God foreknew that man would sin, the sin was committed of necessity because God foreknew it would happen." Thus, an omniscient God = determinism. Augustine's riposte was that if you had foreknowledge that a man would sin, then the man sinned, would that negate the man's free will? Of course, this is a pretty unrealistic thought experiment given that nobody possesses such an ability. For Augustine, just because God has full knowledge of what we will, that does not change the fact that it was us who willed it. Gold medal mental gymnastics.

The Renaissance

If Augustine represents attempts to bring free will in line with Christian doctrine, Rene Descartes represents the final spiritual interlude before the onslaught of science and rationality gripped Europe.

Descartes is perhaps best known for his separation of the physical body and non-physical mind (dualism), as well as his insistence that each of us can be sure of our existence by means of possessing and perceiving our very own conscious experience (I think, therefore I am). *Cartesian dualism*, as it came to be known, was a response to the inability to trace conscious experience to any biological origins. How can concepts such as the sensation of pain, love and racism originate from a bunch of cells? Descartes proposed that every body is governed by an external mind that was neither matter nor energy, and was able to receive and send signals to the body via the pineal gland in the brain.

The obvious and thus far unanswered challenge to this notion is how? If the mind is not physical, how can it interact with physical objects? As Daniel Dennett analogises, Casper the Friendly Ghost defies the laws of physics by simultaneously passing through walls and holding an object. Descartes' dualism inheres the same contradiction.

Casper the Friendly Ghost (1948) sitting on a grave because that makes sense.

Similarly, if thinking is existing, we must assume that consciousness is a reliable witness. Yet our minds are interminable tricksters causing us to perceive Jesus' face in tea leaves and Satanic

messages in reversed music. According to this line of thinking, evidence for our existence is said to derive from conscious awareness of said existence, but what happens when awareness is misdirected or misguided? Is consciousness a reliable witness?

Returning to our scale, Descartes fully backed free agency, suggesting himself to be "conscious of a will so extended as to be subject to no limits"[xiii]. However, while will may be limitless, action is not. Descartes proposed that we are capable of willing anything, but the realisation of will is restricted by the body; we can will to fly, but, short of sprouting wings, we cannot yet defy gravity. In divorcing the mind from the body, Descartes (and later Hume) forced us to conceptualise the mind as a telekinetic controller of the body; a source of boundless imagination.

Until now, you may have noticed that all of our thinkers have been fairly far to the right on the free will scale, albeit wilfully so. Spinoza bucks that trend. A Dutchman of Portuguese descent living in the Dutch Golden Age, Spinoza was far more in awe of nature than people. He compared the agent to a cog in a machine. Imbued with the gift of self-awareness, a cog would interpret its movements as a function of itself and the outside world; sure, the cog next to me is grinding up on me, but I'm *choosing* to follow its motions and subsequently guide the next cog down the line. Why does the cog, then, not choose to stop? If you accepted right now that free will is an illusion, would you stop? Would you throw your hands up at the futility and end it all? Or would your programming keep you ticking along? Spinoza thus challenges Descartes suggestion that knowledge of existence *ipso facto* proves existence.

More explicitly, Spinoza expresses freedom as the acceptance of our place within a determined universe. What he means here is that by consciously vitiating the ego and its wont to freely affect the world, the psychological resistance we experience in the face of nature's forces are nullified; the cog can rest easy, safe in the knowledge that its motion is caused. And yet, we return to the question of accountability: the jury still refuses to buy that determinism made us do it. Using a somewhat Platonic distinction, Spinoza suggests that those who allow 'passive' emotions to affect thought and behaviour are trapped in a 'life of fantasy', in contrast to a 'life of reason'. His attempts to align – or render compatible – determinism and free will follow a similar logical pattern to those of Augustine. Although our actions are caused by a deterministic universe - “Things could have been produced by God in no other way, and in no other order than they have been produced”[xiv] – free will represents a more proximate[5] cause; God causes free will causes action.

Upon attributing agency to these proximate causes, Spinoza followed the stoics in advocating 'detachment' from these passive emotions; for example, realising that an act against you that evoked, say, hatred, was itself driven, not by free will, but by a passive emotion in the offender. The big picture allows us to detach from these emotions and be guided instead by 'active' emotions; love, compassion and all that good stuff. Another moral distinction. The confusion, for the purpose of this chapter, is the extent to which this detachment can be caused by the agent, rather than God or the universe.

On the other side of the debate, we have Rousseau, who believed that "nature commands every animal, and the beast obeys. Man experiences the same impression, but he recognizes himself free to acquiesce or to resist"[xv]. Human beings have a special metaphysical property that allows them to transcend nature and become the author of their own path. What this metaphysical property is or how we know it exists isn’t concretely dealt with, but, as Lee MacLean[xvi] suggests, Rousseau’s

[5] We can distinguish between distal and proximate causes. While your hunger may be a proximate – more direct – cause of you eating, your skipping breakfast is a more distal – less direct – cause.

worldview required free will. Firstly, ever the optimist, Rousseau ascribed great force to the notion of euthenics – that the world could be improved by human endeavours; evil represented deviations from the “state of nature”, which could be avoided by acting freely. Secondly, Rousseau considered that belief in free will itself was essential to virtue. Living *as if* we have free will is more important than actually *possessing* it. Permitting a degree of illusion into our conception of free will finds sympathy with Daniel Dennett, whose own stance ill appear in the next chapter.

The enlightened rationalists

While Spinoza was unable to entirely relinquish free will, David Hume stood firm. For Hume, writing at the beginning of the enlightenment in the 18th century, reason was shackled by the passions. It is our desires, likes and dislikes that create the thought, and reason that manipulates it, like a glorified assembly worker. Inevitably then, the passions and reason were two mutually distinct forces acting independently.

The first issue with this idea is the tendency for the passions to bedevil reason. In fits of anger, jealousy, or love, reason is often denied a say until the dust has settled. This is still compatible with Hume's distinction, as our assembly worker may have merely been granted temporary leave, but as we delve deeper, we see that distinguishing one from the other the epistemological equivalent of alchemy. But let's hear Kant’s take before we jump all the way in.

Kant agreed with Hume's division of reason and passion, but granted reason significantly more power. While Hume believes reason to be "the slave of the passions", Kant insists that we are all bound by the *categorical imperative* - universal moral laws, immune to the influence of the passions. One such example is the famous ‘Formula of Universal Law of Nature’: “Act only according to that maxim by which you can at the same time will that it should become a universal law” (think Ghandi's "be the change you want to see in the world" or the Biblical Golden Rule "do unto others only as you'd have them do unto you"). In Kant's perplexingly abstract line of thinking, these universal laws do not require the passions, which are reserved for defining the more changeable aspects of morality (the *hypothetical imperative*). Confusingly, Kant concedes that experience and judgement are needed to inform the categorical imperative, belonging, as they do, not to the passions, but to reason. Ok, let’s pause here because that was mental. So Kant believed that the categorical imperatives are items on a list of universal moral laws. All humans are subject to them by reason. Hypothetical imperatives are motivated by the passions and offer us an escape from the categorical passions. Compare “thou shalt not kill” to “if someone is waving a knife at my wife’s throat, deck the prick”.

So what does this have to do with agency and free will? Well, given that reason is conscious, it belongs to and is caused by the agent; whereas the passions, by definition, are subconscious. Given that Kant elevates reason to such a grandiose position in the agent's internal world, surely he must be an advocate for some kind of free will. As with anything Kantean, the answer is far from simple.

He struggled with the same problems we've seen among the Atomists, Spinoza and Hume. Beginning from the premise that the universe contains laws that govern matter, it follows that, as we are matter, we must be determined by nature. The latter thinkers reasoned (sorry, couldn't help it) that free will cannot possibly exist when considered within the framework of a causal universal. Given Kant's reverence for reason, he wriggles out of this paradox by granting agents 'practical reason': reason so powerful that it can reappropriate causality from nature. For example, a virus may infect an agent's body, bringing about a fever that induces delirium and renders them unable to reason effectively. This is nature causing behaviour. However, given that 'pure reason' is not subject to the

whims of the passions, it has primacy over the effects of the virus and thus remains undisturbed. Another way to state this is to say that Kant thought about what motivated thoughts and actions. In the scenario above, the motivation for behaviour was brought about by the immune system's response to the virus. When practical reason is in charge, it is able to detach itself from other causes and dispassionately determine a course of action; it voluntarily follows rules and norms that it itself creates. If Kant didn't associate causes with determinism, we might say that free will is reason being the cause of its own effects. However, concrete examples are sorely lacking for this line of reasoning.

Hume's attempt to justify free will was (somehow) even more vague. Despite believing in the hegemony of the passions over reason, that now-familiar need to hold a person responsible for their actions motivated him to scrape the barrel in search of autonomy. Thus, for Hume, an action can be both determined and free, and free only if it is caused by the motives of the agent (à la Kant). Quite how this 'compatibilism' functions when reason is the slave of passions is explored through the writings of more contemporary philosophers in the next chapter.

Arthur Schopenhauer's thoughts on will are fascinating and far more tangible than the Humes and Kants of history. Writing in the 1950s, he begins by dismissing Descartes' premise that consciousness must exist by virtue of our ability to perceive it. The notion that "I can will what I will" is a tautology; it is tantamount to arguing a cup is a cup because it is cup-like. His next step is to devise a new premise in which free will can only be demonstrated by the absence of necessity, which, like Hume, he believed to be causality; if a thing is caused, it is not free. Thus, he arrives at the following conclusion:

"Every man, being what he is and placed in the circumstances which for the moment obtain...can absolutely never do anything else than just what at that moment he does do. Accordingly, the whole course of a man's life, in all its incidences great and small, is as necessarily predetermined as the course of a clock."[xvii]

Unlike Hume and Kant, Schopenhauer attempts to trace will to its cause: character. Each person is imbued with an immutable character that remains rigid throughout one's life[6]. "As little as a billiard ball on a table can move before receiving an impact, so little can a man get up from his chair before being drawn or driven by a motive." That motive is enacted by character, the construction of which lies beyond our control.

In considering the differences between animals and humans, he concedes that higher-order animals possess a 'relative freedom' due to their capacity to deliberate and thus (potentially) avoid being entirely driven by low-order instinct. However, without adequately resolving this caveat, he appears to remain on the side of determinism.

One confusion inherent in Schopenhauer's thinking is how to describe the agent in the absence of free will. If you dismiss such freedom, you surely dismiss will, and indeed the 'self', altogether. Thought and action pits various internal motives against each other with "the stronger motive assert[ing] its power over the will"[xviii]. But if the will is powerless to affect the battle of motives, how can it exist? Will implies volition, which requires a unified[7] agent, but an organism controlled by

[6] Schopenhauer was particularly piqued by the tendency for people to be doomed to repeat mistakes.

[7] Once again, I apologise for the terminology, but this one's unavoidable. When you read 'unified' in this book, I want you to imagine a mind full of disparate voices who sit down together and try to make compromises. Will the voice of pacifism be able to convince the voice of retribution to chill out and not slap the guy in front of you on the bus broadcasting his conversation on the phone to anyone with ears? If so, the mind becomes 'unified'.

nature and involuntary character has no volition, and thus no will. As far as criticisms go, this one is fairly pedantic, but an important one in light of our attempt to evaluate the power, if any, of agency and free will. As far as providing an alternative hypothesis, well, keep reading.

A more forceful interpretation of determinism came from Pierre-Simon Laplace whose malevolent demon, armed with knowledge of the location and momentum of every atom in the universe, could predict their past, present and future with perfect accuracy. Supported by the predominance of Newton's three laws of motion, Laplace's demon teamed up with science to lend weight to the theory put forward by the Atomists two millennia prior. However, as with all paradigms, the ground was about to fall away, plunging the scientific debate on free will into great uncertainty.

Conclusion

In this chapter, we've taken a fast-track tour through history's attempt to understand the world and our place in it. But what have we learned?

The atomists, Spinoza and Hume begin from a materialist standpoint whereby i) the laws of nature govern matter, ii) we are matter, and therefore iii) our thoughts and actions are subject to determinism. To think otherwise would be to arrogate for a unique power exclusive to human beings. And yet, none of these thinkers were able to entirely divorce themselves from the niggling thought that we can effect some kind of change, whether in ourselves, or in the world around us.

Next, pretty much every thinker we've looked at so far has, whether explicitly or otherwise, intertwined free will and morality, with the attainment of freedom only possible when it sits comfortably within our conception of rectitude. Perhaps most intuitively, St. Augustine describes this as an internal coalescence of our conscience and consciousness; we feel most in control when we are happy with the decision we have made. Most interestingly, this particular definition still resonates with us today. When asked whether they believe in free will, most will claim that it is this freedom that allows them to make good, moral decisions, and/or to avoid bad ones. Framed in this light, our need for free will derives, in part, from its ability to help us navigate group interaction. This emerges in discussions from Plato and Aristotle, to Augustine and Kant, who need free will to provide accountability.

Furthermore, Descartes' suggestion that evidence for consciousness is self-referential. That is to say, we exist because we directly perceive our own existence. This argument is dangerously appealing. We directly perceive the process of making decisions, forming opinions and selectively recalling memories to inform future plans. To consider any of these internal processes as beyond our control is borderline heretical, but we must isolate and scrutinise the source. Just as we hold some news outlets to be more trustworthy than others, likewise we must consider the fallibility of human consciousness. To borrow Paul Valery's rebuttal of his countryman: "sometimes I am, sometimes I think" (early 20th century mic drop).

Within this framework, we are also individuals who can freely choose our own paths, including whether to be moral or immoral, or whether that fridge magnet is worth however many rupees the shady vendor has quoted us. According to Aristotle and Augustine, we are in control, although not entirely; according to Hume (depending on which day you catch him on) and Spinoza, we are governed by our emotions, and yet we can attain freedom of will. Although Kant and Hume expend far too much effort tripping over their own feet, they introduced some important themes. What exactly is the relationship between reason and emotion? Is the former a slave to the latter? What/who causes our thoughts and actions?

These questions and contradictions laid out in this chapter serve as the basis for the rest of this book. But we're not quite done with free will yet. The 20th and 21st centuries have provided us with some answers and even more questions. What insight has modernity provided?

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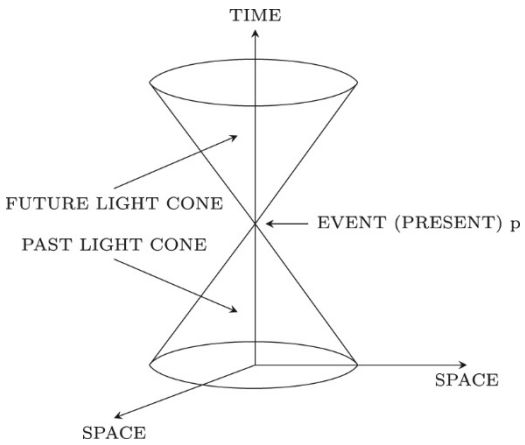
[i] Shoham, 1993
[ii] *Ibid*, p.163
[iii] Homer, 2007, p.13
[iv] Weil, 1963. Cited by Dilman, 1999, p.14.
[v] *Ibid*, p.14
[vi] Russell, 1946
[vii] Konstan, 2018
[viii] Plato, 1973, p.50
[ix] *Ibid*, p.65
[x] Aristotle, 1949. Cited by Dilman, 1999, p.53.
[xi] *Ibid*, p.56
[xii] Augustine, 387-395. Cited by Dilman, 1999, p.73.
[xiii] Descartes, *Fourth Meditation*, 1641. Cited in Eaton, 1927.
[xiv] Spinoza, 1677/201, p.33.
[xv] Rousseau, *The Discourses*, 1755. Cited in Simpson, 2007, p.64.
[xvi] MacLean, 2013
[xvii] Schopenhauer, 1951, P.48
[xviii] *Ibid*, p.50

Chapter 2
Agency in the modern era

Although the debates raged on, the Enlightenment redefined the rules of engagement in favour of the paradigm shaped by Newton in the 18th century and Einstein in the 20th. The deterministic subscriptions of the Atomists were formalised in a set of physical laws backed up by equations and stuff, leaving little room for free agency of mere mortals.

Cats in boxes

Newton's three laws of motion set out the principles that govern the interaction of all matter in the universe. Gravity, the idea that the force all objects exert on one another is a product of their relative size and distance, and its extension to every particle and atom in the universe, led to the rather nihilistic conclusion that ancient, immutable equations lie at the origin of all human experience. In a further blow to free will, both Einstein's general and special theories of relativity demonstrate that neither matter or energy can exceed the speed of light, nor can they travel backwards of time. Confirmation that space-time is linear affirmed its role in the causality of all things. As we can see below, Einstein showed that an event (p) is entirely caused by its past light cone – the edge of which is restricted by the speed of light – and will be unaffected by anything lying beyond its boundaries. Further, *p* is only capable of causing anything within its future light cone. We can see the intrinsic relationship between space and time: matter and energy, restricted by the speed of light, can only travel so far per unit of time, which is what give the past and future their cone shape; the further back or forward in time you go, the further (spatially) matter and energy can travel. Although physicists hadn't discovered it yet, all signs pointed to a causally deterministic equation governing the activity of all matter and energy between any two points in time, including human consciousness. This certainty was about to change.



Light cones are free will murderers

In 1927, about a decade after Einstein did his clever maths, Werner Heisenberg posited the *uncertainty principle*. Everything in the universe can be said to have two properties: position and momentum. The position of a particle can be measured, but its momentum is determined by another entity, waves, whose position is much harder to pin down. In order to measure both wave and particle properties of a thing, you have to layer the various waves of a particle over one another, isolating the parts of the wave where the peaks (the top of the '∩') line up, creating a 'quantum object' that has properties of both waves and particles. The problem is that although, by doing so, the measurer can be far more precise about both the location and momentum of a thing, this

precision can only ever be a probability, rather than certainty. In other words, the search for greater precision in our measurement of the universe necessarily results in uncertainty. In a nutshell, this is the principle that underpins quantum mechanics. Even more strangely, particles that comprise atoms – such as quarks, electrons as well as the famous bosons – refuse to observe the laws of classical physics in that they appear to occupy multiple positions in space at the same time. In a finding that would make Mulder's skin crawl, as soon as we try to measure their position, their behaviour changes and they settle on a position. You may have heard of Schrödinger's cat, a thought experiment premised on this very finding: you have closed box with a cat inside and some chemical agent offering a 50% probability of the cat's demise; until you open it and take a look, the cat is simultaneously alive and dead. According to quantum physics, (human?) observation is itself a cause of behaviour.

Unsurprisingly, this phenomenon was celebrated by those looking for an escape from the clutches of determinism. For example, Arthur Eddington wrote that "if the atom has indeterminacy, surely the human mind will have an equal indeterminacy"[i] albeit with a caveat: "The indeterminacy recognised in modern quantum theory is only a partial step towards freeing our actions from deterministic control."[ii] L. Susan Stebbing wasn't having any of it. She questioned the equivalence of an electron and human volition, and insisted that removing determinism from the equation did not automatically resolve in in favour of free will[iii].

Free will in two simple steps

The false correlation between the death of determinism and birth of free will was not new. Leaning on Epicurean swerves (see chapter 1), American logician C.S. Peirce had previously suggested that while determinism robs us of freedom, *tychism* – chance – robs us of responsibility[iv]; the universe may not be the sole architect of our future, but in its absence, randomness ensures that neither can we claim authorship.

William James fleshed this idea out further. Addressing the muddled dualism of the likes of Augustine and Hume, James suggested that there are 'hard determinists', who categorically denied free will, and 'soft determinists', lost in a "quagmire of evasion"[v]. This *compatibilism* (of determinism and free will) leaves no room for the kind of ambiguity that free will requires, leading James to argue, instead, for *indeterminism* in which it is chance that creates a range of possibilities and will that chooses one over the others. The genius of James' two-stage model lies in it simultaneously

permitting the probability (or indeterminism) of quantum mechanics as well as the *incompatibilist* determinism of Schopenhauer's character. By 1938, an exasperated Eddington declared that "There is no half-way house between random and correlated behavior."[vi]

Uncertainty gave the compatibilism-incompatibilism debate a new edge. Did the randomness that a probabilistic universe implied bolster or weaken free will? Although the applicability of randomness to human free will is still debated[1], determinism seems to have incorporated its implications. While physicists run around trying to tame subatomic particles, philosophy redefined the rules of engagement.

I can only do what I can do

Modern incompatibilist theories take their cue from Schopenhauer's immutable character. Behavioural psychologist B.F. Skinner argued in *Beyond Freedom and Dignity* that man is shaped entirely by his environment, declaring that "the achievements for which a person himself is to be given credit seem to approach zero."[vii]. Similarly, Van Inwagen[viii] poses the *consequence argument*: if our actions are caused by prior events that are beyond our control, then the consequences (our actions) are also beyond our control.

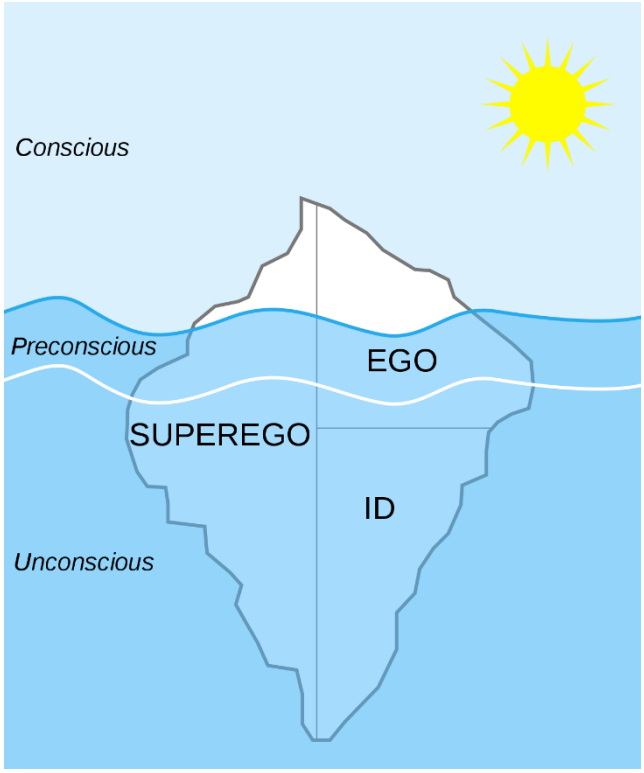
Formalising this idea, Harry Frankfurt is responsible for one of the principal conditions of free will, the *principle of alternative possibilities* (PAP), which states that "a person is morally responsible for what he has done only if he could have done otherwise."[ix] This posed a significant obstacle to compatibalists because, in a deterministic universe, a person cannot do anything other than what he is determined to do.

Frankfurt, himself a compatibilist, responds to this in William James fashion arguing that a fundamental attribute of humans is their possession of 'second-order' desires. We have base (first-order) desires – hunger, fear, love, hate – that are moderated by preferences for which desires win out. I have a desire to avoid developing a beer gut, but I just bloody love beer. Although my pro-beer desire may win the odd battle, my long-term allegiance (second-order desire) lies firmly with the slimming effects of beer abstinence. For Frankfurt, it doesn't matter whether these desires are determined. A second-order desire being met – moderating between two or more base desires – is an instance of free will. Before we challenge this idea, Frankfurt's framing of the mind's internal battle segues nicely into the mad visionary Sigmund Freud.

Freud divided the mind into the *id*, *superego* and *ego*, which loosely represented the instincts, the moraliser and the mediator (between the former two). Here's an analogy in Freud's own words: "in its relation to the id, [the ego] is like a man on horseback, who has to hold in check the superior strength of the horse; with this difference, that the rider tries to do so with his own strength, while the ego uses borrowed forces. The analogy may be carried a little further. Often, a rider, if he is not to be parted from his horse, is obliged to guide [the horse] where it wants to go; so, in the same way, the ego is in the habit of transforming the id's will into action, as if it were its own."[x] In a similar vein to Plato's horses, we have a rider (ego) being pulled in different directions by the instincts (id) and the conscience (superego), never really gaining much control over either. As you can see in the illustration below, only a small part of the ego and superego are what would now call conscious. Given that these three brain functions are constantly doing battle behind the scenes, with the

[1] A further and more recent stance concerns the apparent effect of consciousness (observation) on events. Roger Penrose made one famous case for this in the *Emperor's New Mind* (1991) in which he shares Einstein's scepticism of quantum mechanics by demonstrating the brain is non-algorithmic and thus lies in the grey area between classical and quantum physics.

eventual behaviour demonstrative of the victor/s, Freud seems to imply that agency cannot exist. Although apparent in the thinking of Hume and Schopenhauer, Freud was the first to really sketch out a theory of the subconscious in contrast to the conscious[2].



Some have suggested that because Freud championed a form of therapy, psychoanalysis, that, through introspection, had the power to liberate individuals of their subconscious shackles, he ascribed some degree of conscious volition. For example, Dilman writes: "Freud, far from being a philosophical determinist, has devised a 'therapy' which in every way assumes the capacity for free will and responsibility in individual human beings." (1999, P.182)

Freud's insistence that psychotherapy should yield the 'true' or even 'best' version of the self certainly helped to muddy the water of his brand of determinism. He believed that by understanding one's compulsions contained within the ego – both external and internal – one could, ideally by themself, resolve one's psychological problems. In doing so, Freud appears to be permitting at least a modicum of free will to the patient. Could this version of free will be similar to that of Spinoza's in that we are only free when we accept that we are not free? While he never explicitly addressed this contradiction, he did continue to stress that mere awareness of oneself would improve one's state of mind. One of Freud's successors, Carl Jung, framed the problem concisely: "…the fact is that free will only exists within the limits of consciousness. Beyond those limits there is mere compulsion."[xi].

Returning to Frankfurt, are second-order desires artefacts of the conscious mind, or are they simply illusory compulsions? Michael McKenna, not content with a free will premised solely on desires, suggests that the crux of the matter is characterised by the relationship between intentions and desires, or our "responsiveness to reason" that define free agency. He asks us to imagine Jennifer's

[2] This is perhaps best illustrated in Freud's infamous *Oedipal complex*. Deriving from the Greek classic *Oedipus Rex* about a child who was helplessly resigned to meet his fate – to kill his father and marry his mother – Freud ascribed such machinations to boys aged between 3-6. When a child does not successfully pass through this stage (aptly named, the 'Phallic stage'), he may retain such desires into adulthood. Just like Oedipus, the patient's condition was considered beyond his control.

decision to go to an event instead of other events with various consequences, pondering: “Suppose, for instance, we learn that, if the ticket cost $1,001.00, this would not influence Jennifer’s decision to attend the game. Indeed, there is no amount of money that she would not pay except $1,000.00. Now her sensitivity to the reason of not wishing to pay $1,000.00 appears to be irrational.”[xii] Irrational, indeed, Jennifer, you conveniently stupid fictional woman. As McKenna admits “many people who act of their own free will and are morally responsible for doing so act contrary to what they recognize as sufficient reasons to do otherwise.”[xiii] Whilst it’s fairly easy to universally declare that Jennifer is an irrational moron, in the real world, as we will see over the next few chapters, rational judgements and, perhaps more crucially, judgements of rational judgements, lie in the eye of the beholder. Despite McKenna and others’ call to reason, the distinction between desire and rationality, if it even exists, is magnificent at evading detection.

A similar argument posed by Fred Feldman[xiv] and Michael Zimmerman[xv], known as the *possible worlds thesis*, states that if an agent is able to conceive of different worlds that stem directly from different decisions, he is responsible for the decision ultimately made. This harkens back to one of Kant’s categorical imperatives – “ought implies can” – “For if the moral law commands that we ought to be better human beings now, it inescapably follows that we must be capable of being better human beings.”[xvi]

A further position on free will instantiated by modernity is that of Libertarianism. Libertarian free will rests on the counterfactual, "I could have acted otherwise"; it is a faith in the idea that if you rewound time, you could choose an action different from the one taken. For this reason, Libertarianism is an incompatibilist school of thought – free will and determinism cannot co-exist – but goes further to reason that, as human beings have free will, determinism must be false.

Two of today’s most prominent Libertarians are Robert Kane and Daniel Dennet, both of whom advocate a Jameasean two-stage model (the universe chooses the deck of cards, the agent chooses the card) of free will and both of whom cede considerable ground to forces that lie beyond the control of the agent, proposing that although we may not have free will *all* of the time, there are times when we are in the driving seat.

Dennett firstly asks us to consider freedom not as something that does or does not exist, but as a scale measured in degrees; a human being has more freedom than a flower. Free will, therefore, is the existence of greater degrees of freedom over the complexity of the human mind. In defence of the two-stage model, Dennett dismisses the ultimate causes of human thought and action – whether or not they be determined by nature’s grand algorithm – instead proposing that regardless of how in control we actually, we all are in possession of the kind of freedom “worth wanting”[xvii]. To clarify this distinction, it is worth observing that Dennett’s views are rooted in notions of moral responsibility. Just like Augustine and Kant, one cannot be held responsible for one’s actions in the absence of free will; similarly, Dennett’s position is that it really doesn’t matter whether what we perceive to be free will is the product of determinism, the fact that we are able to deliberate at all is sufficient grounds for the existence of freedom. “I am faced with an important decision to make, and after a certain amount of deliberation, I say to myself: "That's enough. I've considered this matter enough and now I'm going to act," in the full knowledge that I could have considered further, in the full knowledge that the eventualities may prove that I decided in error, but with the acceptance of responsibility in any case.”[xviii]

Not content with an outright dismissal of determinism, Robert Kane forges a different position. With a strong emphasis on the connection between actions and their causes, Kane stresses that for an agent to have ‘ultimate responsibility’ for an action, she alone must be responsible for “those acts by

which we made ourselves into the kinds of persons we are"[xix], which he calls 'self-forming actions'. Struggling for a long time to explain away the role of chance on agency, Kane seems to settle on what he terms the "liberty of indifference" in which the agent can choose to assume responsibility for an action regardless of how much that action was influenced by external forces. Confronted with a poor decision and despite having had other (presumably better) choices, the agent can shrug and say "Like the author of the novel, I am in the process of writing an unfinished story and forming an unfinished character who, in my case, is myself."[xx].

While Dennett brushes off arguments that point to non-free causes of human thoughts and actions, Kane goes to great pains to incorporate them into a justification for free will; and yet, despite their public disagreements, both seem to resolve the problem in a similar way.

The big bang made me do it

In the 1980s, Benjamin Libet and colleagues conducted a series of experiments that managed to attract considerable controversy, both for their findings and methods. They asked participants to sit down, stare at a clock, and 1) note down the moment they had the intention to raise their hand before 2) actually raising their hand. Their stated intention was found to occur up to two seconds after the "readiness potential"; the brain activity that, in reality, initiated the hand movement, as measured by electroencephalogram (EEG)[xxi]. These findings suggest that decisions (as far as moving one's hand can be extended to all decisions) first occur subconsciously in the mind, with consciousness taking ownership after the fact. Libet himself later challenged this interpretation, suggesting that the brain may "refer backwards in time" with the actual sensation consciously "felt" before the real-world stimulus; in other words, the brain's concept of time is, by design, warped. He suggests that the time between the readiness potential and movement presents a window of opportunity for conscious will to veto an action: "the brain 'decides' to initiate or, at least, prepare to initiate [certain actions] before there is any reportable subjective awareness that such a decision has taken place".[xxii]

A fundamental criticism of the study lies in the subjectivity of measurements. Firstly, from the moment participants are primed to have a thought, the thought exists, albeit in latent form. If you wake up at 8am and have a meeting at 9am, I challenge you enjoy that hour without being niggled by your impending appointment. Secondly, it is possible that the mind constructs *multiple drafts* of how to negotiate a given situation that may or may not be based on real-world events; given that the mind only cares for which draft wins out, the (temporal) order of events that help to construct these drafts may be superfluous information[xxiii]. In other words, the *fact* that some things happened is given greater mental precedence than the *order* in which they happened. These points, along with other potential biases, serve to discredit participant reports.

Mele extends Libet's "backwards in time" argument along two-stage lines, proposing that while the *urge* may be non-conscious, the *decision* that occurs afterwards could be conscious. "That our urges often are generated by processes of which we are not conscious is not surprising. And if we sometimes make effective decisions about whether or not to act on a conscious urge, so much the better for free will."[xxiv] Mele also discusses the possibility that different actions require different degrees of consciousness. From entirely unconscious reactions to heat to deliberative calculation, consciousness is not always required for an action to take place, making measurement difficult.

Despite these objections, follow-up studies have all found pretty similar delays between subconscious readiness potentials and conscious awareness of decisions[xxv]. Once again, the importance of ultimate causality rears its head. As Roediger, Goode, and Zaromb[xxvi] write: "Clearly

conscious intention cannot cause an action if a neural event that precedes and correlates with the action comes before conscious intention." Dennett labels this demand *reductio ad absurdum*; if we insist that every event be traced back to its ultimate cause, the blame for my decision to have a naughty sugar in my coffee this morning must be placed squarely at the feet of the big bang. Pacherie concurs, arguing that an action does not have to be entirely owned by the agent as long as he is involved in the "proximal chain of causes"[xxvii], while Laura Ekstrom suggests that there are two conditions to free will: autonomy – she defends the *coherence theory of autonomy* postulating that acts are free when preferences are not influenced by others and are aligned with pre-existing preferences – and the PAP argument which she claims requires indeterminism[xxviii].

This debate does a good job of encapsulating one big source of disagreement between the various free will camps: the varying importance of degrees of causality of human thought and action.

Plato's mind cave

After detailing a range of examples of human behaviour that cannot have its roots in free agency, Daniel Wegner throws down the gauntlet: "it has to be one way or the other. Either the automatisms are oddities against the general backdrop of conscious behavior causation in everyday life, or we must turn everything around quite radically and begin to think that behavior that occurs with a sense of will is somehow the odd case, an add-on to a more basic underlying system"[xxix].

In a similar vein to Roediger, Goode, and Zaromb above, Wegner's position relies on the idea that conscious will does not cause an action. This appeals to the principle: if Y happens irrespective of X, X cannot be a cause. Mele challenges this idea with the following: "Sally's mother drove her to school, and Sally arrived there at 8:00 a.m. What Sally's mother did was a cause of Sally's arriving at school when she did. This is true, even though, if Sally's mother had not driven her to school, Sally's father would have done so and delivered her there at the same time." (P.876) Using this vignette, Mele is suggesting that even though Sally's mother caused Sally's arrival, the two need not be intrinsic, as other causes are possible; applying this logic to the mind, she is saying that just because particular facet of will did not cause an action, it does not follow that free will must be stripped of its causal influence. However, there appears to be a logical flaw with this reasoning. The premise in which X precedes Y refers to a specific chain of events – a timeline in which Sally's mother (X) caused Sally's arrival at school (Y); if you add another variable, Sally's father driving, you have created a new chain of events[3]. Sally's arrival is no longer Y, but an entirely different variable altogether. Regardless of where you stand on this war of hypotheticals, denying a causal relationship between free will and action requires an understanding of the mind we do not yet possess, while advocacy would seem to fly in the face of the understanding we do have.

As others have mentioned, Wegner also considers the connection between irrationality and free will, suggesting that when agents are misguided by their inner demons (and The Daily Mail), we cannot label the cause of these thoughts and actions 'free'. While Kane's agent may simply own their mistakes, Elisabeth Pacherie writes "To show that the experience of willing is not always errorless is certainly not to show that it is always in error."[xxx]. This is worth chewing on. Following Pacherie's challenge to its logical conclusion, is it even possible to show that will is always in error? This seems like an impossible burden of proof to impose on free will sceptics, and yet, it is unequivocally correct. Worse still, is an irrational mind even capable of recognising its own irrationality? We will

[3] Things threaten to get a bit metaphysical here. If you side with the *possible worlds* argument, the argument presented by Mele is valid.

explore this idea in the chapters ahead but I suggest that you pause and consider what your current position is and what proof you would need (if any) to move you from it.

Another way of framing the debate is around the importance of free will's independence. While all agree that will is epiphenomenal[4], Wegner and Harris believe that this eliminates the possibility of free will, while Mele and Dennett believe that there still remains enough independence for us to claim.

Agreeing with the sceptics, Derek Pereboom believes that a world in which free will is explained out of existence spells danger for moral responsibility, admitting that this would require relinquishing "our ordinary view of ourselves as blameworthy for immoral actions and praiseworthy for moral ones."[xxxi] If you've followed the debate so far, you may feel that all we've been doing is hopping from 'free will is not the cause' to 'but…but…moral responsibility'. Fortunately, Saul Smilansky seeks a resolution to this quandary via *illusionism*. Admitting that a belief in one's own free will is necessary to moral behaviour, he suggests that even in light of rejection of Libertarian free will, humans need and will always have the illusion of free will[xxxii]. Over the course of this book, we'll see several examples of illusionism at work but let me leave you with a great little study from the 1960s by W. Grey Walter, as reported by Dennett:

"Grey Walter performed his experiment with patients in whose motor cortex he had implanted electrodes. He wanted to test the hypothesis that certain bursts of recorded activity were the initiators of intentional actions. So he arranged for each patient to look at slides from a carousel projector. The patient could advance the carousel at will, by pressing the button on the controller… Unbeknownst to the patient, however, the controller button was a dummy, not attached to the slide projector at all! What actually advanced the slides was the amplified signal from the electrode implanted in the patient's motor cortex.

One might suppose that the patients would notice nothing out of the ordinary, but in fact they were startled by the effect, because it seemed to them as if the slide projector was anticipating their decisions. They reported that just as they were "about to" push the button, but before they had actually decided to do so, the projector would advance the slide — and they would find themselves pressing the button with the worry that it was going to advance the slide twice!"[xxxiii]

Conclusion

This chapter began by showing the impact science has had on the free will debate in the modern era, firstly, with the determinism of classical physics and later with the uncertainty of Quantum Physics in the 20th century. To this day, the laws that underpin both remain at odds with one another, leaving those whose stances on free will are based on the laws of physics in a difficult position.

Even if determinism finds little support, free will advocates must still contend with the role of chance on thoughts and actions; personality, for example, may not be determined, but it is a stretch to claim that it is within our control. William James proposed a resolution with his two-stage model in which the universe presents a range of choices, but it is the agent who makes the final decision.

A point of disagreement that stems from this idea is the connection between degrees of causality and free will; we may not be entirely responsible for an action, but is that enough to dismiss free will

[4] Part of the causal chain, rather than being a root cause.

altogether? Dennett argues that it would be absurd to do so, as it would mean tracing every event back to the origin of the universe; Wegner, among others, are comfortable with that proposition.

The consequences of this line of thinking are summarised by Pereboom, who suggests that to accept a world in which free will is reduced to a short cameo effectively dissolves moral responsibility. Indeed, this concern lies at the heart of free will defenders past and present. Between Libertarian free will and the *illusionism* described by Smilansky lies an unavoidable, yet uncomfortable truth: we require a sense of agency without, seemingly, having much of it.

In 1775, Gregory Potemkin was appointed the governor-general of Russia's recently acquired southern provinces. Handed the difficult task of taming the wild people of the Steppes, reconstructing and populating areas, and appeasing the expectations of the visiting Empress Catherine II, Potemkin constructed mobile villages and a murder of travelling thespians. Their job was to give the impression to the barge-dwelling Empress that progress had been made. The term, *Potemkin Village*, has been applied in modern times to the show presented by visitors to North Korea, but may also be applied to human consciousness. A self-probing mind checking in to see if all is well is met by its own Potemkin Village, free will, our acceptance of which is central to our ability to function[xxxiv].

Human beings justify decisions on a certain rationality that they claim to control. The next portion of this book will deconstruct the rational façade of our very own Potemkin Village, beginning with an attempt to understand what exactly we mean when we use the term 'rationality'.

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[i] Eddington, 1932, p.79
[ii] Eddington, 1928, p.313
[iii] Stebbing, 1937
[iv] Peirce, 1892
[v] James, 1884. *The Dilemma of Determinism*. Cited by Doyle, 2010
[vi] Eddington, 1938
[vii] Skinner, 1971, p.44
[viii] Van Inwagen, 1986
[ix] Frankfurt, 1969
[x] Freud, 1923. Cited in Freud, 1964
[xi] Jung, 1937/2015, p.223
[xii] McKenna, 2006, p.25
[xiii] *Ibid*, p.27
[xiv] Feldman, 1986
[xv] Zimmerman, 1996
[xvi] Kant, 1793/1999, p.94
[xvii] Dennett, 1984
[xviii] Dennett, 1981, p.295
[xix] Fischer *et al*., 2007, p.26
[xx] *ibid*, p.42
[xxi] Libet et al., 1983
[xxii] Libet, 1985, p.536
[xxiii] Dennett & Kinsbourne, 1992
[xxiv] Mele, 2011, p.862
[xxv] Haggard & Eimer, 1999, Lau et al., 2004, Sirigu et al., 2004
[xxvi] Roediger, Goode, and Zaromb, 2008, p.208
[xxvii] Pacherie, 2006
[xxviii] Ekstrom, 2011
[xxix] Wegner, 2003, p.144

[xxx] Pacherie, 2006, p.163
[xxxi] Pereboom, 2011, p.407
[xxxii] Smilanksy, 2011
[xxxiii] Dennett, 1992, chapter 6.5
[xxxiv] Dennett, 1992

Chapter 3
Irrationality

Freud was a bit mad. Dividing the mind into the conscious, preconscious and unconscious, he suspected that many of his patients' fears were locked away in subconscious vaults in the form of *repressed memories*[1]. His patient case notes are brimming with accusations linking schizophrenia to repressed homosexuality, poor child-father relations to matriphilia and dreams of the number 3 to having penis on the mind. His thinking was suspiciously dominated by sex; his stages of sexual development – genital, latent, phallic, anal and oral – connected events during these stages to later personality traits, often colourful forms of sexual perversion. And when he wasn't deriving universal psychopathologies from a handful of case studies, he was plagiarising them from others[i].

That said, despite a pretty bad rap sheet, his contributions should stand alone. Notably, for our purposes, his suggestion that the unconscious mind drives behaviour to which the conscious mind is not privy has left a permanent stamp on the social sciences. We are not as in control as we think, but does that mean we're irrational?

Dual-systems and cognitive biases

Back in the 1960s, Arthur Reber and his colleagues began looking into unconscious processes of learning that he dubbed *implicit learning*. Beginning with language, he subjected his human guinea pigs to strings of letters that, while appearing to be nonsense, had a grammatical logic. Over the course of repeated exposure, Reber found that participants were able to produce their own strings without being able to explicitly state how[ii]. This shouldn't come as a big surprise. Who can explain the grammatical ambiguity of the infamous TV show title: *Discuss sex with Dick Cavett* or the contemporarily-relevant *vegetarians don't know how good meat tastes*?[iii] Nowadays, this type of implicit understanding is known in psychology as *procedural memory*[2]. This work is commonly understood to be the inauguration of *dual-systems theory*[iv], which pit an unconscious-yet-fast 'system 1' against a conscious-yet-slow 'system 2'[3]. What philosophers have called logic and reason, psychologists label conscious and unconscious.

Before continuing, it's always useful to frame ideas within the paradigms they emerge within. The 1960s and 70s are often referred to as the 'cognitive revolution'. Whereas the behavioural psychologists, through their successes in conditioning participants (usually rats) and controlling behaviour, saw the minds of agents as black boxes entirely driven by external stimuli, cognitive psychologists insisted that opening up the black box and analysing what was happening inside is both achievable and enormously important. The drawback, perhaps, was that while behaviourists

[1] While many of you have certainly heard of repressed memories, you may not have heard that they're mostly nonsense. Newly-emerged repressed memories that led to convictions have been falsified (Loftus, 1993; 1994) and evidence for trauma caused by repressed childhood events is lacking (Pope & Hudson, 1995). While what happens in childhood has a huge impact on personality, the idea that there are secret caches of memories that cause certain behaviour is questionable, especially given the fallibility of memory and its need to confabulate.
[2] Think: driving a car, riding a bike, using a Playstation controller or applying make-up in the morning before work. We don't have to think, we just do.
[3] More precisely, system 1 is said to step in when quick decisions need to be made – reacting to pain, fight or flight etc. – whereas system 2 takes over when more deliberation is required. It is not entirely true that the distinction is clearly conscious vs unconscious because both systems seem to be co-dependent. To dig deeper, see Evans (2007, Chapter 7).

denied people *any* agency, cognitive scientists often ascribed *too much*[4]. With this in mind, it's puzzle time. Wason's[v] 'four-card problem' presents participants with four cards along with the following rule: "Every card which has a D on one side has a 3 on the other side". Participants are allowed to turn over two cards to either verify or falsify the rule. Stare blankly below for a few minutes.

Although the majority of challengers turned over "D" and "3", Wason suggested that the correct move would be to turn over "D" and "7" because the rule only stated that 'if there is a D, there is a 3', not the other way round, therefore turning the 3 over and finding another letter would not disprove the rule[5]. Although in future studies, Wason did find that when the problem was presented using real-world analogies, participants improved significantly[vi], his attempts to "train" future participants largely failed and he thus concluded that around 75% of us are fundamentally irrational[vii]. Without going into too much detail, this period of research is characterised by the use of abstract syllogisms (e.g. if A, then B) to test people's proximity to logical apotheosis; or to evaluate the extent to which we employ our perfectly rational system 2 over the irrational system 1. If you failed the above test and your ego is in tatters, fear not, as we'll be smashing the rational-archy in the next chapter.

As discussed, economists share an affinity towards rationality. Léon Walras was a mathematician *cum* economist who died at the beginning of the 20th century. Among other contributions, Walrus lifted principles from thermodynamics, creating a model that pitted supply against demand to demonstrate that price levels in a given market were subject to a *general equilibrium*. Let's break this down. In a nutshell, thermodynamic equilibria refer to the stability of heat within a given system; designers of nuclear plants must ensure that temperatures don't rise to Chernobyl levels. The idea is that although heat can fluctuate, there is a stable state called an equilibrium, and when an additional mechanism is added or removed, heat levels move about again but settle at another equilibrium, and so on. Walrus applied this principle to economics, supplanting, for example, energy and volume for goods, and temperature and pressure for prices. Despite fluctuations in supply and demand, Walrus' analogy suggests that a given market will eventually rest at an equilibrium where supply and demand stabilise, and price levels are constant. The theory posits that a litre of orange juice will remain at £1.50 until the news comes out that oranges are genetically modified by the Chinese to cause impotency (you heard it here first). After a period of adjustment, the price will stabilise again at its new equilibrium of £3. As appealing as this physics-economics analogy is, it is infinitely easier to study particles than it is humans (and it certainly isn't easy to study particles, as we've already discovered).

[4] It is perhaps no coincidence that the cognitive revolution coincided with the rise of computer science and research in artificial intelligence, in which agency was not just rational, but hyper-rational (see e.g. Fikes & Nilsson 1971 for agency in AI research and Colman 2013 for a summary of Game Theory in Economics).
[5] If you're still scratching your head, as I did for a *long* time when first seeing this, imagine a deck of cards consisting of only 3s on the number side, and different letters on the other. If you turned them all over to the letter side, all A's would have a 3 on the other side, but all 3's wouldn't. The rule would still be true.

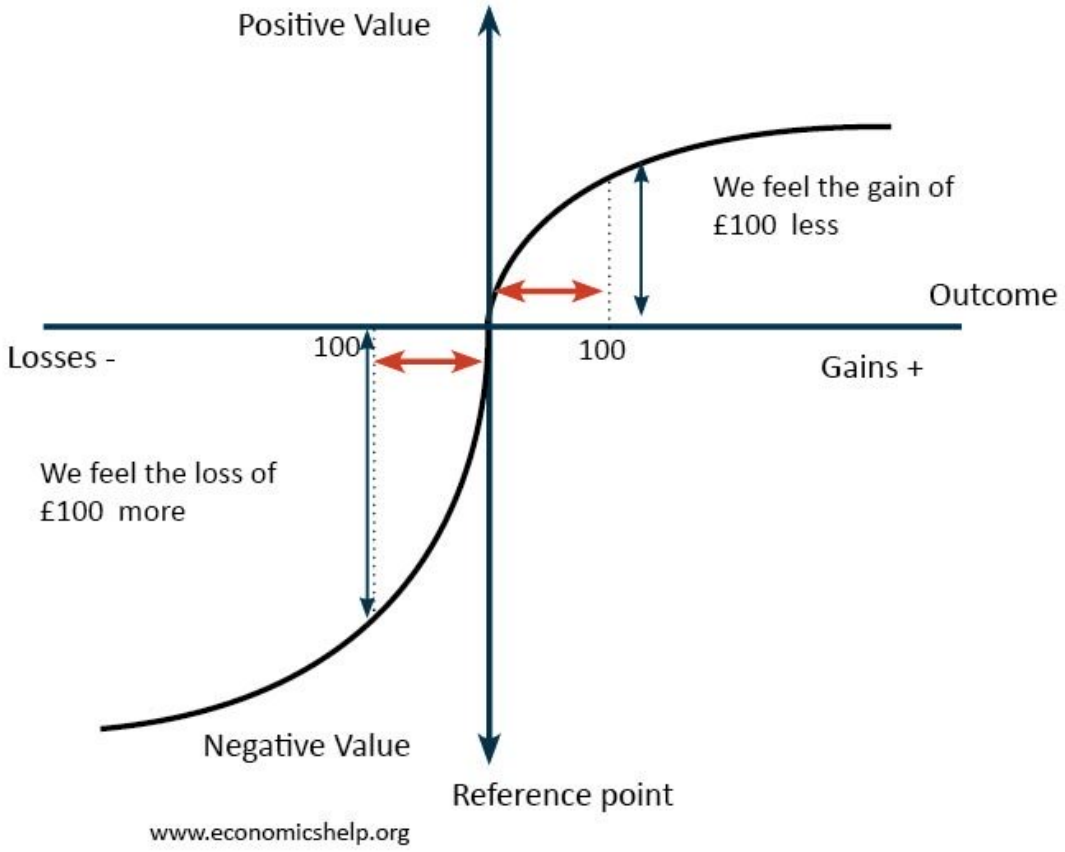
Importantly, this thinking was applied at the individual level, too. Barter between two individuals is modelled as the interaction of endowment (what they have initially) and utility (how much they want the goods). Endowment is fairly simple: if I enter a negotiation with two apples and one orange, that is my endowment. Utility is wildly abstract, however, as it reduces what an agent wants to a numerical value. In neoclassical microeconomic models, the agent is represented by their utility (*U*). How is *U* determined? In order to answer this question, economists frame the agent as a perfectly rational "utility-maximiser" in which *utility* is getting as many commodities (or money) as they desire. In other words, in order for these models to make sense (or indeed any model requiring calculation), certain assumptions are made. In the case of microeconomics, the assumption is that it is inconceivable for an individual to pass up the opportunity to make more money or get more stuff they like. Although models in *consumer theory* do allow for budget constraints and even (belatedly) risk aversion, the agent is always a utility-maximiser (ironically dubbed *homo economicus*, or economic man[6]). Let's look at an example. Until the 1970s, *expected utility theory* maintained that agents calculate risk according to probability so that if there was a 60% chance of winning £100 from a £100 bet, our decision on whether to take the bet would be framed mathematically:

probability x *maximum winnings* – *amount invested* = 0.6 x 200 – 100.

If the answer is greater than 0 (it is), then we should take that bet. Would you?

Kahneman and Tversky (1979) thought you wouldn't. They found that agents attribute far more risk to potential losses than gains, depicted nicely in the graph below. An agent that thinks according to the above equation, *homo economicus*, would be represented by a straight line from the bottom-left to the top-right; the pain of losing £100 would be equivalent to the joy of winning £100. However, the graph shows an individual whose pain of losing is far greater than joy of winning. Furthermore, we are incredibly sensitive to *any* loss or gain, no matter how small, hence the steep curves stemming from the *x, y* intersection (represented by the red arrows).

[6] I should be fair to economists here. It is certainly true that no economist today would attempt to justify economic man in the extreme form described here. However, it is true to say, I believe, that many in the field ascribe an *unrealistic degree* of rationality to agents. For example, there is a common theme of blaming negative outcomes (losses in welfare) on a lack of information, with the prescription being that more information is better. As we will see in the next few chapters, this logic is deeply flawed. Furthermore, there is a tendency among economists to find economic rationality in all unexpected events. This is exemplified brilliantly by Francis Fukuyama who writes: "Modern observers have frequently tried to explain Indian social rules in terms of their functional or economic utility—for example, that the prohibition on eating cows started out as a hygienic measure to avoid contaminated meat. Quite apart from the fact that the early Indo-Aryans were cow eaters like the [semi-nomadic ethnic group] Nuer, such explanations fail to penetrate the subjectively experienced coherence of the society and reflect nothing more than the secular biases of the observers themselves." (2012, P.217)



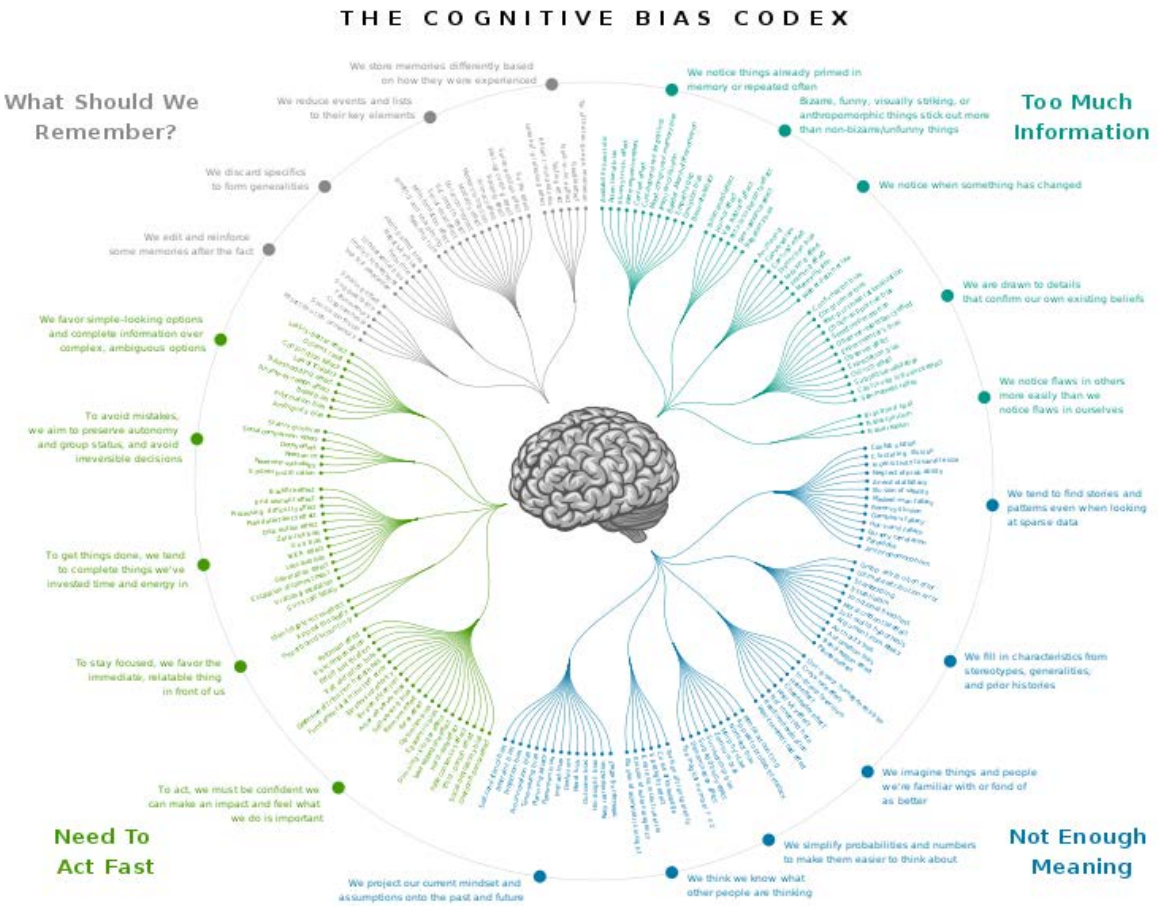
Prospect theory, as they labelled it, uncovered a so-called *negative bias* among agents and began something of a revolution in the study of agency, with biases and heuristics[7] becoming the sticks used to beat economists with; this new group of vigilante researchers developed and fostered a brand-new field of research, behavioural economics, whose mission was to catalogue the plethora of ways in which Jung's "mere compulsions" manifests themselves. Over the years, this catalogue has become more voluminous, numbering into the hundreds, vaguely sorted into beautiful but imprecise categories (see below), many of which can be found in Kahneman's *Thinking Fast and Slow*, which models bias as the offspring of system 1.

Another blow to expected utility came from the winner of the Nobel Prize in Economics, Elinor Ostrom. Ostrom, responding partly to the Tragedy of the Commons thought experiment[8], conducted field work in several parts of Africa demonstrating that communities, far from maximising their own utility, devised innovative forms of cooperation in order to survive floods, earthquakes, droughts and whatever else Mother Nature threw their way[viii]. Later on, in a series of economic games[9], a number of studies emerged illustrating that as generosity declines, punishment increases[ix]. Participants often forego payment in order to punish selfish behaviour. In other words, when making

[7] Broadly, a bias is an unconscious preference for something and a heuristic is an unconscious 'mental shortcut' in decision-making. We'll see plenty of examples in the pages that follow.

[8] Evolutionary Biologist Garrett Hardin published a paper in Science in 1968 entitled *Tragedy of the Commons*, describing the human incapacity to share resources owing to our tendency to look after number one (and maximise our own gains). As we all fear competition, we each take s much as we can, ultimately destroying the resource in question.

[9] Economic games are not as fun as the name suggests. They are the study format of choice in economics, as participants gather into a room and play for fictional money in a variety of manipulations designed to understand how humans cooperate and compete over resources.



decisions about money, the amount we expect to gain is one factor, but keeping others around us in check is another. From the perspective of *homo economicus*, this is horribly irrational.

Moving away from economics, another example of irrationality is *confirmation bias*. This bias suggests that our belief system is in part based on confirming prior beliefs; we believe new information that confirms what we already believed and, by extension, reject what doesn't. While the origin of the term isn't well-understood[10], contemporary research has found evidence of it in fields as diverse as criminology[x], forensic science[xi] and political science[xii]. Framing human belief in this context also helps us understand why news articles that seem to offer such little substance can be so popular; tell people what they want to hear and watch the revenue pour in.

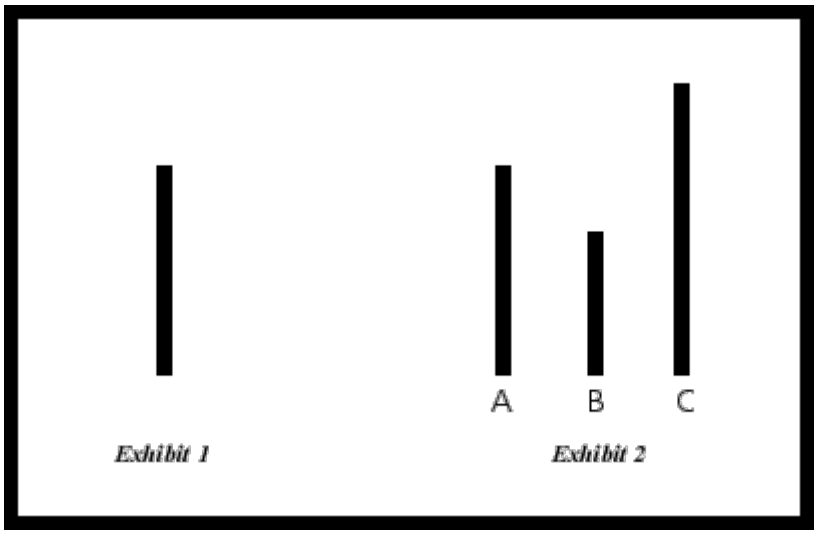
Behavioral economics and similar findings in cognitive and social psychology have been essential in driving rational choice theorists closer towards an accurate representation of agency. They have demonstrated the multidimensionality of considerations that people give when making decisions, whether with money or other facets of life. This has culminated, in recent years, in the birth of *liberal paternalism*, in which the state – aided by enlightened behavioural economists – nudge us towards 'better' financial decisions[11]. One of the founders of this movement, Richard Thaler, won the Nobel Prize for Economics in 2018, demonstrating just how much attention the field is garnering. As with any form of paternalism – or nanny statism, depending on your preferred level of state

[10] Nickerson (1998) traces the idea back all the way to Francis Bacon in 1620.
[11] A famous of example of this is whether organ donorship is determined by 'opt in' or 'opt out'. One study has suggested that in 'opt out' countries, where less action is required, donorship is greater (Shephard, O'Carroll & Ferguson, 2014).

engagement in our lives – it demands an inspection of who the paternal figures are and what they are nudging us towards, or, in the context of this chapter, what they consider to be 'rational'.

Monkey see, monkey do

Another area in the study of biases is conformity. Back in the 1950s, a psychologist called Solomon Asch ran a few studies coaxing out various examples of herd-like behaviour. One of the most famous studies in this area involved the simple task of identifying which of a trio of lines matched a target line. Simple, right?



As you can see, there's a clear winner. However, when Asch instructed his stooges (known as confederates) to confidently select the line that was incorrect, 75% of participants were convinced to doubt their own sanity by going with the majority at least once over 12 trials[xiii].

In a later study that every psychology undergraduate knows by heart, Harvard professor Stanley Milgram ran a rather disturbing set of studies in the 1960s in which participants questioned an individual sat in another room out of sight and were told to punish incorrect answers with electric shocks that ramped up in voltage with every subsequent mistake. Despite their agonising cries, pleas to stop and mentions of a dodgy heart, a shocking number of participants kept the punishment coming, even when the individual stopped responding altogether, egged on by a lab coat-adorned dude with a clipboard. In the wake of World War II in which an entire population looked on as Jews were systematically disappeared, the authors were attempting to understand what lay behind compliance to such horrors. They concluded that humans are hardwired to conform to authority and demonstrated the extent to which this obedience to authority was able to override every other instinct that was screaming "this isn't right!"[12][xiv]. Although we may not always be aware of them, our minds are host to many voices shouting conflicting instructions.

Despite this, we are not always mindless adherents of authority. History is rife with examples of civil disobedience reacting to egregious authoritarianism, which, of course is a pretty useful tool in levelling the playing field in favour of an oppressed group. The instinct to disobey authority can move into the irrational as demonstrated perhaps by British Conservative MP Michael Gove's now infamous 2016 rebuke "people in this country have had enough of experts". Similarly, a study in 2013 discovered a correlation between rejection of the authority of science and belief in conspiracy theories[xv]. If a body of authority is inconveniently standing in the way of believing what we want to

[12] Fortunately, the tortured individual was another stooge and the electric shocks fake.

believe, it can sod right off. This reinforces the idea that we don't accept information because it is true, but because it fits our worldview.

Both of the above examples indicate that our own decision-making process is highly susceptible to outside influence. Whether a guy in a lab coat tells us to torture people or scientists dare to suggest people should try to reduce their carbon footprint, what other people think and do seems to matter. Worst of all, most of the time, we aren't aware of how our decisions are being hijacked, such is our commitment to individuality[13]. More on this later.

Focus

Consciousness remains one of the greatest mysteries of our time. One interesting theory on why we developed it in the first place suggests evolution sought to gain greater control over Plato and Freud's horses of the subconscious[xvi]. This is a seductive idea given that every conscious act we can come up with involves directing attention somewhere, whether it be on an object in the outside world or our own minds. However, even something as simple as focusing attention is co-opted by the mind's many invisible forces.

An important factor behind attention is working memory (WM), which is considered to be a form of short-term memory that facilitates reasoning and decision-making through the temporary storing of information. Back in the 1990s, it was grandiosely claimed that the variance in WM ability lay behind the distribution of general intelligence[14] across a population[xvii]. While most research in the modern era has dialled back such claims, WM still seems to account for between a third and a half of general intelligence[xviii]. Unlike the distinction between long- and short-term memory in your computer, WM is not located in one brain region but involves networks that span the whole brain. For example, remembering who shot the sheriff might incorporate parts of the visual cortex and prefrontal cortex (PFC)[xix]. Studying patients with lesions in certain areas of the PFC revealed working memory deficiencies in brains with damage to this area[xx]. However, an interesting article published in *Nature* suggested that high-performance WM is characterised not by more PFC neurons or different networks, but in the efficiency with which brains (largely unconsciously) select information to store[xxi]. Although there is still somewhat of a debate regarding the plasticity of WM and attention[xxii], at the time of writing, it is very difficult to find any evidence on how we might improve these abilities throughout life; it may well be that an adult's attentional capacity is more or less fixed.

Another example of focus at work is in the study of vision. In 1982, Marr encapsulated the zeitgeist at the time that the purpose of vision was to present a three-dimensional depiction of reality[xxiii]. Gibson hit back that it probably wasn't quite so simple. He suggested that vision evolved around the goals of the seer and, therefore, that visual perception presents us with the *affordances* of objects[xxiv]. In other words, we see only what we need to see because a lot of what's out there is irrelevant. This would explain the phenomenon of *apophenia*, in which the brain makes sense out nonsense. A brilliant example of this comes from a court case in 1990 in which Judas Priest were arraigned for attempting to bewitch listeners by deviously encoding suicide prompts, audible only when their song *Beyond the Realms of Death* was played backwards. Fortunately, before the Inquisition took force, experts called by the defence argued that humans hear what they expect to

[13] With Anglo-American cultures, with their emphasis on individualism, being the worst culprits.

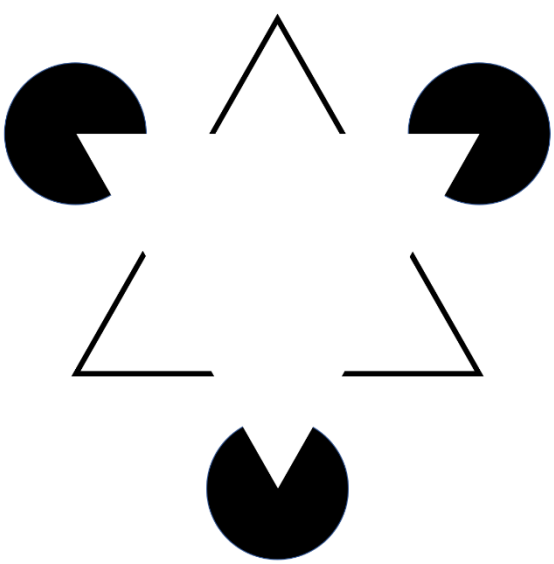
[14] In the wake of Gardner's theory of multiple intelligences, general intelligence, or IQ, can be seen as a specific type of intelligence that involves the manipulation of abstract concepts and reasoning. This is closely related to the *fluid intelligence* that many modern researchers contrast with the factual *crystallised intelligence*. For a summary and a look at the relationship between intelligence and personality, see Batey, Chamorro-Premuzic & Furnham (2009).

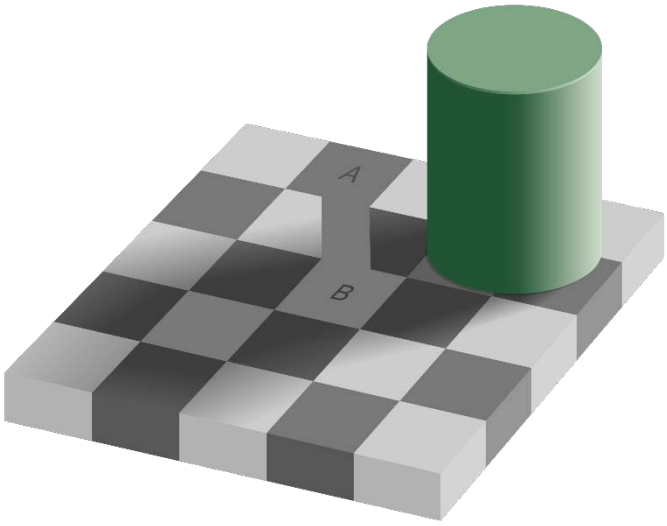
hear, finding examples from a range of other songs. Part of a concept called *priming*, we now know that manipulating expectations of a future event can alter our perception of it[15]. Other examples of apophenia in action are seeing familiar shapes in clouds or a dick in a rock (see below).

Apophenia aided by a touch of priming.

[15] Within an exciting new field called neuroeconomics that studies the neuroscience of economic decision-making, findings confirm the idea that expectation contributes towards perception e.g. Knutsen *et al*. (2007).

A discussion on the irrationality of vision wouldn't be complete without an optical illusion or two:





The Kanisza Triangle Illusion above forces our brains to see a triangle by placing a family of three Pacmen at the right angles. On the right, the Checker Shadow Illusion presents us with two squares of the same shade. Yet, put your finger on the line that connects A and B, and the shades suddenly appear different. Even after we learn the right answer, there is no way of telling our brains to stop seeing what isn't there. In tennis, when going to return a ball, what we see is not the ball's actual trajectory, but our brain's best guess at the *expected* trajectory, which – as the guesswork improves with practice – is why most of us swing and miss while the pros can somehow anticipate where a ball travelling 150+mph will be a tenth of a second after it leaves their opponent's bat. We are guided not by reality, but by a pragmatic illusion thereof.

There are so many examples of our irrational vision in action and I don't want to belabour the point, but there's one more hilarious one you can try yourself by searching for a video called "selective attention test". Check it out.

Did you see it?

The minds behind the video, Simons and Chabris[xxv], found that just under half of their participants failed to see the gorilla. *Inattentional blindness*, as the phenomenon is known, is more likely if the task in question requires more attention. It's common sense really. Despite conventional wisdom revering multitasking, we can only focus on one thing at a time, and the more focused we are, the blinder we become to everything else.

Although most of our brains' visual interpretations are pretty essential to our survival, they are clearly imperfect. Given that rationality hinges on stoically processing information, it stands to reason that the brain's transmission of fake news can serve as a pretty significant impediment. Let's take a look under the hood.

The addicted brain

Addicts have long been seen by society as weak-willed individuals guilty of making bad life choices, but it's interesting to consider that nobody aspires to become an addict. Nobody takes their first snort of cocaine buoyed at the prospect of eventually becoming existentially dependent. If being an addict is so undesirable, why is it so prevalent? Time for some neuroscience.

Reward and punishment in the brain occurs through processes belonging to what is known as the *dopaminergic system*. Dopamine, as many of you know, is one of many neurochemicals floating around the brain stimulating us with a warm feeling when we do good and holding back when we fuck up. The evolutionary benefit of such a system is fairly obvious. The brain knows its form at birth is inadequate for a rapidly-changing world and so it needs to be able to learn. We come across a new territory with new sources of food; we try each one and see how our body reacts. If we don't chuck it back up or shrivel up into the foetal position and perish, our brain sends out a load of lovely neurochemicals. Furthermore, the brain remembers to send out more reward every time the same stimulus is perceived. Ever since Pavlov's dog salivated when he learned that bell equals food, this concept has been known as *conditioning*. Neurochemicals activating certain brain regions give rise to the sensation of emotions. For example, one cluster of neurons located behind the ears in the temporal lobes called the amydala (we have two, one on each side) has been associated with fear and therefore, along with the rest of the limbic system[16], is a part of the dopaminergic system. Fear is an innate mechanism, but, through conditioning, we learn to attach it to aspects of the outside world as we go through life (hence, phobias). This is true of all emotions.

Although, once again, conditioning ourselves to distinguish between what we should and shouldn't do is pretty useful for keeping us alive, it's a bit of a bodge job. Certain substances, once consumed, give us the illusion of reward; the brain subsequently makes a note to get more. Let's take a look at nicotine.

Upon inhalation, nicotine particles are carried by the smoke to the lungs, where they travel one-way to the brain via pulmonary venous circulation. All neurochemicals are absorbed by neuronal receptors that stick out of post-synaptic cells, instructing its recipient to fire up. The brain regions that respond to nicotine – the mesolimbic area, the corpus striatum, and the frontal cortex – are flooded with dopamine, which we experience as a nicotine rush. The problem is that over increased exposure to nicotine, the brain physically changes, growing new nicotinic cholinergic receptors to deal with the workload. Now with too many new mouths to feed, nicotine deprivation activates punishment mode, leading to symptoms we recognise as withdrawal. These changes are, broadly speaking, permanent[xxvi]. Once an addict, always an addict.

In terms of starting out, 80% of smokers develop the habit before the age of 18[xxvii]. We know that it -restrictive taboo, the desire to be more grown-up than your friends and not be left out means that many young people look to emulate adults who themselves wish they'd never bothered. Thus, we become addicts before we are smart enough to know better[17]. This concept can be extended to other drugs too; where and with whom you grow up has a huge influence on your likelihood of becoming dependent on narcotics . Peer pressure itself is a result of the broader phenomenon of conformity that we looked at earlier.

Therefore, our brains are predisposed to learn to love things we shouldn't, and we are confronted daily with voices telling us eat more ice cream, cheat on partners and flick through Instagram for the fifth time that minute. Addictions, whether biological or psychological reveal an important fact about the brain. It is not one unified driver of thought and behaviour, but a cacophony of voices, each pushing us in different directions. People with enlarged amygdalae (cerebral fear centres) may perceive fearful voices as louder and more influential than others. People with genetic deficiencies in dopamine production affecting certain brain regions may find it much harder to turn down sugary

[16] A collection of very old brain networks we would commonly associate with the base, reptilian emotions.
[17] There is even a genetic component to nicotine addiction showing heritability of around 50% (Lessov-Schlaggar, 2008).

treats. We assume that each of us faces the same internal battle but this is anything but the case; addicts may be weak-willed, but they didn't *choose* to be. In fact, it is arguable that none of us chose to have the strength of will we have.

Writing in *The Neuroscience of Fair Play*, Pfaff and Wilson write: "the brain is an organ not merely divided into major parts but divided against itself," before going on to give an example: "The primal fear triggered by stressful or anger-producing stimuli is a response becoming well understood at the molecular and cellular levels. It is counterbalanced by an automatic shutdown of fear-inducing thought when altruistic behavior is appropriate."[xxix] Far from the two horses of Plato and Freud, it appears we have a whole herd on our hands.

Conclusion

Building on last chapter, we moved into the puzzling world of the subconscious and thought about what scientists mean when they talk about irrationality. While Freud got the ball rolling, research has splintered out into a panoply of avenues.

We first looked at a popular psychological distinction that contrasts a fast but error-laden system 1 with a slow, but calculating system 2. In the eyes of behavioural economists such as Daniel Kahneman, system 1 is the culprit for much of our irrational thinking. Over time, cognitive scientists have uncovered a frightening number of erroneous patterns in human cognition that are housed together under the banner of cognitive biases. The picture painted by behavioural economists for agency is bleak with the policy prescription of choice involving correcting for irrationality by nudging people to make the right decisions.

Another category of bias appears to be our need to conform. Asch's studies lend weight to the notion that peer pressure is incredibly powerful, and Milgram's demonstration that, under the right conditions, we could all be Nazis[18] should make us all consider just how susceptible we are to its effects. While most of us believe we may be able to resist the call to conform, research presented in this chapter indicates that we have an in-built need to look to others when thinking and acting, which we may seldom be aware of. If any doubt remains, and I hope it does, we will develop these ideas further in part 2. You are not as independent as you think, despite what Beyoncé tells you.

Our exploration into irrationality then moved into attention and how much control we have over it. Beginning with working memory and ending with vision, research in the cognitive sciences have revealed a number of subconscious processes that combine to tarnish the brain's reputation as an organ capable of impartial calculation. The ability to hold information in one's working memory, a key component of both attention and general intelligence, varies significantly from one person to the next; even worse, this variance appears to be beyond our control. Furthermore, vision appears to be one of many examples illustrating how neurons scramble to devise quick fixes to an ever-changing environment replete with countless fatal obstacles. These quick fixes are called *heuristics* and, as we will see in the next chapter, are the roots of cognitive biases. As useful as they are, however, they are flawed, and a part of each and every one of us whether we like it or not. Some of these flaws are hilarious (such as nature's dick pic), while some are tragic.

This led us to consider addiction. The brain's reward and punishment mechanisms help us to learn and enhance survival, but they also latch on to some pretty harmful stimuli, whether it's cocaine, social media or sugar. Yet again, our susceptibility to addiction is varied, partly genetically and partly

[18] If you haven't seen it, watch *Die Welle* (The Wave). Fantastic movie.

environmentally. It is harder for some people to say “no” than it is for others, and it doesn’t really get much easier.

If all this is true, degrees of agency differ from one person to the next, as Dennett stressed in the last chapter, and those degrees are beyond our control. While one person may find it fairly easy to ‘rationally’ evaluate all options, another may be misdirected by any number of unconscious voices. The real lesson to be learned is that our thoughts and actions are not orchestrated by a Cartesian *homunculus*[19], but represent a compromise between potentially hundreds of interconnected brain networks. What we may conclude here is that the brain is doing its best, yet its goal is not to represent the external world with high fidelity, but to translate the essentials into a working directory that helps us get by. When the relationship between perception and reality fails to coalesce, we call this irrationality; and yet we all have these imperfect brains, even if the imperfections differ from one person to the next. Therefore, in order to gain an understanding of the limits of agency, we may need to reformulate our notion of ‘rationality’.

[i] Crews, 2017
[ii] Reber, 1967
[iii] Pinker, 1994
[iv] Frankish, 2010
[v] Wason, 1968
[vi] Wason & Johnson-Laird, 1972
[vii] Evans, 2013
[viii] Ostrom, 1992
[ix] Brodbeck *et al*., 2013
[x] Hill, Memon & McGeorge, 2008
[xi] Kassin, Dror & Kukucka, 2013
[xii] Knobloch, Johnson & Westerwick, 2015
[xiii] Asch, 1951
[xiv] Milgram, 1963
[xv] Lewandowsy, Oberauer & Gignac, 2013
[xvi] Graziano & Kastner, 2011
[xvii] Kyllonen & Christal, 1990
[xviii] Conway, Kane & Engle, 2003
[xix] Supèr, Sprekreijse & Lamme, 2001
[xx] D’Esposito & Postle, 2015
[xxi] Vogel, McCollough & Machizawa, 2005
[xxii] Contrast Jaeggi *et al*., 2008 and Chooi & Thompson, 2012
[xxiii] Marr, 1982
[xxiv] Gibson, 1986
[xxv] Simons and Chabris, 1999
[xxvi] Benowitz, 2010
[xxvii] Lynch & Bonnie, 1994
[xxviii] Jedrzejczak, 2005
[xxix] Pfaff & Wilson, 2007

[19] A ‘little man’ in the brain pulling the strings.

Chapter 4
The rationality relativists

Our exploration of the limits of agency has led us to consider how the brain impedes our quest to make judicious life choices, but they've also forced us to inspect what 'judicious' actually means. To some, a concept can be defined by its opposite: happiness is the absence of sadness (or vice versa, depending on how full your figurative glass is), darkness is the absence of light, and irrationality is the absence of rationality. Wason's (author of the card problem) woes were due to his participants' deviation from a rationality defined by the ability to solve an abstract logical problem; liberal paternalists advocate the manipulation of information to 'nudge' consumers away from irrationally consuming unhealthy food; economists often conceive of rationality as maximising material gain. In the world of science, just as in the real world, rationality can sometimes appear to be little more than subjectivity disguised as objectivity; if you don't think like me, you're being irrational.

This last chapter on agency will explore the musings of a bunch of people I've labelled the 'rationality relativists' owing to their more relaxed stance on the hard distinction between rationality and irrationality. As we'll see, their perspective on agency goes beyond a description of who we are today to include who we have had to be over the course of our approx 2.5-million-year history. The conclusions of these thinkers will help us to narrow our focus of agency in preparation for the pant-wettingly exciting second part.

The bias bias

One thinker omitted from last chapter's discussion of rationality is Herbert Simon. Although a psychologist by training, he had the audacity to step into the world of economics and challenge the rationalist orthodoxy. In his view, agents are not utility-maximising but subject to *bounded rationality* – rationality with limits[i]: "boundedly rational agents experience limits in formulating and solving complex problems and in processing (receiving, storing, retrieving, transmitting) information"[ii]. Simon's prescriptions were targeted, specifying that economic models should incorporate limitations on information processing in order to redefine the concept of utility[1].

Psychologist Gerd Gigerenzer believes it is bounded rationality that should have shaped the discourse in the emerging field of behavioural economics in place of the exhaustive list of biases and heuristics. His claim is that while Simon and economists such as Frank Knight and John Maynard Keynes plotted an alternative to neoclassical economics (NE), behavioural economists such as Kahneman, Ariely and Thaler accepted NE's definition of rationality and set about demonstrating deviations from it. Furthermore, Gigerenzer attacks the suggestion that erroneous thinking can so neatly be categorised into a taxonomy such as that in the graphic presented in chapter 3. For him, biases and heuristics are not to be taken as examples of the human brain's limitations, but a by-product of its incredible power. Elsewhere, author of *Black Swan,* Nassim Nicholas Taleb, entered the battlefield with a tweet threatening the release of a paper[2] laying out no fewer than 12 errors with BE methodology. While there is a fairly acrimonious debate between Gigerenzer and Taleb on one side and BE's superstars on the other[3], one conclusion that I hope both sides would agree on is

[1] As you may recall, 'utility' is the term economists use to numerically represent what agents want, and is traditionally considered to be formulated by a thirst for moolah.
[2] *Nudge sinister: How Behavioral Economics is Dangerous Verbalism* (Tweet dated: 15/05/19).
[3] Gigerenzer's accusations seem to be focused BE's one-dimensional representation of the mind; he claims that by cataloguing biases, researchers are perpetuating the myth of *homo economicus* by continuing to hold it

that the cognitive mistakes we make are products of cerebral strategies that, while evolving to serve one purpose, are applied to another; irrationality, framed in this way, is simply misapplied rationality[4].

For example, let's return briefly to Wason's infuriating four-card problem and evaluate his definition of rationality. To solve the problem, the participant would need to a) conceive of a set of cards with numbers on one side and letters on the other, and b) be familiar with the logic of syllogisms, neither of which describe your average human. If all *a*'s are blue and some *b*'s are *a*'s, then who really gives a shit how many *b*'s are blue? The heightened cognition endowed to homo sapiens evolved to solve real-world, often social, problems[iii], with the ability to think through unique logical problems a happy coincidence that only a subset of us excel at. Most of us imagine a real deck of cards whose number-letter relation is consistent (because what madman would make cards any other way?) and spend little mental energy decomposing a rule that is ambiguous by design. Many of us perhaps feel a sense of anger towards the author of such a rule for making life needlessly difficult and inducing in us a sense of intellectual inferiority (and by 'many of us', I of course mean 'I'). There are a variety of evolutionary forces at play when attempting to solve the problem, none of which are fit for purpose. Our brains did not evolve to solve scientists' riddles, and thus our failure to do so is more an indictment of the irrelevance of the task itself than the inadequacy of the mind.

Gigerenzer goes as far as to say that the sheer volume of biases present in the BE literature supposes a 'bias bias' in which the desire to uncover a bias is a bias in itself. While I personally wouldn't claim that instances of erroneous cognition necessarily resist categorisation, Gigerenzer and Taleb do inject nuance to a debate that had become a little preoccupied with irrationality and bias. The world today is very, very different to the way it was a hundred, a thousand, or even a million years ago. In order to understand agency in the modern world, we need to gain some perspective on the historical challenges that helped to shape our brains. To some degree, we are still just Neanderthals dragging our knuckles into the 21st century.

Approaching from another angle, Teppo Felin offers up a redefinition of rationality, which he claims "is defined as correctly perceiving different options and choosing those that are objectively the best."[iv] With the focus switched to perception, Felin critiques both sides of the debate; NE's omniscient agent, and what he considers to be BE's perceptively perfect agent. The paper suggests that critics of economic agency from James to Kahneman have substituted perfect rationality for perfect perception through their tacit assumption that the issue is how we process information rather than the means by which information reaches us. Building on Gibson's[v] [5] suggestion that vision represents the selection of only pertinent stimuli, Felin and colleagues argue for the existence of an *umwelt* that describes vision – and, indeed, all forms of perception – as the selection of stimuli biased by the brain of the individual organism. For example, Felin takes issue with the use of visual illusions to highlight irrationality, stating that they "rarely provide a good example of bias in perception, but instead can be interpreted as illustrations of how the visual system works."[vi] For

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up as an ideal. He also takes issue with the negative treatment of such 'cognitive illusions' as well as the sheer volume of biases that dangerously shift the focus away from root problems. While a lot of Gigerenzer's opposition mis-frames the spirit of BE research, the debate allows neutrals to glean the good, the bad and the ugly of the same cognitive processes. Interested readers may want to start with an overview of the debate in a Bloomberg article entitled *Behavioral Economics' Latest Bias: Seeing Bias Wherever It Looks* by Brandon Kochkodin.

[4] Gigerenzer would also fervently argue that many of the biases claimed by BE simply don't exist when the methodology or statistics are tweaked.

[5] See chapter 3, p.?

example, if we return to chapter 3's Checker Shadow Illusion, the perceived difference in colour is not an example of the brain's inefficiency but rather the opposite. Evolution determined it useful that the brain be able to distinguish between a variety of light properties – from wavelength to amplitude to frequency – in order to, for example, note that a portion of the field of vision that appears darker is indicative of an area partially deprived of light; in other words, to distinguish not just shade from non-shade, but degrees of shade. Visual illusions are mostly designed by cunning humans to trick the brain and, in doing so, reveal to us how the brain has evolved. What Felin is emphasising here is that the eyes are not hi-fidelity cameras; they select and manipulate stimuli according to innate, changing brain structures. *Umwelt* is seeing what the brain wants (us) to see.

The modern caveman

Benjamin Franklin sagely pointed out that we could be sure of only two things in life: death and taxes, and in doing so reminded us that uncertainty is an inescapable certainty. Two evolutionary psychologists used this pearl of wisdom as a starting point to explore the etiology of irrationality. Martie Haselton and David Buss' Error Management Theory (EMT) suggests that flawed thinking is a product of choosing the least damaging strategy in the face of uncertainty or, in their terminology, to evaluate which errors – false positives or false negatives – will be least harmful[vii].

One of my favourite examples asks us to imagine an early female human faced with the dilemma of choosing a mate. Since nature determined that women should bear the brunt of reproduction, the female's main concern is finding a male who will share the burden and thus increase the likelihood that the kid will make it beyond puberty. Now, Ms. Cavelady has narrowed down her choice to a handful of suitors, but ascertaining which of them possesses the requisite attribute/s is, despite our lady's conviction in her ability to "read people", anything but an exact science. The uncertainty inherent in the decision yields two possible errors: she either attributes loyalty to a man whore (false positive) or imputes infidelity in a perfectly loyal candidate (false negative). Which of these errors, if committed, would be most harmful? While missing out on an eligible bachelor isn't ideal, raising a child alone (in a time without state assistance, free healthcare or Tesco Value beans) could be something approximating a death sentence. Managing errors, according to Haselton and Buss, allows for the formation of subconscious heuristics to deal with complex decisions involving uncertainty. Thus, when your Tinder match shuns your witty banter, she's not being irrational, fellas, she's been shaped by evolution to be picky.

Table 41.2
A Selection of Adaptive Biases

Category and Domain	False Positive (FP)	Costs of FP	False Negative (FN)	Costs of FN	Result
Protective: Approaching Sounds	Ready too early	Low	Struck by source	High	Bias toward underestimating time to arrival
Protective: Foods	Reject a food type that is in fact safe	Low	Ingest toxin or pathogen	High	Bias toward acquiring permanent aversion on the basis of one piece of evidence of toxicity
Protective: Diseased persons	Avoid noninfectious person	Usually low	Become infected	Often very high	Tendency to avoid persons with physical afflictions, even if noninfectious
Protective: Physically threatening persons	Avoid altercation with safe person	Usually low	Suffer physical injury	Often high	Tendency to overestimate physical formidability of potentially threatening persons
Social: Men's inference of female sexual interest	Inferring sexual interest where there is none	Rejection—relatively low	Inferring no interest when there is interest	Missed reproductive opportunity—high	Sexual overperception by men
Social: Women's inference of commitment	Inferring interest to commit where there is none	Desertion—high	Inferring unwillingness to commit where there is willingness	Delayed start to reproduction—relatively low	Underperception of commitment by women
Social: Social exchange	Attempt to free-ride and get caught	Potential ostracism, especially in collectivist social situations—high	Cooperate when one could free-ride	Give up a unnecessary benefit in exchange—relatively low	Bias toward cooperation
Self and Future: Beliefs about future achievements	Believe you can achieve things when you cannot	Low (if costs of failure are low)	Believe you cannot achieve things when, in fact, you could	High (if benefit of success is high)	Optimistic bias (where benefits of success exceed costs of failure); overconfidence bias

As we can see, the theory has been extended to other biases observable in the modern world. Of particular note is the discussion on disease avoidance that has been linked extensively to xenophobia[viii]. First appearing in a social psychology journal, the theory posits that when communities were small and isolated from each other and contagious disease rampant, the appearance of outsiders came to forebode catastrophic outbreaks. Being fair to outsiders was secondary to survival so that, in line with EMT, developing a prejudice was the least costly error[6].

This chimes with another theory of consciousness currently echoing through the halls of cognitive neuroscience departments. The likes of Anthony Damasio and Mark Solms wager that consciousness is a highly-evolved form of homeostasis[7] that teams up with the rest of the body to distinguish itself as a single organismic system that is separate from the rest of the universe; individual identity. What the human brain excels at is the creation of a model of the world that can be regularly updated and can re-organise itself based on updated models. Consciousness kicks in when our predictions fail in order to update our understanding either of how the world works, or how we work in relation to the world[ix]. Either way, the ability to separate 'me' from 'everything else' is pretty useful.

Returning to the optimistic Gigerenzer, whose examination of biases culminated in what he calls *fast and frugal* heuristics. While BE tends to *describe* a bias or heuristic, Gigerenzer seeks to *explain* why it exists. One of his most famous examples is how we catch a ball. When a ball is hit into the air, the brain is not able to accurately measure or process the variables that would pinpoint where the ball will land. Therefore, it must come up with a technique that combines perceptible information from the environment and the limited processing power at the brain's disposal. It was discovered that

[6] Inevitably, this is just one part of the story. Xenophobia's close cousin, nationalism, is inextricably linked to the phenomenon. We'll explore this in more detail in chapter 6.
[7] Think of homeostasis as a biological balancing act. The fact that the body can change its temperature depending on the climate, its water levels depending on diet and fight evil bacteria are all homeostatic attempts to attain a healthy biological balance.

baseball fielders (and, indeed, any catcher of anything) use a simple heuristic that keeps the angle of their gaze constant; if the wind shifts the ball higher, the catcher's gaze will become more obtuse, directing the catcher backwards, and vice versa [8] [x]. The gaze heuristic is both fast, in that it relies on immediate feedback from external cues, and is frugal, in that it is not cognitively demanding. In Gigerenzer's model of cognition, what has previously been described as irrationality by bounded rationality scholars, is simply 'ecological rationality'. In the evolutionary sciences, this is parallel to 'evolutionary mismatch' in which a series of genes were produced or 'turned on' in a fashion that helps its host to survive and replicate in a given environment, only for the environment to change dramatically and render those genes no longer fit-for-purpose[xi].

Evolutionary mismatch

In the last chapter, we saw how the brain's incredible plasticity in combination with its thirst for certain foods and chemicals can backfire and lead to addiction. This is one of many examples of evolutionary mismatch in which a brain function that evolved for one purpose attempts to serve another. While Gigerenzer correctly identifies and catalogues heuristics that do a great job at managing the complexity of the messy world we inhabit[9], the purpose of this chapter is to further explore the *limits* of agency. With this in mind, and hoping to avoid Gigerenzer and Taleb's Twitter wrath, let's look at more ways in which we're all idiots.

Gambling

In the last chapter, we saw how addiction is the brain's association of pleasure with toxic substances. However, while this may appear to vilify the dopaminergic system, we can now frame addiction within the wider logic of ecological rationality. To make this point clearer, let's break down gambling.

One key brain region involved in the dopaminergic system is the Nucleus Accumbens (NAc), one of whose jobs it is to mediate between the emotional limbic system and movement-inducing motor structures. An amazing feature of this region is its role in the brain's ability to reward an *expected* outcome. Readers are no doubt familiar with Ivan Pavlov's dog salivating over the expectation of dinner denoted by the ring of a bell; a study more or less replicating this conditioning effect found that the NAc spikes upon anticipation of a reward[xii]. The evolutionary logic of such a process is pretty clear; we need to learn how to recognise not just the good stuff, but also the signs that presage the good stuff. When your phone dings and your heart jumps in the hope it's your crush, it's because your NAc has learned to make the connection between that sound and positive social interaction. As wonderful as that is, it has its drawbacks.

One form of addiction that abuses this reward network is gambling. While most gamblers are able to draw the line after mild losses, more serious cases are divided into 'problem' and 'pathological' gambling, with the latter being classified as a neurological addiction. It is estimated that somewhere between 0.7-1% of gamblers have a serious problem, which equates, in the UK, to (a very approximate) 400,000 individuals[xiii]. The success of gambling institutions is to make rewards both high and unpredictable, given that the greater the expected reward and the more uncertain its receipt is, the more activity we see in reward systems[xiv]. We stick with a good mystery novel until

[8] Contrast this with uber-rationalist Richard Dawkins' take: "When a man throws a ball high in the air and catches it again, he behaves as if he had solved a set of differential equations in predicting the trajectory of the ball. He may neither know nor care what a differential equation is, but this does not affect his skill with the ball. At some subconscious level, something functionally equivalent to the mathematical calculations is going on." (1976, p.95)

[9] MORE EXAMPLES

the climax because of the expectation of a good pay-off; we invest emotionally in the outcomes of sports contests. Expectation of reward is incredibly powerful[xv]. This uncertainty ensures that, once the jackpot has been hit once, the NAc codes the stimuli that signals the jackpot (the bright whirr of the fruit machine, the buzz of the Bookmaker's, the overturned river) to send a rush of dopamine in expectation of another, and then another...Furthermore, this short cycle of hope, disappointment and occasional elation literally makes us more impatient, as gamblers and substance abusers devalue delayed rewards[10] [xvi]. By extension, the uncertainty of expected rewards erodes impulse control. How many times have you checked your phone in the last 15 minutes?

Stress and society

As mentioned earlier in this chapter, homeostasis is the term used to capture the regulation of physiological system balance. Another example of this is the aptly-named *sympathetic nervous system* whose job it is to redirect blood and hormones in the event of stress. The heartrate increases, flooding the muscles with blood and the brain with oxygen in preparation for fight or flight. The post-industrialised world is heralded for its technological feats but has often exacerbated stress-levels. To borrow *Sapiens* author, Yuval Noah Harari's observation: "one of history's few iron laws is that luxuries tend to become necessities and to spawn new obligations…people gets used to a certain luxury [and] reach a point where they can't live without it."[xvii] Harari uses the example of emails. Whilst it's undeniable that the ability to communicate with anybody anywhere at any time is a boon, the ease of sending mails results in a rise in total communiqués, which is why checking your inbox in the 21st century can feel like using a bucket to save a sinking ship; for every email answered, another two await.

Modern humans are overloaded with choice, whether it be at the supermarket, labour market or mating market. *Choice overload*, or *analysis paralysis*, posits that a surfeit of choice can have negative psychological effects. While the context in which this effect occurs and the variance between people are disputed[xviii], we are all intimately familiar with the exhausting effects of choice. Many of us in the Western world are choosing to stay single for longer, with online dating platforms providing a never-ending pool of topless gym selfies and filtered misrepresentations of beauty to fall back on; the sheer volume of choice, as well as the criteria these platforms nudge us towards adopting, can make modern-day dating overwhelming[xix]. It is little wonder that young Chinese men and women often outsource the decision to parents who wander through 'marriage markets' checking out CVs for prospective sons and daughters-in-law. Choice can be a blessing and a curse, as we will see in more detail in chapter 9.

Another facet of modern, populous society is the range of social statuses. While hierarchies have always played a role in the organisation of human societies, the sheer size of those societies, as well as changes in how hierarchies are determined, have created larger gaps between individuals that, when detected, can raise stress levels. A phenomenon in social psychology known as *social comparison* suggests that one's happiness is not necessarily what one has or doesn't have, but rather what one possesses *in relation* to others. According to Hill & Buss[xx], our ancestors evolved a certain cupidity towards the possessions of those around us in order to incentivise them to out-compete rivals and dominate the scarce resources in their terrain. Today, however, at least for the 99%, there is always somebody above us who has something that we don't. For example, one study found that those with wealthier neighbours admit less satisfaction, even if they're already pretty

[10] It may be false inference on my part, but it seems to me that this also explains the joylessness of materialism; the happiness of buying a new car lies predominantly in the expectation rather than the realisation.

well off[11] [xxi]. It's not the *absolute* but *relative* size that matters. This is reflected in Marx' observation that: "A house may be big or small. As long as the surrounding houses are equally small, it satisfies all social demands for a dwelling. But let a palace reside beside the little house, and it shrinks from a little house to a hut."[xxii]. In line with the *relative income hypothesis*, and serving as another nail in the coffin for rational choice theorists' conception of utility, income satisfaction is significantly affected by social comparison[xxiii]. All these opportunities to become aware of what you don't have send stress-levels through the roof[xxiv].

The horrific effects of stress have been widely documented. It shrinks your brain[xxv], does a number on your memory and executive functions[xxvi], messes with digestion[xxvii], has been correlated with cardiovascular ailments such as thrombosis and ischemia[xxviii] and is a general all-round bad hombre. Of course, these examples are extreme cases, but the fact remains that stress pushes the body into a state that evolved to deal with more existential threats. The world we have built for ourselves, however, has managed to inadvertently repurpose stress-response from battles with sabre-toothed tigers to battles with fellow consumers on Black Friday.

There are countless more examples of evolutionary mismatch. Dietary illnesses, obesity (and a general lack of exercise), short-sightedness, depression and solitude[xxix]. You get the idea. Of course, taking an evolutionary path assumes that genes are the sole architects of our irrationality but research in the last few decades has revealed that culture has an equally important role in shaping its inhabitants, and is no less susceptible to evolutionary forces. In the next part, we'll take a closer look at how this process unfolds.

Conclusion

As our discussion on agency draws to a close, it is worth summarising what we have learned about how much say we have in what we think and do.

The first chapter began with more abstract, philosophical musings on agency and free will, drawing out some of the main challenges and contradictions. Firstly, it emerged that we simultaneously shape and are shaped by our environments; given that the universe is determined by immutable laws and we are part of the universe, we, ergo, would appear to be caught up in this omnipotent wave of determinism. Yet, every fibre of our being rejects this hypothesis, desperately pointing at all the decisions we seem to make and, equally, those we don't. Perhaps there is an equation lying latently in the ether that will finally serve as free will's death knell and imprison us in lock-step with the laws of nature once and for all, but if there is, it seems unlikely that humans will ever be capable of figuring it out.

While the question of determinism lies out of our reach, we do have the means of exploring the relationship between the individual and everything else. In chapter 2, we saw the influence of

[11] It's worth noting that proximity matters. Even though looking out of the windows to see bigger and better homes can be depressing, it's still more satisfying to live in richer neighbourhoods, regardless of your own comparative wealth. "Yes, your neighbor's income does affect your happiness, but the income of your proximate neighbor has a different effect on your happiness than the income of your more distant neighbor does." (p.828)

science initially throw its weight behind determinism before Schrödinger's cat pissed uncertainty all over the walls. Despite more clearly-defined schools of thought emerging – compatibilism, incompatibilism, Libertarianism – and the principle that they rested on – principle of alternate possibilities – interlacing all debates, the issues that perturbed classic philosophy – causality and moral responsibility – remained insurmountable obstacles to achieving consensus.

Philosophers from Socrates to St. Augustine to Kant made intriguing cases for free will's essential role in moralistic accountability. The two possible outcomes of a criminal law case – guilty and not-guilty – speak directly to the ability to consciously avoid certain outcomes. Pre-programmed automatons cannot be guilty (but they can be de-programmed)[12]. In the next part, we consider how morality arises in societies new and old, as well as how this influences personality and, by extension, political ideology. Millennia of socialisation has led us to the point where morality dictates almost everything we say and do with the rules we come to agree on stored in an ethereal repository we call culture. Morality is the offspring of culture, not consciousness and yet agency can only be explained within the context of the real world. Therefore, are free will and morality *necessarily* intertwined? No, but unless we all decide tomorrow to go and live in caves by ourselves, culture must remain central to the discussion.

Building on Descartes' rejection of a biological mind and lionising of the independence of his own thoughts, we saw how Freud tore up the script with his model of the mind. Although Freud made some hilarious errors in his understanding of the unconscious mind, he opened up an area of research that has sought to understand the relationship between what happens above and below the surface of consciousness. In spite of neoclassical economics' conception of a fully-rational agent, subsequent research has uncovered a range of behaviour and cognition that appears to fly in the face of expectation. Chapter 3's exploration of irrationality came down hard on agency, detailing our wont to eat awful foods, see things that aren't there and choose drugs over life. While chapter 4 re-framed the problem as one resulting from environmental change outpacing that of the genetic foundations of the brain, there remained little support for agency. The likes of Gigerenzer and Taleb herald the brain's guesswork but do little to instantiate agency.

I've spent most of this first part shitting all over agency and free will, but I've not been balanced. As Pacherie observed, definitively proving that free will does not exists is beyond science at the moment and probably forever. There do seem to be decisions we can make, cerebral programs we can write and memories we can access, all with a high degree of freedom. While the debate likely won't be settled in our lifetimes, let alone these pages, the argument I'm proposing is that the control we are in possession of can be described as *diminished will*; although we probably have some free will, it is far and few between. With the role of will diminished, a void opens up as regards the source of thoughts and actions. Despite the feeling that 'we' made a decision, who 'we' are is a fragmented collection of brain networks – 'many voices' – competing for control.

With this conclusion in mind, we look to fill this void by switching focus to the brain's conception of 'us': identity. We will consider how the ghost in the machine is given a form that simultaneously distinguishes itself from, and harmonises itself with other organic machines. The inherent contradiction in this iterative process gives rise to a hazy sense of self that, despite needing to appear consistent, is anything but.

[12] There have been some excellent discussions on how we can harness what we know about agency to reform the legal system. See, for example, Robert Sapolsky's *Behave*, chapter 16.

[i] Simon, 1979
[ii] Simon, 1957
[iii] MacLean, 2016
[iv] Felin, Koendrink & Krueger, 2017, p.1041
[v] Gibson, 1978
[vi] Felin, Koendrink & Krueger, 2017, p.1046
[vii] Haselton & Buss, 2000
[viii] Faulker *et al*., 2004
[ix] Damasio, 1999; Solms, 2019
[x] McLeod and Dienes, 1996
[xi] Giphart & Vugt, 2018
[xii] Schultz, 2016
[xiii] Spinella, 2003; Gambling Commission, 2019
[xiv] Berns *et al*., 2001
[xv] Anselme & Robinson, 2013
[xvi] Petry, 2001
[xvii] Harari, 2015, p.98
[xviii] Scheibehenne, Greifeneder & Todd, 2010
[xix] Finkel *et al*., 2012
[xx] Hill & Buss, 2008
[xxi] Firebaugh & Schroder, 2009
[xxii] Marx, 1849
[xxiii] Boyce, Brown & Moore, 2010
[xxiv] Taylor, Buunk & Aspinwall, 1990
[xxv] Sarahian, 2014
[xxvi] Lupien *et al*., 2009
[xxvii] Söderholm & Perdue, 2001
[xxviii] Rozanski, Blumenthal & Kaplan, 1993
[xxix] Li, Vugt & Colarelli, 2017

PART TWO
IDENTITY

Chapter 5
From agency to identity

The first part of this book mainly focused on discerning wilful from non-wilful actions in order to gain some perspective on the degrees of agency we possess. In our discussion of irrationality and evolutionary mismatch, however, our remit expanded to understanding what causes those thoughts and actions that lie beyond our control; namely, brain networks that evolved to solve one problem, but, when thrown into novel environments, gave rise to others. Importantly, we also entertained a theory of consciousness positing that our awareness served to distinguish us as individuals from everything and everyone else around us. It follows, therefore, that one way human beings do that is the creation and maintenance of an identity, which, as we will see, drives much of what we think and do.

Thinking about examples of what constitutes identity, what comes to mind? The music you listen to; the politics you subscribe to; being a mother, brother, son or wife; being a hard-worker, weed-smoker etc. A lot of who we are as individuals relies on placing ourselves within one social group or another, and then broadcasting that placement to other people. Social media may reflect the pinnacle of identity-projection with anyone daring to friend or follow another opening the floodgates to an incessant wave of opinions, selfies and cat videos. As Waterman writes: "From birth onwards, our psyches always function with some physical, social, and cultural context, and a great deal of our time is spent in interaction with others...Even when we are alone, our internal monologue in consciousness is influenced by the images we carry of people in our life."[i]. With this in mind, if so much of our identities is forged by other people, are we merely mosaics of others or is there an individual in there somewhere? As previous chapters have hinted at, there may be no way of untangling this mess; we are both individuals and products of our environments. This chapter will begin by offering a cursory introduction to research focused primarily on how identity is conceived of in the mind of the individual. Although there will be frequent references to happenings external to the individual, we will remain seated within the mind throughout, considering how agents shape their identities.

Me, myself and I

Our boy, William James, made a distinction between the "I" – the thinking beacon of subjectivity – and the "me", which is a descriptive reflection of the "I" constructed by the ego. "I" thinks in the moment, while "me" accumulates all those moments across time to form an identity. In James' phrasing, the "I" is the subject, imposing itself on the world, while the "me" is the object, with the world imposing itself on it, which nicely highlights the ongoing battle of dominance between the individual and the external world; the "I" shapes the world while the world shapes the "me"[1] [ii]. I know I keep mentioning this but it's bloody confusing!

So, in considering how the "me" comes to be, it's worth pondering how our two selves interact. How can the "I" observe, analyse and shape the "me"? Why, through introspection of course. And can we all look inwards at our own minds? As it turns out, not really. A lot of us, especially kids, are shit at it.

[1] For the sake of clarification, agency includes both the "I" and "me" (what "I" does is driven by who "me" is), whereas identity is really just the "me". It is hopefully becoming clear to you, lovely reader, that although we are still thinking about agency, we are now only talking about one part of it.

Most of us are able to recognise ourselves in the mirror by the age of 2[2] [iii], at which point we begin to develop a theory of mind (ToM). Despite its seemingly philosophical appearance, ToM is really just the study of an animal's ability to a) understand that it has a mind that thinks and b) that other animals also have their own minds that produce distinct thoughts. So while the consciousnesses of 2-3 year-olds seem to be switched on, they remain pretty useless at (b) as exemplified, for example, by their inability to follow the gazes of other people[3]; a concept termed 'joint attention'[iv]. ToM is essential to successful introspection, as understanding other minds opens our eyes to all the possible ways our minds *could* be unique; you don't know how mediocre *Godfather II* is until you see the original. Humans seem to be able to achieve such enlightenment at around age 4 when we start to be able to infer false beliefs in others. The 'smarties task' had children look at, and inside, a pack of smarties inexcusably filled with pencils, before asking them what they thought an adult, only allowed to look at the outside, would think was inside the pack. 2-3 years-olds guessed the adults would believe the pack to contain pencils, while 4-year-olds correctly guessed: Smarties[v]; thus, the older children were capable of understanding that their thoughts and those of others were not always aligned[4]. Neurologically, this finding is corroborated by the discovery that the information-processing frontal lobes undergo a growth spurt between 4-7 years old[vi]. Further, given that the development of this brain region is connected to executive function[5] performance[vii], the egocentrism that prevents accurate inference into others' minds is not limited to young children; frontal lobe development differs not just across age, but varies widely in the adult population, too[viii].

In terms of identity formation, children start developing a moral compass by the age of 6[ix] allowing them to form and integrate into groups, which ushers in the beginnings of an articulable collection of personality traits between 8-11 years old[x]. As brains grow and humans split off into larger and more diverse groups, humans hone their ToM prowess and become Jedi-level introspectors, allowing for more control over identity-formation.

Identity's identity crisis

No doubt most readers will have heard or used the term 'identity crisis' before, but did you know the term's father, Erik Erikson (fun name), wasn't thinking about whether you wanted to be a marketing director forever or the difficulty of trying to balance a career and parenthood. Erikson, focusing on kids, devised of stages through which identity is formed. In Erikson's words an identity crisis does not refer to "an impending catastrophe" but rather "a necessary turning point, a crucial moment when development must move one way or the other, marshalling resources of growth, recovery and further differentiation."[xi] For example, stage 1, trust vs mistrust, sees an infant develop an internal model of trust and attachment; rubbish parents leave the infant with trust issues imprinted on their identity. While much of Erikson's focus was on mid-pubescent adolescence, when

[2] As denoted by passing The Mirror Test, an achievement matched by surprisingly few non-human animals including great apes, certain types of elephants, dolphins and whales and, somehow, ants. Although, it should be mentioned that "recognising oneself" should be interpreted conservatively. You probably won't find ants looking wistfully into a mirror doing engaging in a bout of soul-searching.

[3] To be fair to the runts, they aren't utterly oblivious to others. For example, 12-month olds interpret objects according to others' emotional responses (Moses, Baldwin, Rosicky and Todball 2001).

[4] In another study, human children and chimpanzees were tested on their respective abilities to cooperate. Confronted with a task and the opportunity to collaborate with a (same-species) partner, the human children (German 2-3 year-olds) not only chose to cooperate far more often, but their doing so led to successfully completing the task (Rekers, Haun & Tomasello, 2011). This lends weight to theory that it is enhanced cooperative capacities led to the eventual domination of man over beast.

[5] The brain's fat controller: emotional regulator, decision-maker, impulse controller and general internal dictator.

identity is at its most variable, his real contribution to the phenomenon was that identity serves as "the 'integrator' that moves one towards wholeness"[xii], the inspiration for which was Erikson's experience with WWII veterans whose loss of identity led to a sense of 'fragmentation'. The ethical code and perception of a 'just' world was severely uprooted by experiences of the depravities of war. In Erikson's view, these values coalesce to create an identity that serves to keep the individual feeling whole because when our model of the world fails to describe reality, the 'me' crumbles in our hands.

Despite Erikson's contributions, psychologists remained displeased. It was all well and good gaining a perspective on identity, but what was the point if they didn't have neat little boxes to put people in[6]? Up stepped James Marcia, identity heavyweight number two. Marcia borrowed heavily from Erikson's conception of identity crises, suggesting that a person is in one of two types of relationship with their identity: exploration or commitment. From this, he created four categories of identity status: achievement (explored then committed), moratorium (still exploring), foreclosure (committed without exploring) and diffusion (neither exploring or committing, just passively going with the flow)[7] [xiii]. Interviewing primarily adolescents whose "physical development, cognitive skills, and social expectations coincide to enable young persons to construct a viable pathway toward their adulthood"[xiv], Marcia and colleagues designed questions to ascertain what identity status participants could be ascribed to. Although Marcia praised the flexibility of identity, he suggested that "at the bare minimum, [identity] involves commitment to a sexual orientation, an ideological stance, and a vocational direction."[xv] Marcia may be accused by modern readers of channelling the cultural biases of his time, but, giving him the benefit of the doubt, his point was that identities require a degree of certainty in one area in order to explore another. Consider a mother and child in the park; the child may wander off to explore, return to his mum to check she's still there, then wander further afield, return, repeat. However, if the child returns to find the park bench, previously occupied by mum, empty, his world falls apart; far from wanting to explore, the child is inconsolably lost. For Marcia, exploration of identity works in the same way; the "I" can shuffle and re-shuffle the "me" as long as one 'core' card stays in place. Unfortunately for Marcia's theory, the four stages of identity development rely on these core cards being aspects of identity the importance of which is less today than it once perhaps was[8], which begs the question: are there any core facets of identity that remain constant from one individual to another today?

Throughout the 1980s, John Turner and colleagues devised and refined a theory that attempted to understand how individuals operate within a group. *Self-categorization theory* (SCT) anticipated that individuals' behaviour depended on whether they cognised at the individual or group level, as we saw in previous sections, but the theory went a step further. Turner theorised that, under certain conditions, the individual ceased to see herself as an individual in relation to a group, but as a member of a group in relation to other groups. For example, a group of Man Utd fans may argue over independent views on player performances, but when faced with criticism from Man City fans, their differences rapidly converge upon a consensus. This theory emphasises the process of *depersonalisation* that occurs when group cognition is activated; individual values are suppressed to

[6] The term often used in social science to convert a theory into an empirical study is 'operationalise'. Erikson's thoughts were interesting but needed operationalising.
[7] He called this the *identity status paradigm*, an unforgivably grandiose term even by scientists' standards.
[8] Despite Marcia's admission that the four identity statuses are themselves fissile, identity research had a new paradigm and set about grading elements such as cognitive ability, anxiety and interpersonal attachment in accordance with identity status.

accommodate group values. Although evaluating where one ends and the other begins is difficult for individuals and researchers alike[xvi].

From cradle to grave

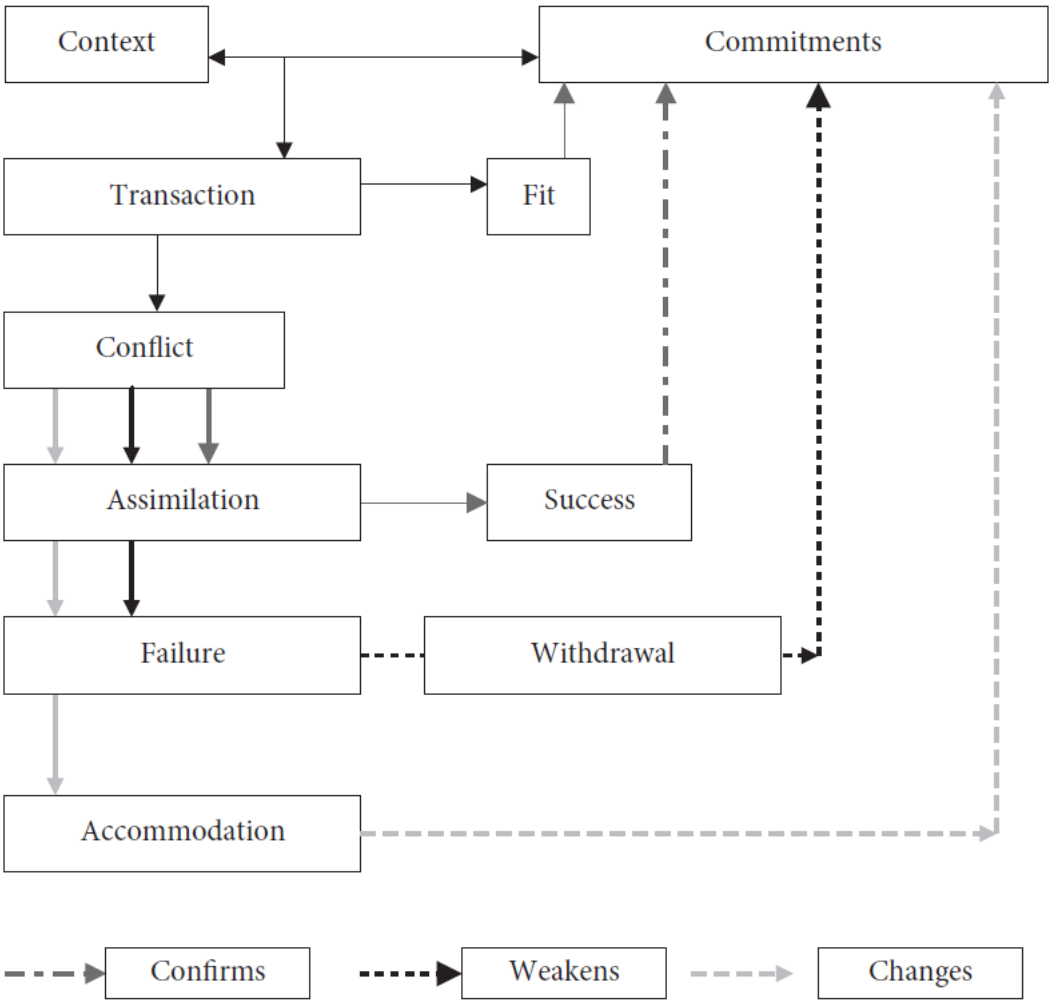
Considering this assortment of identity categories, and the means by which they come to be, forces us to ask why we have identities at all. Readers will hopefully recall the idea adduced by Damasio and Solm that agency allows us to distinguish between our organismic selves and the rest of the world. Further, if the "I" is the conscious agent, then the "me" is the descriptive conception of the "I" that can be consciously conjured up upon demand. But surely it's enough to simply 'know' that "I" am independent from "you" and "them"; why did our brains go one step further to create a "me"? While a big part of the answer – collectivisation – will be laid out in the next chapter, another key element is time. The human-specific endowments of theory of mind not only allow us to predict the behaviour of our prey, but also to recall instances of failed predictions and learn from them; by consciously sewing together memories enriched with cognition, we learn at a rapid rate. Over time, we stitch each scar onto an evolving tapestry that *reinforces* our separateness. Essentially, the creation of identity allowed our ancestors to harness time in order to learn from their experiences.

While Marcia's paradigm does speak to a temporal, dynamic process, developmental psychologists tend to be more concerned with mapping out the progress of certain psychological phenomena over time, rather than the cognitive processes that bring said changes about. One notable exception to this rule is the great Jean Piaget who mapped out changes in *cognitive* development. According to Piaget, when an individual is confronted with new information, they can either *assimilate* it by manipulating the new information to help it fit into pre-existing knowledge (he didn't really cheat on me because I know he's a good person), or we can *accommodate* it by changing the pre-existing knowledge to make the new information fit better (that rat cheated on me!). In the age of fake news and alternative facts, it is unfortunate to conclude that the assimilation or accommodation of new information often depends on which piece of knowledge we most desire to true.

Building on this model, Whitbourne and colleagues suggest that identity is subject to the same process. *Identity process theory* thus suggests that individuals who rely on assimilation "may appear to have high self-regard and perceive themselves as healthy, but underneath this façade they…have feelings of insecurity, particularly with regard to aging."[xvii] Anecdotally, we can all attest to the proclivity among older generations to resist updating their models of the world in the face of change. The authors find evidence for this, largely attributing it to a desire to avoid "intrusive thoughts" that shine a light on the contrast between their attitudes and those of the rest of society. So if assimilation makes you a stubborn old fart, the way forward must surely be accommodation? Nope. Serial accommodators, Sneed and Whitbourne suggest, allow the outside world (new knowledge) to construct their identities and, by extension, likely also suffer from low self-esteem. You can't win with these guys! Of course, the authors concede that the above representations are extremes with 'normal' cognition reflecting a combination of both assimilation and accommodation. However, they do suggest that the general human predilection is to maintain a consistent identity first, and only if that fails, make some cautious edits. As Block writes: "assimilate if you can, accommodate if you must!"[xviii]

Extending this idea even further, Bosma & Kunnan[xix] develop a model at the centre of which lies the interaction of the individual and the environment. To give life to their model below, imagine a guy tucking into a juicy steak (context). Believing himself to be a pretty upstanding gent (commitment), our man flicks open Twitter and sees that his best friend has declared himself vegan (transaction) causing him to consider whether he should follow suit (conflict). As we've learned, his first port of

call is to try to keep his identity in tact (assimilation); he perhaps reminds himself that meat forms an essential part of a balanced diet and, looking around at other diners tucking into their meaty dishes, is able to hit the 'like' button, be a supportive friend, and keep enjoying those lovely steaks (fit). While hitting 'like', however, he glances down at a comment suggesting that ample protein can be found from non-meat sources (conflict strikes again). Unable to come up with an appropriate rebuttal, he feels a wave of uncertain panic and puts his knife and fork down (failure). He knows at this point, he has two options: he can unfriend this self-righteous prick for making him feel guilty for doing something perfectly normal and put the pangs of guilt to the back of his mind (withdrawal), or he can vow to stop his meat-eating ways once and for all (accommodation -> change in commitment)…after devouring this one last steak, of course.



"This is all interesting," I hear you say "but what's it got to do with anything?" What this discussion draws out is an essential characteristic of identity; its need to stay consistent over time. Returning to the big picture of what really governs our thoughts and actions, this need often narrows our perspective to reject anything that contradicts our core identity. If I tell you that your political opponent is a massive partisan who cherry-picks facts to suit their ideology, you won't take much convincing. If I levy that critique on you, however, not only will it bounce off your impenetrable identity, but you'll likely get angry at me for the mere insinuation[9]. To further our understanding of the role identity has in decision-making, we need to consider the relationship between this

[9] Without a doubt, this book's most formidable obstacle.

obsession with consistency and 'core' components of identity (aka personality), as it is the two in tandem that determine whether the cognitive strategy should be that of assimilation or accommodation; however, we're not quite there yet.

Stranger than Fiction

Lingering on the topic of identity as the glue that keeps the individual intact over time, another interesting avenue of research is identity narratives.

Infants develop long-term memory throughout their first year of life[10] culminating in limited references to past experiences between 12 and 18 months[xx]. Cognitive psychologists distinguish between implicit (subconscious) and explicit (conscious) memory; of the latter, a further distinction is drawn between semantic memory – facts – and episodic memory – events – which lies at the heart of autobiographical narratives. Episodic memory reaches a milestone as children begin preschool when, in combination with a developing theory of mind, children can recall shared memories with friends and family[11]. By the age of 5 or 6, kids develop a 'story grammar' in which characters are infused with intentions; there is a beginning, middle and end, and a growing richness in descriptive language[xxi].

As our sense of stories becomes more intricate, we apply it more and more to our own lives. McAdams'[xxii] *lifestory model of identity* claims that the previously-mentioned sense of sameness over time is held together in the form of an unfolding narrative "serving to integrate the reconstructed past, experienced present, and anticipated future."[xxiii] Indeed, Mr. Identity Crisis himself, Erikson, in both of his biographies *Young Man Luther* and *Gandhi's Truth*, regularly referenced the use of narratives that both men used to explore their own identities. In one notable study, Josselson followed one participant, Maria, from her late teens to middle age (spanning 35 years), noting that what changed in her narrative wasn't the facts, but the interpretations thereof[xxiv]. As discussed in the last chapter, one possible cause of the emergence of agency was to confer the ability to create and update models of reality. Identity, in this sense, provides the language (or semiotics) for this to take place more regularly than it otherwise would.

Interestingly, narrative research has made its way into economics through Robert Shiller. In 2013, Shiller was jointly awarded the Nobel Prize in Economic Sciences for his work on demonstrating the inadequacies of *efficient markets theory* – the idea that changing stock prices (entirely) reflect information received by investors about future values of said stocks; in other words, stock market prices perfectly reflect real-world value. Economists, eh? Recently, Shiller has explored the imperfections of investors, culminating in his book *Narrative Economics*[xxv]. Likening stock market bubbles to viral videos, Shiller claims that economic behaviour is driven by narratives, which in turn drive markets. One example is bank runs. Many of you will know that modern banking has adopted the wisdom of *fractional reserve banking*, the central tenant of which allows banks to lend (in the form of loans) far more than they borrow (by way of customer deposits – your money, unless you keep your savings under the mattress)[12]. Most of the time, a very small portion of deposits are

[10] This was observed according to infants' ability to repeat a series of actions up to several weeks after an initial demonstration.

[11] However, a key determinant of this development is the extent to which mothers elaborate on these narratives with children (Fivush, 2011).

[12] There is a sound logic to this that is (crudely) comparable to the decision to switch to fiat money (i.e. money that is not fixed to a real-world thing, such as gold). Just as the latter allows for the (more-or-less) unlimited supply of money, freeing banks from 1:1 borrow-lend ratio allows them to lend much more, to (in an ideal world) borrowers who will use loans productively, stimulating and growing the economy.

withdrawn in any given period, and banks have enough liquidity (cash) to deal with demand. However, if word gets out that a bank is in trouble, people panic, rush *en masse* to get their cash out and the bank goes bust – an eventuality that could have been avoided in the absence of hysteria. When opening your accounts (in the EU at least), you may have noticed that you have government-guaranteed deposit insurance (up to £85,000 in the UK), which was designed to avoid precisely this scenario – if your cash is guaranteed by the government, hopefully your fear-tinged narrative won't cause you to wreak havoc on the banking sector[13].

For a time, I lived in a converted conservatory in Italy, one whole side of which was just one massive, curtain-less window. While at times I had a lovely view of the sea, in the mornings, I cursed the sun for hurling an offensive barrage of light waking me up at stupid o'clock. Most of us go with the traditional window system because we like to have some control over the amount of light we let in. As you may remember, Teppo Felin's *umwelt* performs this role for the brain. While the eyes literally control the amount of light your retinas are subjected to, the umwelt is the secondary filter for *information*, because if there was no filter, we'd all be receiving everything all the time. It would be chaos. What this chapter has sought to underline is that identity is one very important lens through which information passes on its way to being processed. Every moment is shone through a filter built up over a lifetime of existence. The food we dislike, the friends we choose, the jobs we take and political parties we support are all consequences of billions of moments, a slither of which we are aware of. As the free will Libertarians would argue, the root causes of our identity may not matter, so long as we have the sensation of control, whereas Van Inwagen would consider that your limited role in this sensation of self-identity is fatal to free will. Either way, it seems hard to avoid the conclusion that our limited involvement in identity-construction provides another example of *diminished will*.

So where does the "me" live?

To the sound of knowing groans, it is my duty to inform you that nobody really knows. However, Neuroscientist Todd Feinberg gave it a valiant crack in his excellent book *Altered Egos*[xxvi]. Detailing his experience dealing with patients with right frontal lobe damage, he described a handful of genuine identity crises. For example, the rather tragic *Capgras syndrome* leaves sufferers unable to keep track of the identities of even the closest of acquaintances, screaming "imposter!" at parents and spouses[14]. Damage the left frontal lobe and you may be left with *autotopagnosia*, forever believing your appendages (most commonly an arm) do not belong to you. In Feinberg's accounts of confused (and sometimes complete losses of) identities, what stands out is the unscathed brain regions' battles to make sense out of their new reality. Through often-complex narratives fabricated in the mind, origin stories of spare limbs suddenly attached to bodies were constructed, and conspiracies conjured for why a man you don't recognise is claiming to be your husband[15]. What emerges from the accounts of Feinberg's victims is the brain's need to rationalise what it perceives, even if that perception has deviated wildly from reality. Identity is one means of achieving this goal.

Conclusion

[13] Shiller admits that in economics (and, to be honest, in the social sciences, too) measuring the effects of narratives is very difficult, but any attempt to bring realistic conceptions of human agency into the economic sciences should be applauded.

[14] A similar condition, *Autoscopia*, that sees the self project images of itself around the world, is thought to be the inspiration behind Dostoyevsky's *The Double*.

[15] Readers may recall apophenia from chapter 3. In the case of filling in gaps in knowledge, the term used is *confabulation*, and it is one we are, again, all guilty of.

The goal of this chapter has firstly been to demonstrate the bridge between agency and identity, with the latter being one part of the former. Specifically, while the "I" the entity reading these words, the "me" is our sense of self that is hopefully being updated as we delve deeper and deeper. Agents can have some degree of control over their identities, but at the same time, our identities are shaped by the multitude of individual moments that stretch from birth until now; whether those moments be culture, friends, family, or news that your bank is going under.

Through research on theory of mind, we saw that by gaining a better understanding of a) our own minds, and b) the differences between our own and those of others, the door is opened for the formation of identity. Following from that, Erikson and Murcia's work highlighted the types of moments that have the greatest impact on the shape of identity. While Erikson connected identity crises to their inevitable resolutions, Murcia focused more on whether an individual was exploring identities or had already committed. Similarly, Whitbourne and colleagues borrowed Piaget's theory of assimilation and accommodation to build a model for how each identity crisis moment results in either a change of identity or, most commonly, a change of the facts to fit in with our sacred sense of self.

Furthermore, we also observed that a key element of identity is its need for consistency over time. McAdams, for example, likened identity to a glue that holds our identity in place, ensuring that we can distinguish between ourselves and everything else not just in the present, but from birth. The kid who shat himself on the bus when he was 10 after a tragic miscalculation; the teenage adolescent who wore black nail polish and donned a purple afro; and the refined gentleman writing these words are all memories strung together through the power of autobiographical narrative. Furthermore, these totally-fictional events and every other event collectively comprise the lens though which we receive information from the outside world; our identities have an enormous impact on how we think and what we do.

Although Schopenhauer's character seems to be a little more flexible than he gave it credit for, his belief that our role in its shape pales in comparison to its role on our behaviour remains difficult to dispute. Lacking from the discussion so far has been the connection between identity and personality, which would seem to be no less fundamental. So far, we have focused only on the mechanics of identity – the forces that shape it over a person's life – whereas personality is perhaps better thought of as a more tangible description of identity. Over the next three chapters, we'll start to integrate these two aspects of character, beginning with a transition away from "me" to "them".

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[i] Waterman, Ch.13, p.196
[ii] James, 1890
[iii] Lewis & Brooks-Gunn, 1979
[iv] Doherty & Anderson, 1999
[v] Gopnik & Astington, 1988
[vi] Thatcher, 1992
[vii] Shahaeian, 2015
[viii] Smith *et al*., 2019
[ix] Kochanska, Aksan, 2006
[x] Damon *et al*., 2006
[xi] Erikson, 1968, p.12
[xii] Erikson, cited by Hoare, 2001, p.31
[xiii] Waterman, 2015
[xiv] Marcia, 1980, p.110
[xv] *ibid*, p.110
[xvi] Turner *et al*., 1987

[xvii] Sneed & Whitbourne, 2003, p.313
[xviii] Block, 1982, p.286
[xix] Bosma & Kunnan, 2001
[xx] Bloom, 1991
[xxi] Mandler, 1984
[xxii] McAdams, 1985
[xxiii] McAdams & Zapata-Gietl, 2015, p.89
[xxiv] Josselson, 2009
[xxv] Shiller, 2017
[xxvi] Feinberg, 2002

Chapter 6
Groupthink

As the field of evolutionary science matured in the early 20th century, several thinkers floated the idea that evolution acts both at the individual- and group-levels. Konrad Lorenz, who was a staunch advocate of Nazism (and then tried to pretend he wasn't when the global optics of genocide took a turn), used his experience studying geese to contravene the individual-selection paradigm. Lorenz noted that new-born geese were genetically primed to assume the first moving object is a parent, leading Konrad to assume the role as Mother of Geese, like a farmyard Game of Thrones. These early experiences kindled a big-picture thesis on the evolution of behaviour which, in his book *On Aggression*, culminated in the argument that aggression developed in animals "for the good of the species"[i], ensuring that the victorious survivors formed the strongest possible group.

Darwin himself had left room for some form of group selection, who puzzled over the tendency for social insects to defer reproduction to their mothers[ii], rather than engage in mating themselves. Furthermore, how could we explain acts of altruism given that a gene's primary goal is to replicate itself, not others? During the 1930s, R.A. Fisher and J.B.S. Haldane laid out the mathematical principles for acts of altruism[1], central to which was how genetically related the recipient of an act was in relation to the actor. As siblings and parents shared half of a given individual's genes, and cousins an eighth, altruism was more common between brothers than cousins because the costs of the act were offset by the increased survival likelihood of a larger pool of your own genes. This became known as *kin selection*, used for the first time in the 1960s by John Maynard Smith. Thinkers such as Richard Dawkins insist to this day that any example of altruism, or indeed acts that appear to favour the group, can be reduced to a selfish gene, acting in the individual's interests alone[iii].

Originally a kin selection fanboy, O.E. Wilson defected to team Group Selection after evidence for kin selection failed to emerge in studies of animals and insects. Wilson's attempt to reconcile the notion of altruism and evolution yielded *multi-level selection theory* (MLS). While he doesn't deny that evolution acts upon the genomes of individual organisms, his theory suggests that those traits that are selected can be considered 'fit' (which is to say, help the genome to copy itself (replication) and then not be killed (survival) before it can copy itself again) at the level of the cell, organ, whole organism, small groups of organisms (e.g. family), mass collection of organisms (e.g. society), and so on. As you may remember, one element that distinguishes humans from other animals is our refined ability to collaborate owing, to put it simply, to greater strength in numbers. MLS, therefore, suggests that traits such as compassion and empathy have been selected for at the group level. We are empathetic in order to strengthen the group because, as a general rule, the individual organism has a better chance to survive and replicate in a group that is both large and, importantly, cohesive. As Wilson writes: "selfish individuals beat altruistic individuals, while groups of altruists beat groups of selfish individuals."[iv]

Writing in 2015, Harvard linguist and psychologist Steven Pinker[v] argued that using the term 'group selection' unnecessarily muddies the water, as all prosocial genetic traits that exist are those that have survived the vicissitudes of the world *only within an individual genome*. Fair enough. Pinker also dismisses acts of altruism among unrelated individuals as either responses to coercion (as in the

[1] rB<C, in which *r* is the genetic relatedness between the actor and object, *B* is the 'reproductive benefit' that the actor receives from the act of altruism, and *C* is the 'reproductive cost' that the act has on the actor.

case of WWII conscription) or 'fictive kinship', which (mis)applies the principles of kin selection to groups of unrelated persons[2].

You are not required to take a position on this debate, but what it does is to provide some context as we move our exploration of identity from the individual to the group level. Learning from experiences, as we saw last chapter, is one theory for why consciousness evolved; another relates to our 'social perceptual machinery'[vi]. Our environments have had and will continue to have a fundamental impact on who we believe ourselves to be, which in turn determines the decisions we make on what we do and how we think. With this in mind, an important point that Pinker makes is that many traits that are discussed by group selectionists are not genetically-coded – like eye colour or skin pigmentation – but learned from the environment. Therefore, readers should bear in mind that the examples of group-influenced behaviour discussed in this chapter are all the product of evolutionary forces, at the level of the genome and at the level of culture. One important theme that lurks between these pages is that human behaviour can only be understood as the interaction between the microscopic and the macroscopic; the individual and the group; genes and culture. Thus, while I will be careful with the language I use, bear in mind that the traits discussed are not necessarily genetic, but a result of a symbiosis of nature and nurture.

From the cell to society

Perhaps it is my wilful interpretation of Wilson's work, but it seems that one advantage of MLS that Pinker misses is the conflicts that arise between traits selected at different levels. Suicide bombers are not hardwired to self-destruct (otherwise those suicidal genes wouldn't make it out alive), yet some collection of traits has allowed *for the possibility* to override their survival instinct in favour of a more pressing group cause, whether real or imagined. Returning to our many voices metaphor, the louder voices dictate behaviour at the expense of the quieter ones; some of these voices may be pro-group, some pro-individual, and when the two come into conflict, there can be only one winner. For example, xenophobia, which as we saw, may have resulted from fear of disease, is a group-level trait, in that it must first categorise people into groups (based on physical differences), then determine which group/s to avoid. However, if a particularly xenophobic person refuses treatment by a foreign doctor, the group-level trait switches off the individual-level self-preservation trait[3]. As O'Gorman and colleagues write, "group-level (between-group) selection must outweigh the individual-level (within-group) selection for a group-beneficial trait to spread."[vii] It is the conflict between these various levels that give rise to debates over cooperation vs competition. I would go as far as to argue that the political systems we exist within combine individual freedom (represented by team blue: capitalism) and collective cooperation (team red: socialism); the fact that most political systems contain elements of both – and that debates concerning which of the two should gain precedence rage on – reflect the age-old evolutionary conflict described above. Framed in this light, "[i]dentity...is both a structure and a process, both the outcome of developmental progress and a consistent way of being in the world...[it is] a bridge between the individual and a place in society."[viii] We define ourselves simultaneously as individuals within a group and group members in relation to other groups, in order to anchor ourselves within society.

[2] Both of these responses are disputable, but not particularly relevant to the purpose of this chapter; people undoubtedly possess prosocial traits irrespective of whether they are examples of evolutionary mismatch or evolutionary fitness.

[3] Again, to clarify, both traits are the product of evolutionarily selected at the individual level, but the *influence* of said selection operates on different levels.

Let's approach the issue of group identity from a developmental[4] angle. One very useful attribute of human cognition is its ability to categorise elements of the outside world – shapes, food, smells, tastes and people. For example, Bradford Mahon and Alfonso Caramazza compared the visual cortices of congenitally blind and sighted participants, finding that, when asked to consider the size of certain (animate and inanimate) objects, the neural activity observed was strikingly similar[ix]. Further research has revealed a number of seemingly innate forms of cerebral categorisation that connects sensory brain regions to the limbic (emotions) system to create associations among all the stuff that's out there. As Caramazza puts it, we may associate a bear with danger "but you don't have to run away from a hammer". The utility of innate cognitive categorisation relates to last chapter's discussion of Gigerenzer's fast and frugal heuristics; non-conscious categorisation is a shortcut that helps us deal with a complex world. Heeding Pinker's caution, what we can safely conclude is that there are innate brain networks ready to categorise that are employed for social categorisation *after birth*. In Gary Marcus' words: "nature provides a first draft, which experience then revises."[x]

This symbiosis of nature and nurture begins very early. Research has found that children are more likely to follow the lead of same-sex adults[xi] as well as those of the same linguistic[xii] or racial groups[xiii]. Of course, this doesn't mean that all kids are horrible racists. Rather, it shows that the culture that surrounds us acts very early on these innate neural mechanisms. Around the time when our brains develop the ability to infer the thoughts of others – 2-3 years old – children start devising expectations regarding the norms[5] that a group is expected to follow[xiv] while dealing out justice to non-conformers[xv].

Another fantastic example of culture shaping genetic predilections comes from political psychologist Jonathan Haidt who suggests that our attitudes towards people piggyback on the brain's more ancient sensory networks of taste. Among mammals, external stimuli are captured by the nose and tongue, and carried to the insular cortex via the olfactory nerve. The insular cortex then connects with other brain regions forming (insular) networks that connect a certain smell or taste with a certain emotional response. Neuroscientific research has found that it is these networks that give rise to 'social cognition', or, simply, our more subconscious feelings towards people[xvi]. The genetic blueprint that allowed early humans to learn what substances to avoid was recycled in the context of environments consisting of growing communities in order to manage interpersonal relationships. Thus, neurologically, the response you have to the inveterate yoghurt thief at work is very similar to the disgust evoked when trapped in a Dutch oven.

What we can glean from all this is the internal conflict that exists between reasoning and heuristics. Evolution decided that it was unreasonable to expect the brain to create an emotive response to each individual food, determining that the creation of categories offered a shortcut to offset its computational limitations. As societies grew and social intelligence became increasingly important, the same categorisation was applied to humans, pigeon-holing individuals into stereotypes, which allowed our primitive brains to make snap decisions about individuals when careful deliberation would have either been too slow, or relied on inadequate information-processing. In today's world, the function of stereotypes is less existential, and, therefore, the accuracy of categorisation is more ambiguous; the characteristic 'murderous' is a lot easier to observe than 'work-shy'. Furthermore, the huge growth in population over the last few centuries means the groups we create are larger

[4] The term 'developmental' in the social sciences (mainly psychology) generally looks at the processes through which phenomena come to exist, usually through childhood. Last chapter's discussion of the early stages of theory of mind is one example.

[5] For example, loyalty, generosity, prosociality, reciprocity etc.

and the calculus of aggregating group characteristics more difficult; if a group of 10 Mexicans sit around shotting tequila all day, we can draw pretty concrete conclusions, but when that number increases into the thousands over a large geographical area, those stereotypes excel at resisting empirical judgement, creating a grey area rife for acrimonious debate. While the effects of this phenomenon will be discussed in the next chapter, bear in mind, for now, that ordering ourselves into groups allows us to construct identities by comparing and contrasting individuals in relation to other members of your own group (if you're friends with someone on the right, you're not a true left-winger), and groups in relation to other groups (the left are morally superior to the right). As we'll see, these individual- and group-level heuristics often come into conflict.

The power of culture

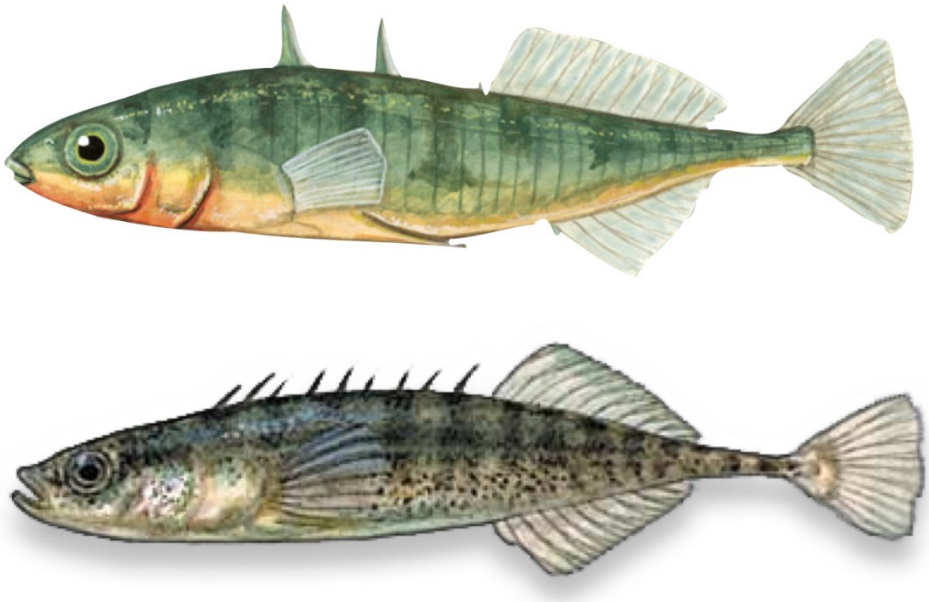
The word 'culture' is likely to evoke memories of weird and wonderful customs and events experienced on your travels, but as we have seen, its role in shaping human behaviour is not to be understated. One of the early proponents of the power of culture was anthropologist William Durham who in the 1970s challenged the prevailing paradigm by suggesting that *value selection* – the selection of traits based on their evolutionary value – could be divided into primary (genetic) and secondary (cultural)[xvii]. Controversial at the time, Durham believed that culture stems from, and is thus always preceded by, genes. However, researchers such as O.E. Wilson, Peter Richerson and Robert Boyd give greater precedence to culture suggesting that the relationship between the two is more of a two-way interaction; that culture can influence genetic selection, as well as vice versa.

For example, let's think about universal grammar. Linguist and political scientist, Noam Chomsky, theorised that the prevalence in language among all human civilisations lends itself to an innateness of language learning. Language itself, however, from English to Swahili to Khoe, is not innate, but rather the product of cultural evolution. The *capacity* to learn a language – pattern recognition, motor cortex control over the throat and mouth, abstraction – allowed for humans to develop systems of oral communication. This paved the way for more complex forms of cooperation, increasing the evolutionary fitness of superior linguists, which, in turn, selected for those combinations of genes that aided complex language-acquisition[6]; from genes, to culture, back to genes.

Despite his insistence that selection operates solely at the level of individual genomes, Richard Dawkins coined the term *meme*[7] to refer to a cultural 'unit', such as a practice, symbol or word, that can be transferred from person to person through social learning. This book, for example, is a meme-conveyer, moving knowledge and ideas from my brain to yours. Boyd and Peterson in their book *Not by Genes Alone*, extended this idea to consider those memes (or 'cultural variants', to use their term) most susceptible to diffusion, which they labelled *biased transmissions*. One key conclusion was that "Selection favors a heavy reliance on imitation whenever individual learning is error-prone or costly, and environments are neither too variable nor too stable."[xviii] Thus, if memes are spread through imitation, the potential costs of making errors as well as the likelihood of the environment to change, impact the rate of transmission of memes. The authors assume that the extreme rates of climate change experienced during the latter half of the Pleistocene era (around 120,000-72,000 years ago[xix]) that brought about constant fluxes in early human environments selected for traits that enhanced social learning.

[6] Something that comparative psychologist, Michael Tomasello, calls *ratcheting*.
[7] And yes, this is where the modern equivalent takes its name from.

Kevin Laland added greater depth to this phenomenon in his provocatively-titled book *Darwin's Unfinished Symphony* in which he brings the mechanisms of social learning into focus. Providing further evidence of the innateness of such imitation, Laland observes degrees of social learning in a range of animals, for example the threespine and ninespine stickleback fish (see below). Despite various manipulations to the two species' environments, the former could not be induced to copy strategies from its shoalmates because, Laland conjects, while the historical environments of ninespines were replete with danger and more uncertainty, raining heavy punishment on individual innovation and thus favouring imitation, this was not the case for the threespines; as Paris Hilton illustrates, an easier life detracts from learning. Laland and colleagues ran a free-to-enter tournament called *Cultaptation* in which, over the course of many rounds, participants had to program survival strategies that combined three options in response to an environmental challenge: INNOVATE, OBSERVE or EXPLOIT, only one of which could be used per round. Innovators would create a novel means of adapting to an environment; observers would copy the strategies of others; and exploiters would employ the technique, whether copied or innovated[xx]. The game sought to investigate the strategic trade-offs individuals experienced when facing changing environments within groups. The most effective strategies, it turned out, were those observing – copying – more than innovating. Freeloaders unite! Explaining the results, Laland notes: "if individuals are able to copy in a "savvy" fashion—for instance, if they can be selective about when, and how frequently, they copy—there are real fitness dividends. Successful strategies were able to time copying for when payoffs drop, evaluate current information based on its age, judge how valuable information would be in the future, and use all this knowledge to maximize copying efficiency."[xxi] Indeed, 4 out of the 10 best strategies used OBSERVE 95% of the time. Expanding further, Laland rejigs Boyd and Peterson's 'rules' of social learning, proposing that the frequency of social copying strategies is determined by: 1) cost – if determining the safety of a food source requires many steps, copying may be employed; 2) uncertainty – sufficient ignorance in an area begets copying; 3) failure – if a social learning strategy fails to lead to satisfaction, the strategy may be changed.



But what does this mean for humans? As it turns out, we do not just excel at copying, but also teaching; a trait that our primate cousins largely missed out on. It is theorised that the greater degree of inter-homo competition over resources inspired greater intra-group cooperation, which gave rise to what essentially amounted to education. Copying is a form of learning that works only for rudimentary strategies; when the skills in question become more complex, learning can only benefit individuals and groups in the long-run if it is accompanied by teaching. Although the distribution of teaching among various species is still somewhat of a mystery, the sheer cognitive demands of such a trait mean that is may only viable when teaching is not just limited to the domain of parents, but expands across society more broadly (as is the case for meerkats, bees, ants and humans); the result is culture, which serves as a repository for all kinds of useful knowledge such as literacy, science and the floss dance.

Further, the growing complexity of human collectives leads to unimaginable complexity in our environments. Whether you take population growth, technological sophistication, urbanisation or any number of variables as your reference point, human environments have evolved and continue to evolve at an astonishing rate. Copying, therefore, while impugned in the modern age, has served humans very well as an evolutionary strategy. If Laland is right, then uncertainty + complexity (+ observed error rate) = a high degree of imitation. For this reason, it is hardly any surprise that we often look to the opinions of the groups we belong to in order to arrive at decisions on matters such as the pros and cons of EU-membership or what vaccinations do to our bodies in the long-run. A tiny slither of us can make even educated guesses on such matters, and so we invariably look to others for answers. Suddenly the conformity bias – overriding what *we* think is right in favour of what *others* think is right – discussed in chapter 3 doesn't seem quite so silly. So while culture remains our main source of knowledge acquisition, to understand which of its many elements we choose to extract, let's take a look at how groups cohere.

Me Tarzan, you Jane

In the last chapter, I asked you to consider the necessity of the 'me'; why do we need identities? The answer – to serve as a bridge between the individual and their place in the group – was a bit of a cop-out. We're still yet to get to the heart of why we need to recognise our place in a group. One answer to this puzzle comes about by analysing the structures of human societies; the controversial world of hierarchy.

The innateness of hierarchy appears to correlate nicely with the traditional left-right political divide. On the extreme left, hierarchy is dismissed altogether; authority is either denied or severely diminished and a tabula rasa-*esque* equality attributed to all group members. On the extreme right, hierarchy is a fundamental element of a functioning collective system; individual difference is emphasised and represents the justification for (often extreme) unequal distributions of wealth and power[8]. Another way to express a theme of this ideological discordance is the distinctive priority awarded to the group (on the left) and the individual (on the right). As proposed before, both individual- and group-level considerations collide and coalesce to give rise to institutions that shape today's social and political systems.

Political anthropologist, Christopher Boehm[9], dedicated a large part of his career to the study of primates and humans in order to ascertain the innateness of hierarchy. He notes that chimpanzees,

[8] Not to mention efficient division of labour (Rowlinson, 1997).

[9] Disclaimer: Boehm is also an advocate of group selection theory, discussed earlier. Although readers would be wise to decry selection bias, Boehm is one of the few anthropologists to consider political behaviour and his stance on this issue was a secondary consideration.

for example, are fiercely hierarchical, with post-adolescent males organising themselves into high- and low-ranking structures, and the lowest-ranking male always ranked above the lowest-ranking female. Similar to gorillas, the alpha male oversees his dictatorship, having his pick of ladies (unlike gorillas whose pimp-like males bop about with harems), first choice of meat and slapping would-be pretenders to the throne. Cooperation among primates is usually limited to minor conflict resolution and hunting parties (both of mobile food and rival chimp gangs). Bonobos, although more gender-equal, still retain a strict alpha-to-gamma hierarchy that is fairly linear[10]. The patriarchy evident in animal and most 'illiterate'[11] human bands and tribes can be ascribed to a) diets that rely more on large game and b) greater threat of predation either by big beasties or rival human bands and tribes, both of which men excel at dealing with. Bonobos, for example, have mostly been roaming around in an environment consisting of abundant food resources, meaning there is less need for inter-tribe war. The demotion of traits that males excel at allowed for the females of the species to make equally valuable contributions to the group, and gave them a seat at the table.

Even among egalitarian human groups, such as the !Kung people in southern Africa and the Utku Eskimos in northern Canada, such gender imbalances can be seen. At the group-level, leadership roles are weak (although often dominated by men), but at the family level, a very strict hierarchy is imposed with women bestowed the same chattel status as livestock, and domestic violence deemed unremarkable; however, female participation plays an important role at the group-level. In an attempt to explain the *U-curve hypothesis* – that human hierarchies went from prevalent, to non-existent, back to prevalent[xxii] – Boehm classifies egalitarianism as *reverse dominance hierarchy*. Whereas *big man* tribes – skewing towards the Mussolini end of the dictatorship spectrum – are ruled by a small coalition of men at the top of the hierarchy, an egalitarian group establishes norms that allow the group majority to dominate would-be 'upstarts' vying for greater power (a small-scale 'dictatorship of the proletariat'). Given the dominance-submission predispositions among all primates[12], Boehm argues that, rather than an attraction to equality, it is the opposition to authority that gives egalitarianism its impetus. As Schneider writes: "all men seek to rule, but if they cannot rule they prefer to be equal."[xxiii] In such a society, certain 'levelling mechanisms'[xxiv] are culturally institutionalised in order to maintain a degree of status quo. For example, a returning victorious hunter may be met not with praise, but scorn for not returning with more; rituals emerge that make a show of distributing meat around the village by an individual not responsible for the kill (to prevent ostentatious laps of victory); arrows are randomly exchanged in order to anonymise the dealer of the final blow. In such societies, commonly-held virtues are often humility, generosity and emotional control[13] with anyone falling foul of such norms likely to be subjected to gossip, criticism and ostracisation orchestrated at the group-level, by men and women alike. Such collective acts can be seen as pre-emptive, cutting down to size those imbued with traits that *could* lead to tyrannical behaviour. Leaders, in such societies, are usually possessed with these virtues and little else;

[10] It is important to note here that most data on bonobos are taken from those in captive given the remoteness of their motherland on the south bank of the Congo river. Therefore, non-linear hierarchies have been found, often in populations with few adults (e.g. Paoli, Palagi & Tarli, 2006).
[11] Not being judgey. This is the term preferred by anthropologists.

[13] By way of an excellent anecdote, anthropologist and long-time Eskimo-initiate, Jean Briggs detailed her experience of being ostracised by the Utku Eskimos. Incorrigibly incapable of dissembling her Western emotions, she frequently found herself at the receiving end of a levelling mechanism when her repeated transgressions led to an intense, months-long period of ostracisation. The full story is fascinating (Briggs, 1971).

"[hunter-gatherer bands] seem to realize that if a little authority is permitted to develop, then a normal human leader is likely to want more."[xxv]

Sounds great, so why aren't we all authority-scorning egalitarians[14]? Although anthropological records are anything but complete[15], egalitarian bands tend to be predominantly small (up to 50), nomadic hunter-gatherers. A point made by both Schneider and Boehm is that as humans began to settle and develop land (as occurred during the agricultural revolution), competition for resources led to a greater instance of inter-group conflict. As we saw before, greater conflict necessitated war heroes whose status was allowed to rise significantly in order to incentivise them to lead offensive and defensive operations against rivals. Regarding group size, it is worth noting that conflict is far from absent among egalitarian tribes. When leaders are weak, conflicts that resist the usual levelling mechanisms can escalate into violence without hope of remediation[16]. As groups scale up, the variance in (innate) individual differences bubble more violently to the surface, and the need for formal institutions to deal with conflict resolution begets ever-more rigid hierarchies. The moral codes that bind groups together become so complex that they are codified and enforced so that not every tussle results in bloodshed[17], but instead by a 'neutral' set of rules applied universally[18].

"Humans naturally form hierarchies when they love groups,"[xxvi] Boehm notes, but in order for groups to dominate others, greater numbers expand the range of individual differences that allow for a huge variance in individual contributions to group welfare. Our innate tendency to seek, or at least be cautious of, domination causes us to ascertain our place, or social status, within the community. One of the means by which humans attempt to perceive the relationship between our individual contribution and the group is…can you guess?

Identity.

Now we have something approaching the 'why' of identity and in the last chapter, we discussed the 'what' from the perspective of the individual mind. In order to bring together the mechanics of identity and the group-level mechanics of this chapter, it is useful to further explore another device coded into identities that keeps large groups together: morality.

Jonathan Haidt, whose research into disgust we saw earlier, has looked into the connection between personality and political ideology. After initially discovering a relationship between disgust and political conservatism, Haidt began developing a set of "innately prepared" characteristics that give rise to variance along the left-rig political spectrum. What emerged was a list of *moral foundations* with four initial categories - suffering, hierarchy, reciprocity, and purity[xxvii] – that were refined over

[14] Authority-scorning, we certainly are. New York Mayor Bill de Blasio's opening of an online photo repository to host uploads of members of the public flouting social-distancing rules was met with bombards of dick pics, middle fingers and unfavourable photoshopped images of the mayor himself. https://nypost.com/2020/04/21/de-blasios-social-distancing-tip-line-flooded-with-obscenities/?utm_source=facebook_sitebuttons&utm_medium=site+buttons&utm_campaign=site+buttons

[15] The reader should bear in mind that accumulating data not only requires the ethologist to integrate fully into a tribe for a sufficient period of time, but that said ethologist is able to circumvent his or her own biases. The data accumulated itself must pass through the researchers own umwelt before being analysed, a point readers of the book are hopefully now in a position to better appreciate.

[16] For example, among the Yanomamo in Ecuador and Brazil, villages are divides into 'patriclans' that are prone to conflict resulting in high rates of homicide. Contrast this with the bully chimps whose intra-group homicide rate is controlled by the alpha.

[17] Chagnon (1988) estimates that such conflicts comprise around 25% of deaths among males in such societies.

[18] Evidence for this can be found in increased tolerance for greater status. For example, among the egalitarian Kapauku in New Guinea, leaders are endowed with both magnanimity and wealth (Pospisil, 1963).

time and are now presented as five moral foundations and their opposites: care (harm), fairness/proportionality (cheating), loyalty (betrayal), authority (subversion) and sanctity/purity (degradation)[xxviii]. Haidt claims that these characteristics were acquired long before roads were paved by the specific demands of a rapidly-changing environment, and are thus firmly embedded in the human genome.

	Care/ harm	Fairness/ cheating	Loyalty/ betrayal	Authority/ subversion	Sanctity/ degradation
Adaptive challenge	Protect and care for children	Reap benefits of two-way partnerships	Form cohesive coalitions	Forge beneficial relationships within hierarchies	Avoid contaminants
Original triggers	Suffering, distress, or neediness expressed by one's child	Cheating, cooperation, deception	Threat or challenge to group	Signs of dominance and submission	Waste products, diseased people
Current triggers	Baby seals, cute cartoon characters	Marital fidelity, broken vending machines	Sports teams, nations	Bosses, respected professionals	Taboo ideas (communism, racism)
Characteristic emotions	Compassion	Anger, gratitude, guilt	Group pride, rage at traitors	Respect, fear	Disgust
Relevant virtues	Caring, kindness	Fairness, justice, trustworthiness	Loyalty, patriotism, self-sacrifice	Obedience, deference	Temperance, chastity, piety, cleanliness

Combining Boehm and Haidt's work, it transpires that artefacts of culture such as hierarchy and morality served to bind together larger numbers of differing but conspecific organisms. In an eternal back-and-forth between the individual and the environment, our DNA was imprinted (and re-imprinted) with conceptions of fairness, authority, compassion, loyalty and purity that differed from one person to the next. Cultural moral codes and hierarchy arose to harmonise these individual differences with a greater variance lending greater complexity and rigidity to these social constructions. From birth, our identities evolve to incorporate these elements of culture into our identities in order to locate our position in society.

Conclusion

Moving up the levels from the individual, to the group, this chapter has discussed how early human environments both necessitated and gave shape to identity.

We first looked at a debate that emerged in the mid-20th century that pitched the traditional individual-level selectionists against a new group of scholars emphasising the influence of human collectives on natural selection. While attributing a certain characteristic to nature or nurture is anything but straightforward, scientists such as O.E. Wilson and Alexander Boehm isolate certain characteristics present not just in modern humans but our primate cousins and ancient ancestors, not just labelling these traits innate, but claiming that their presence in our genome is a direct result

of group fitness. We also established that there is utility in framing human behaviour as a conflict between individual- and group-level traits.

Through Boyd, Richerson and Laland, we delved more deeply into the power of culture, using natural selection as a metaphor to understand how knowledge and ideas become solidified in the form of *memes* and ultimately transcend the groups of individuals who create them. In a similar vein, Laland expounds on the innateness of copying, establishing that, under certain conditions, identifying and purloining these memes serves as a means to improve evolutionary fitness.

Finally, we explored the mechanics of groups, uncovering certain traits that require establishing hierarchies and moral codes that allow large groups to cohere and out-compete rival groups and predators. Both Boehm and Haidt take the bold step of claiming that there are certain characteristics that remain a permanent feature of our DNA, with both, especially Haidt, identifying these traits as components of morality. It is the variation of these traits that shape both our identities, which, in turn, shape our cultures, and vice versa, in perpetuity.

There is so much more to say on this connection between the group, personality and political beliefs, but before we can do so, there is another level to consider. We've moved from the individual, to individuals within groups, but there is one more influence on identity that remains: groups vs groups.

Now go and take a walk before we return with episode 7: ingroups and outgroups.

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[i] Lorenz, 1966
[ii] Darwin, 1859
[iii] Dawkins, 1976
[iv] Wilson, 2012, p.243
[v] Pinker, 2015
[vi] Graziano, 2011
[vii] O'Gorman *et al*., 2008, p.4
[viii] Josselson & Flum, 2015, p.136
[ix] Mahon *et al*., 2009
[x] Marcus, 2004, p.34
[xi] Bandura, 1977
[xii] Kinzler, Dopoux & Spelke, 2007
[xiii] Egalite, Kisida & Winters, 2015
[xiv] Liberman *et al*., 2018
[xv] Shmidt, Rakoczy & Tomasello, 2012
[xvi] Couto *et al*., 2013
[xvii] Durham, 1976
[xviii] Boyd & Peterson, 2006, P.118
[xix] Potts, 1996
[xx] Rendell *et al*. 2010
[xxi] Laland 2016, P.104
[xxii] Knauft, 1991
[xxiii] Schneider, 1979
[xxiv] Fried, 1967
[xxv] Boehm, 2001, p.87
[xxvi] *Ibid*, p.39
[xxvii] Haidt & Joseph, 2004
[xxviii] Haidt, 2013

Chapter 7
Ingroups and Outgroups

In the last chapter, we looked at some of the advantages of understanding the connection between genes, groups and behaviour, highlighting some of the evolutionary benefits to outsourcing thoughts and actions to the group. We continue this theme by looking at how the interaction *between groups* affects this triadic relationship with a special focus on how individuals divide themselves into 'us' and 'them'.

Early thinkers

Although a great deal of thinkers throughout history had considered the presence of group division, one early attempt to understand how these divisions occur came about through Dollard *et al*.'s[i] exploration into frustration and aggression. Building on Freudian conceptions of the means of emotional development, the authors assumed frustration to be the result of unrealised goals, which, when frequent (or particularly salient), led to expressions of frustration by means of aggressive behaviour[1]. Given the human proclivity to seek out the path of least resistance, the authors suggested that minority groups are vulnerable to oppression by virtue of being seen as easy targets. Just as a bully projects feelings of oppression experienced at home onto weaker kids, so do majority groups turn their frustration onto minorities. Simplistic as it was, the post-WWII world began clamouring for explanations of how and why group conflict emerges with the above example suggesting that inter-group conflict originates within individuals and manifests itself at the group level.

In a similar vein, Adorno *et al*.[ii] switched their focus to top-down processes, specifically regarding attitudes towards authoritarianism. Considering the norms that bond groups together, Adorno and his mates discovered that the presence of and respect towards authority is more important to some groups (i.e. religious) more than others. Furthermore, they connected this affinity for authority to greater levels of prejudice, noting that Catholics demonstrated more prejudice than non-religious groups, but no more than Protestants.

A study that looked more directly at inter-group conflict is the now-famed *Robber's Cave Experiment*. Muzafer Sherif and colleagues took a group of 11-12 year-old boys to a summer camp in Oklahoma and were randomly divided into two teams[2]. The groups then spent a period of isolation away from the other group, slowly evolving unique group norms, complete with team names and flags. Even before the competition[3] between the two groups had started, they started forming negative opinions of each other. As the competition went on, things got increasingly heated, with insults exchanged, flags burned and opposing huts raided under cover of darkness. Some real Navy Seal shit. The researchers observed that as hostility between groups increased, so did cohesion within groups. The more they hated the opposing group, the more they bonded with members of their own group, with even the adult camp leaders buying into the war. Things eventually got so bad

[1] I couldn't find a good place for this in the main text, but readers may be interested to hear that research connects social isolation to increased aggression (Rodriguez-Romaguera & Stuber, 2018).

[2] A quick general note: as the social sciences have evolved, as have considerations of ethics and methodology. Some studies cited in this book seem barbaric by contemporary standards (e.g. Chapter 3's torture by electrocution), and they probably were. Importantly, the way samples are selected, data is collected and crunched, hypotheses are made and tested – in other words, rigour – has changed significantly and therefore, you should take some of these findings with a generous pinch of salt.

[3] Summer camp classics such as tug-of-war, baseball, capture the flag etc.

that the researchers had to step in and turn the experiment on its head, attempting (initially in vain) to lead the two sides towards a peaceable *détente*[iii]. Several years later Sherif used this experiment to devise the *realistic conflict theory*[iv]. Given that the initial division was exacerbated by competition and then resolved through shared 'superordinate' goals[4], Sherif posited that it was the extent to which group goals aligned or conflicted that determined inter-group attitudes. His ideas were particularly poignant in the context of the Cold War that pitted the U.S.A. and the Soviet Union, previously allied against the threat of Nazi Germany, against one another.

In the following decade, Henri Tajfel took up Sherif's mantle by exploring the various ways in which individuals could be induced to conflict. In a series of experiments, similar inter-group hostility developed between groups divided into laughably arbitrary categories such as eye colour, painting preferences or how many dots they could see in a certain image[v]. No matter how groups were divided, it was the situational division of *goals* that had the most impact[5]. Tajfel's *minimal group paradigm* formalised this idea, coining, in the process, the terms ingroup and outgroup to represent the nature of group divisions[vi]. Furthermore, the ease of inducing ingroup-outgroup division has been found to exist across cultures[vii] and is even supported by a twin study whose conclusions suggest that ingroup favouritism is, at least in part, innate[6] [viii].

Lending even more weight to the innateness of inter-group division, Otten and Wentura composed an experiment similar to those described above. A bunch of kids were divided into arbitrary groups (in this case, 'perceptual style') based on a computer-generated assessment the feedback of which, unbeknownst to participants, had been automated by sneaky experimenters. Questions were then put to these kids concerning attitudes towards their ingroup and outgroups[7]; however, this time, the questions flashed briefly on-screen and their answers time-constrained. Despite being deprived room to ponder, strong ingroup favouritism was still observed[ix]. If you're still not convinced, Hart *et al*. cut out the middle man and went straight to the source, the brain. A small group of 20–35-year-olds, consisting of black and white men, were hooked up to an fMRI brain scanner before being shown black and white human faces. The results indicated more amygdala (fear/threat centre) activity when shown faces of a different race[x]. If such instincts were driven (even mostly) by culture, you would perhaps expect to see amygdala activation increase with age, but no such correlation was observed. The existence of some in-built outgroup identifier is bolstered by evidence that race is implicitly coded into one's first impressions when meeting someone[xi].

Ingroups

Brewer considers the formation of ingroups to be one that embodies *contingent altruism*. In her view, altruism emerged as a trait necessary to human survival, but "altruism must be contingent

[4] The experimenters created activities that could only be completed with both groups cooperating such as obtaining water during a drought or pooling financial resources to purchase a film.

[5] It's criminal on my part that I haven't yet found space to reference the notion of *situationism* that emerged in around the same era. Lee Ross' seminal *the Person and the Situation* demonstrated that individual personality differences can all but disappear given the right circumstances. For example, in one study, theology and law students were asked to give a speech in a nearby building. Each group passed a "shabbily dressed man" slumped against a wall, but the factor that determined whether students stopped to help or not was not personality (theology students, ironically, were off to give a speech on the Good Samaritan parable), but whether students were in a rush or not (Darley and Batson, 1973).

[6] The authors posit the existence of an innate *central affiliation mechanism* that provides the capacity to attach oneself to a group by means of environmental *essentialist favouritist systems* such as race, ethnicity, language, religion etc.

[7] For example, "How much do you enjoy having this perceptual style?" and "If you could choose, which perceptual style would you prefer?"

on the probability that others will cooperate as well." [xii] Ingroups, therefore, aside from offering protection against existential threats, fix their boundaries according to a learned mutual trust predicated on "I'll scratch your back, but if you don't scratch mine, you're not one of us!" This runs parallel to what sociobiologist Robert Trivers dubbed *reciprocal altruism*, which, contrary to group-selection theory, explains altruism as individual-level tit-for-tat in which actions that sacrifice individual fitness in the short-term, will increase fitness in the long-term when favours are ultimately repaid[xiii]. Altruism, which really lies at the centre of the individual-group-level debate discussed in the last chapter, is seen by individualists as a selfish investment in which a costly favour today comes with the expectation of reciprocation tomorrow. Seen at the group-level of analysis, however, Brewer's approach helps us understand how and why human altruism is bound by the threat of free-riding. Moving between both levels shows us that while individual fitness requires selfishness, group fitness requires the presence of altruism; the balance between the two can be characterised as contingent altruism.

In combination with the fundamental group characteristics presented in the last chapter, Brewer's work on altruism is a great jumping-off point for other common identities that arise within groups around the world. A great study that came out of the University of Oxford analysed 60 societies taken from across the globe[8] in the search to uncover 'universal' cooperative traits[xiv]. The authors found seven: "helping kin, helping your group, reciprocating, being brave, deferring to superiors, dividing disputed resources, and respecting prior possession". Of course, some of these are quite broad – helping your group how exactly? – but what's interesting to me is that these traits speak to the idea of cooperation bound by the threat of selfishness. While the values created by a group may be an arbitrary mechanism shaped by evolution to hold a group together, the presence of these cooperative constants speak to (dare I say 'core') group-level identities from which other cultural values can be constructed. This is yet another elegant example of how nature and nurture conspire to give the organism its form.

Once these norms have been established, group members are driven to maintain and reinforce them. Brewer and Campbell[xv] studied 1,500 individuals from 30 tribes in Uganda, Kenya and Northern Tanzania over a 10-year period of time. They found that there was a considerable "loyalty bias" towards members of ingroups, particularly concerning traits such as honour and trust. Once you're in, you're in. But how does a group decide who is in and who is out? The brain seems to bestow its user with a high degree of flexibility in determining group membership both of ourselves and others, which helps us to understand how group division can be driven by such an arbitrary rationale.

Finally, the desire to belong to a group is driven both by the individual's unique mind and the situation she finds herself in. For example, Hogg posits that moments of perceived[9] uncertainty cause an individual to seek out the guidance of a group[10] [xvi]. Hogg expands this idea beyond group membership to the make-up of one's individual values[xvii], in line Richerson, Boyd and Laland's idea that social learning is more frequent in times of uncertainty. Similarly, the *self-esteem hypothesis* suggests that times of low self-esteem lead to more actively searching out and conforming to the group[xviii]. We assume, at this point, that some situations can have the same effect on most

[8] "Sub-Saharan Africa, Circum-Mediterranean, East Eurasia, Insular Pacific, North America, South America."
[9] I'll be using this word to emphasise that the beliefs discussed may not represent reality, but instead represent the brain's best guess at reality guided, as we have seen, by our own unique filters.
[10] Hogg leans on this idea to suggest that it is this uncertainty that causes membership of extremist groups. However, readers should be cautious of this interpretation given that other factors, such as social isolation (e.g. Loken and Zelenz, 2018), have also been found to drive such behaviour.

individuals – losing your job, ending a 20-year marriage, death of a parent. All of these depressing eventualities are likely to induce crises of uncertainty or esteem regardless of the individual's unique mind, which points to the strength of what we might call 'situational variables' above 'individual differences'. Concerning the latter, personality is, of course, a major player in moderating group membership. For example, Leary and Baumeister point to the importance of individual personality differences: variance along the introversion-extroversion scale[xix], as well as 'agreeableness' – the extent to which you need people to like you – both impact an individual's prosocial behaviour and thus, group role[xx]. Teasing apart the distinct effects of the situation and the individual mind deserves a book unto itself. For now, let's simply induct the debate into our existing individual-culture framework.

As values are established within a group, roles are created to reflect the status of its members. Aside from serving to maintain the purpose of a given group, these roles represent an essential component of identity; that bridge connecting the individual to their group, whether it be father, teacher, treasurer, sage etc., roles contain a measure of social status that, as we saw in the last chapter, matters to each and every one of us. Chapter 2's Carl Jung poured through literary and literal history, theorising the existence of 'archetypes' – such as the great mother, the wise old man, the prodigal son – that societies have created over time though their shared *collective unconscious* – which we can think of as Dawkin's cultural *memes* – knowledge spreading within cultures. We are born with the need to belong to a collective, and those collectives we end up in produce roles, or archetypes, that members are innately primed to aspire towards in a quest to achieve greater status. Today's archetypes might include the young entrepreneur, the wise teacher, the liberated bachelor, the environmental saviour…These are all symbols of greatness we look to define and embody as we march through time.

Outgroups

In their exposition of the innateness of race detection, Kurzban, Tooley and Cosmides muse over the likely conditions that would have required early man to divide himself into an "us" and a "them": "To negotiate their social world successfully, and to anticipate the likely social consequences of alternative courses of action, our ancestors would have benefited by being equipped with neurocognitive machinery that tracked these shifting alliances [between individuals seeking greater power]."[xxi] In other words, being able to distinguish between political allies and enemies abetted survival, which, given that alliances ebbed and flowed, lends itself to the porous nature of group boundaries shown above. However, given the difficulty of inferring these alliances, we developed heuristics that identify easily-recognised symbols such as physical, linguistic or mental differences.

Furthermore, attribution of characteristics to the outgroup plays a massive role in shaping the characteristics of the ingroup. In *Britons: Forging the Nation*, Linda Colley explores how that conservative buzzword, British Values, came to be. As she writes, "Men and women decide who they are by reference to who they are not…[Britons] came to define themselves as a single people not because of any political or cultural consensus at home, but in reaction to the Other beyond their shores."[xxii] In the wake of the French Revolution of the late 18th century, for example, William Burke captures the reaction of many Britons, decrying "the excesses of an irrational, unprincipled, proscribing… bloody and tyrannical democracy, by wicked persons"[xxiii], claiming, on the contrary, that "we look up with awe to kings; with affection to parliaments; with duty to magistrates; with reverence to priests and with respect to nobility."[xxiv] Is it possible that the warmth Britons still show our monarchs is the result of France's bloody transition into a monarch-free Republic?

Taking a more contemporary example, the frequency of Catalan people's use of Catalan over Castilian Spanish is influenced much more by the rejection of Spanish nationhood than a sense of Catalonian identity[xxv]. In other words, behaviour takes its primary cue from an opposition to the outgroup. John Turner's research comes to a similar conclusion going as far as to say that when groupthink is activated, individuals are "depersonalised"[xxvi], their sense of identity blending into the collective consciousness of the ingroup. The individual tends to *self-categorise* "himself or herself as an individual person in contrast to other persons within some ingroup, or may categorize self as an ingroup in contrast to some outgroup within some higher-order self-category such as "society"."[xxvii] This penchant to shift one's identity across an individual-group continuum is situationally triggered by means of, what Jonathan Haidt calls the "hive switch"[xxviii] – from individual to bee drone.

Returning to Brewer & Campbell's study of East African tribes, it was found that, unlike the unwavering support shown to the ingroup, the extent of outgroup hostility varied across several dimensions: lower-status groups were generally rated indifferently, whereas higher-status group were perceived with a mix of hostility, jealousy and admiration. Another factor was geographical proximity; the authors considered that participants "feel psychologically closer to a 'familiar enemy' than to a little-known stranger"[xxix]. Even more interestingly, the boundaries between groups – defined not in geographical terms but the frequency of interaction between members – were pliable, with groups engaging in regular inter-group warfare as well as inter-group marriage. In other words, changes in circumstances forced outgroup attitude to switch between positive and negative; the man leading a raid on your berry patch today could be your brother-in-law tomorrow.

Turner, again, describes a predisposition of the ingroup to manufacture "positive distinctiveness"[xxx], which suggests that ingroup members define themselves through comparisons to outgroups in ways that promote the superiority of the ingroup. As we have seen, artefacts of distinctiveness vary enormously and arbitrarily. Giles and Giles offer us a Biblical anecdote exemplifying language as one historical ingroup-outgroup distinction:

"Language can be a critical determinant of whether someone views another as an authentic ingroup member or an outgroup imposter. Indeed, even one sound can cause detection as with the notion of linguistic shibboleths, which are words or terms that when communicated can identify someone as being a member of a distinctive group. In the Bible (Judges 15, 5–6), an account is provided of the Gileadites who captured large numbers of Ephraimites. If a person answered negatively to the question, "Are you an Ephraimite?" they would then be required to pronounce Shibboleth. If the captured said, Sibboleth because they could not articulate the appropriate 'sh' sound, then their outgroup status was revealed and they were duly killed (along with, purportedly, 42,000 other Ephraimites)."[xxxi]

Ingroup love vs outgroup hate

Although not yet guided by the distinction between ingroups and outgroups, early sociologists implied that group values strengthen when encountering other groups[xxxii]. During the 1950s, when inter-group research was in full flow, Gordon Allport's *The Nature of Prejudice* considered the relationship between prejudice and inter-group contact, concluding that the latter does not necessarily evoke the former[xxxiii]. The racial prejudice that Allport saw as permitting segregation to maintain its grip on American society was being aided by increased interaction

between members of different races, which was in occurring with greater frequency, giving rise to improved outgroup evaluations[11].

As we saw in Brewer and Campbell's East African study, attitudes towards ingroups and outgroup do not necessarily fluctuate in tandem[xxxiv]. When Tajfel, Billig, Bundy, & Flament managed to induce intergroup hostility over individuals' preference of Klee over Kandinsky, they also observed that although participants demonstrated strong ingroup favouritism, opportunities to impose punishments on the outgroup were seldom taken[xxxv]. As the Robber's Cave boys demonstrated, an important variable is the degree of perceived competition (in contrast to cooperation). In a more recent study of fans of different football teams[12] and supporters of opposing political parties, it was found that one way we perceive intergroup competition is through a moral lens. Researchers divided participants into political party preferences introducing, in one battleground, parties only at the extreme left and right in order to induce a more pronounced sense of moral difference[13], which made for much more negative outgroup appraisals[xxxvi]. Groups that divide themselves in moral terms is a key theme of this book. By connecting modern-day group conflict to its origins, I hope to demonstrate that human beings seek to, and even derive pleasure from, disparaging members of outgroups. Like all of the fascinating artefacts of our minds discussed so far, this tendency evolved for 'ecologically rational' reasons but, certainly in the context of political hostility, appears to be an example of evolutionary mismatch.

Importantly, and in keeping with last chapter's assessment of early human nomadic vs sedentary tribes, outgroup enmity can be significantly reduced when competition is not zero-sum[xxxvii]; in other words, when the pie is large enough that both groups can have their fill (positive-sum), thy can co-exist peaceably. The problem arises when resources are perceived to be insufficient to meet both groups' demands (zero-sum). Aside from competition over resources, *realistic conflict theory* posits that attitudes towards outgroups are contingent on whether there is a perception of threat, whether existential or political[xxxviii]. Likewise, outgroup hostility is only favoured over ingroup amity when the latter is threatened[xxxix].

Aside from guns and tanks, threat can also be related to status. According to Hogg "Intergroup comparison...is effectively a struggle over the relative status or prestige of one's ingroup. Higher status groups fight to protect their evaluative superiority; lower status groups struggle to shrug off their social stigma and promote their positivity."[xl]. Extending this concept, Mackie, Devos & Smith propose *intergroup emotions theory* which specifies the conditions under which threat translates to anxiety: 1) strong identification and 2) group status relative to others[xli]. Scheepers, Ellemers and Sintemaartensdijk add fuel to fire, finding that blood pressure is higher among low status groups (when relative status is salient) and groups anticipating a demotion in status[xlii]. It was highest among those identifying more strongly with a group. Fascinatingly, it would appear that the same neural mechanisms that evolved to detect individual status within a group is also used to detect group status in relation to other groups, with more or less parallel neurological responses.

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[11] Somewhat pessimistic of man's ability to overcome bias, Allport wrote that "it required years of labor and billions of dollars to gain the secret of the atom. It will take a still greater investment to gain the secrets of man's irrational nature. It is easier to…smash the atom than a prejudice." (p.xvii)

[12] One of my favourite quotes ever is reported in this study: (Schalke FC fan about Dortmund FC fans) "As far as I'm concerned, they're bad people, just bad people."

[13] Based in Germany, the authors note that "While political preferences among mainstream parties in Germany surely involve moral aspects, the discourse is mild in comparison with, e.g., the United States. The mainstream parties are not as polarized, the relations among them are not as conflictual, and many consider them to have more in common than in separation." (Weisel and Böhm, 2015, p.117)

It is important to note that these effects of status perception depend on degrees of power that status bestows. Ed Sheeran fans are unlikely to riot when he's pipped to number 1 by Billie Eilish because the added status of belonging to a group leading the music charts has few real-world consequences. Swap Ed for Labour and Billie for the Conservatives, however, and suddenly status translates (perceptibly) to power. It's taken us a while, but I hope you're starting to see how agency and identity relate directly to the problem of political conflict!

The processes described in this chapter help to explain how identity is, in part, shaped by intergroup distinctiveness; however, "when groups are political entities…these processes may be exacerbated through deliberate manipulation by group leaders in the interests of mobilizing collective action to secure or maintain political power."[xliii] Successful politicians and journalists are experts in harnessing these cognitive processes to induce feelings of outgroup enmity and ingroup amity[14], most effectively when doing so within moral parameters. While dissent within the group has been said to positively reshape ingroup norms[xliv], if the terms and conditions of membership are violated too much, group leaders can force a subsection of its members into exile, creating, in effect, an outgroup within an ingroup. For example, as early as 1983 Noam Chomsky wrote of Israeli leaders' tendency to classify state dissenters into two camps: anti-Semites and "self-hating Jews" with the latter rhetorically pushed to the periphery of the ingroup[xlv]. Similarly, Worrell speaks to the same phenomenon occurring within African American communities with repeated moral transgressions, such as voting Republican, often met with accusations of "not being black enough"[xlvi]. Although the fractioning of ingroups may seem to complicate matters, it demonstrates the dynamism of group identification. An individual can belong to many groups – the boundaries of which are constantly being drawn and redrawn – with ingroup favouritism or outgroup animosity only bubbling to the surface under certain conditions, but otherwise remaining dormant.

Conclusion

In this chapter, we began by looking at the evolution of how ingroups and outgroups interact. In the wake of WWII, many thinkers focused on group divisions as products of individual prejudice imposed by society. Some of Sherif's early work added some much-needed depth to research, with his summer camp experiment showing just how easy it is to divide groups simply by introducing competition (and, conversely, how to re-unify groups through inducements to cooperation). Further research into group division demonstrated an innateness not just to social categorisation, but placing those categories along a spectrum ranging from friend to foe, with the reasons for doing so often based on very little.

In line with last chapter's findings, the glue that binds members of ingroups together is often moral. Studies from societies around the world indicates the existence of certain universal group values, subsumed into artefacts of cooperation. One key example revolves around altruism, the bounded nature of which reflects a necessary balance between group-level cooperation and individual-level self-concern; altruism without limits leaves itself susceptible to exploitation. We saw that an individual's need for group membership seems to be a combination of uncertainty, low self-esteem (sometimes meaning low-status) an individual difference. Once in, however, ingroup members conform quickly to the group's worldview.

[14] Direction of causality is worth considering here. Are politicians deviously gaining expertise in how to work group sentiment or is it their ambition that distinguishes them from non-politicians, and the knowledge of how to rile groups up a subconscious trait no more refined than the average? I'd say those who seem able to tap in to group sentiment are more driven by evolutionary instinct than Machiavellian genius.

In attempting to understand how a group's worldview comes to be, we heard substantial evidence that "men and women decide who they are by reference to who they are not". Equipped with theories from the archives of human history, it was theorised that understanding shifting alliances allowed our ancestors to anticipate threat by identifying an outgroup and distinguishing members of it from members of their ingroup. In the same way that individual identity allows us to distinguish between us and the rest of the world, group identity allows for similarly clear boundaries. Although these boundaries can overlap and undergo adjustment, they can, under the right circumstances (broadly, higher degrees of threat) become very rigid.

Generally speaking, the situations in question fall into one of two categories: competition or cooperation, with the former inducing the more rigid boundaries. Looking under the hood of competition revealed the notion of perceived threat. Groups sensing greater threat from other groups stiffen up, conforming more closely to ingroup norms, and further away from outgroup identification, the most vitriolic of which is framed in terms of moral aberration. While threat can be represented by physical violence, it can also be the perception of relative group status within a given society. The lower the status of the group, or the greater the threat of a drop in status, the more prevalent are ingroup cooperation and outgroup competition.

In line with multi-level selection theory, identity can shift between individual and group level. When it does shift from the former to the latter, one's 'hive switch' is activated and the individual 'depersonalised', merging their beliefs, motivations and goals with those of the group. Possessed both of identities that distinguish the individual from the group (chapter 5) as well as those distinguishing the ingroup from the outgroup (chapters 6 and 7), our consciousness is deprived of knowing from which level identity is derived, often assuming our thoughts and actions are our own, when in reality they are merely on loan from the environment. In the next chapter, we'll apply these lessons more directly to political behaviour, arriving at a definition and evaluation of partisanship. For now, it is worth noting that the gap in explanations for behaviour that diminished will has created is filled by an identity constructed by genes, cultural influence and group identification.

I'll leave you with this. At the turn of the 20th century, the USA found itself fresh out of conflict with Spain, and embroiled in several wars in Asia. William James gave a speech aimed at conciliation between the pro- and anti-war factions within the U.S. population. Admitting the challenge he faced in bringing the two sides to a compromise, James conceded: "In the whole discussion both sides are on imaginative and sentimental ground. It is but one utopia against another, and everything one says must be abstract and hypothetical." This utopian vision spreads across group members and "grasps the individual as in a vise." Although James, a pacifist, proposed a civic utopia in which men were enlisted not just for war, but "To coal and iron mines, to freight trains, to fishing fleets in December, to dishwashing, clotheswashing, and windowwashing, to road-building and tunnel-making, to foundries and stoke-holes, and to the frames of skyscrapers, would our gilded youths be drafted off, according to their choice, to get the childishness knocked out of them, and to come back into society with healthier sympathies and soberer ideas" he concluded that "The only thing needed henceforward is to inflame the civic temper as part history has inflamed the military temper."[xlvii] Before turning to the next chapter, it is worth pausing to reflect on why it is that certain utopias dance more vividly in the minds of citizens than others.

[i] Dollard *et al*.'s, 1939
[ii] Adorno *et al*., 1950
[iii] Sherif *et al*., 1961
[iv] Sherif, 1966

[v] Billig, Bundy, & Flament, 1971
[vi] Tajfel's, 1970
[vii] Diehl, 1990
[viii] Lewis and Bates, 2010
[ix] Otten and Wentura, 1999
[x] Hart *et al*., 2000
[xi] Fisk and Neuberg, 1990
[xii] Brewer, 1999, p.433
[xiii] Trivers, 1971
[xiv] Curry, Mullins and Whitehouse, 2019
[xv] Brewer and Campbell, 1976
[xvi] Hogg, 2007; Hogg, 2012
[xvii] Hogg, 2000
[xviii] Abrams & Hogg, 1988; Rubin & Hewstone, 1998
[xix] Leary and Baumeister, 2000
[xx] Graziano *et al*., 2007
[xxi] Kurzban, Tooley and Cosmides, 2001, p.15387
[xxii] Colley, 2005,
[xxiii] Burke, 1866, p.219
[xxiv] Burke, 1968, p.94-5
[xxv] Giles & Viladot, 1994
[xxvi] Turner *et al*., 1987
[xxvii] Turner *et al*., 2006, p.14
[xxviii] Haidt, 2013
[xxix] Brewer & Campbell, 1976
[xxx] Turner, 1975
[xxxi] Giles & Giles, 2013, p.144
[xxxii] Sumner, 1906
[xxxiii] Allport, 1954
[xxxiv] Brewer and Campbell, 1976
[xxxv] Tajfel, Billig, Bundy, & Flament, 1971. See also: Mummendey & Otten, 1998
[xxxvi] Weisel and Böhm, 2015
[xxxvii] Halevy, Bornstein and Sagiv 2008; Halevy and Bornstein, 2012
[xxxviii] Sherif & Sherif, 1953; Levine & Campbell, 1972
[xxxix] Mummendey & Otten, 1998
[xl] Hogg, 2016, P.7
[xli] Mackie, Devos & Smith, 2000
[xlii] Scheepers, Ellemers and Sintemaartensdijk, 2009
[xliii] Brewer, 1999, p.437
[xliv] Jetten & Hornsey, 2014
[xlv] Chomsky 1983/1999
[xlvi] Worrell, 2015
[xlvii] James, 1910/2015

Chapter 8
Partisanship: personality, morality and calamity

"the people is seduced by private interests that some few skilful men succeed by their reputation and eloquence to substitute for the people's own interest."
Jean-Jacques Rousseau, 1755

I'd like to first offer an introductory well done for making it this far into a book that promised a political disquisition and will only now start to deliver on the title's promise. In this chapter, I hope to reward your patience as we apply our findings from agency and identity to the sphere of political activity in considering firstly, what partisanship means and secondly, how it is ultimately an extension of the mechanics of identity discussed so far.

Our story starts once again with Solomon Asch, author of last chapter's Robbers Cave study, who noted in a 1948 paper that "a factor of 'prestige' is capable of altering the evaluations of statements concerning serious political and economic questions… a person, confronted with an opinion from one who has prestige for him, will have his reaction to it colored accordingly"[i], echoing Rousseau's words that pretentiously preface this chapter. As we may recall, Asch was primarily concerned with the influence of conformity, with this early study demonstrating the "blind bias" of participants entirely swayed by political leaders.

Especially across Eastern Europe, *partizans* were often military guerrilla movements resisting foreign invasion, particularly in the Soviet Union, Hungary and Yugoslavia where partisan forces led indefatigable incursions against Nazi encroachments[1]. In countries with longer histories of democratic stability, however, partisanship came to take on a different meaning. Two seminal works from the mid-20th century, *The Voter Decides*[ii] and *The American Voter*[iii] zeroed in on the phenomenon that saw voters develop "long-lasting attachments to parties". As we will see, however, and as previous chapters have suggested, attachments vary in strength and are not limited to one sole group. With this in mind, in this book, partisanship refers to attachments made to an *ideology that is represented by a group and its leader/s*[2]. Do note that as this more expansive definition is novel, when discussing partisanship in relation to research in this chapter, partisanship will assume its classic party-attachment form.

Forming partisan identity

One of the first problems related to the classic definition is observed by Nau who writes: "Independents are voters who do not identify with any political party and are therefore not, strictly speaking, partisans. However, they exhibit partisan behaviour in the sense that they consider

[1] As an example of the upside to nationalism, Polish partisans were particularly well-placed to engage in anti-Nazi imperialism given that their own guerrilla movements had been engaged for over a century in resisting foreign occupation while the whole country was gobbled up and disappeared by the Prussians, Russians and Habsburgs from the late 18th to the early 20th century. During this period, Polish nationalists rose up once every 10-15 years, stubbornly refusing to be partitioned out of existence. Nationalist fervour is the reason Poland exists today, and perhaps why they're more sensitive to racial and religious outgroups (ditto for Hungary).

[2] For those pondering how ideology could be derived in any place other than a political party, stay tuned. Genes, family, culture, ingroups/outgroups, personality and all the good stuff we've looked at so far play a role in shaping and reshaping an individual's political ideology.

themselves members of the group of independents and act accordingly."[iv] Nau is writing in reference to the evolution of the U.S. electoral system in which all parties beyond the Democrats and Republicans are subsumed under the label 'independents', which itself has become an object of partisan-like attachment. Furthermore, Green, Palmquist and Schickler[v] note that shifts in ideology across a population over time does not follow shifts in party attachment, suggesting that the two should be treated separately. Of course, this phenomenon is fairly unique to American politics, with other majoritarian electoral systems[3] allowing supporters of third and fourth parties the luxury of party-specific attachments. However, even in the UK, the majoritarian system often encourages tactical voting in which the party earning a voter's support is not necessarily representative of that voter's political ideology, but rather is the best bad option with the most chance of winning. One would think that tactical voting is redundant in more proportional electoral systems (PR) but, while voters are less shackled in their voting choices, the complexity of a truly multi-party landscape nudges them towards tactical voting of a different nature[4] [vi], albeit less egregious. In Blais *et al*'s[vii] study of Israeli voting behaviour, it was found that around 10% of the electorate voted tactically in an attempt to bolster not their preferred party, but preferred ruling coalition, given that certain parties are more likely to team up than others when votes are more evenly distributed. Thus, while you may hear voters selling their souls to the American Democrats or British Labour, their partisanship is often best described as *anti*-Republican or *anti*-Conservative, respectively. As we saw in the last chapter, "Men and women decide who they are by reference to who they are not"; partisanship, therefore, is more complicated than just being *pro*-party X. "Partisans need not and do not invariably agree with the leaders of their party"[viii].

Building on the formation of political groups, Bettencourt *et al*.[ix] suggest that our innate tendency towards social categorisation has political consequences. While these authors focus on relative group status (more on this later), other lines of inquiry looked towards 'reference groups' – represented by, for example, gender, race and sexuality – to explain party affiliation[x] with Stanley and Niemi identifying one cause of U.S. political realignment as the growing tendency among black voters to support the Democrats, while southern whites moved in the other direction[5] [xi].

Returning to individual-level explanations, a variety of researchers develop psychological categories to test whether individual personality pushes voters towards a certain ideology. A mainstay of personality psychology, he Five Factor Model (FFM), divides personality across five distinct dimensions broken down below:

[3] For example, British readers will be acutely aware of the First Past The Post (FPTP) system in which the winner of each constituency takes it all, usually leading to a mismatch between total vote proportion and seats gained in parliament.

[4] Broadly, this is because even PR systems contain elements of majoritarian logic. For example, in Norway smaller parties in smaller regions competing for 'compensatory seats' in parliament must attain 4% of the total national vote to qualify. When the perception is that a party is unlikely to reach this threshold, a *defecting vote* may be cast for a more 'competitive' rival.

[5] We should be careful about overgeneralisation here. Racial tension in the US is much more pronounced than elsewhere given their more direct interaction with slavery. This makes race far more salient a feature of American group identity and likely increases the likelihood of race swaying political allegiance.

Personality Trait	Low Scorer	High Scorer
Openness	Favours conservative values Judges in conventional terms Is uncomfortable with complexities Moralistic	Values intellectual matters Rebellious, non-conforming Has an unusual thought process Introspective
Conscientiousness	Unable to deny gratification Self-indulgent Engages in daydreams	Behaves ethically Dependable, responsible Productive Has high aspiration level
Extraversion	Emotionally bland Avoids close relationships Over-control of impulses Submissive	Talkative Gregarious Socially poised Behaves assertively
Agreeableness	Critical, skeptical Behaviour is condescending Tries to push limits Expresses hostility directly	Sympathetic, considerate Warm, compassionate Likeable Behaves in a giving way
Neuroticism	Calm, relaxed Satisfied with self Clear-cut personality Prides self on objectivity	Thin-skinned Anxious Irritable Guilt-prone

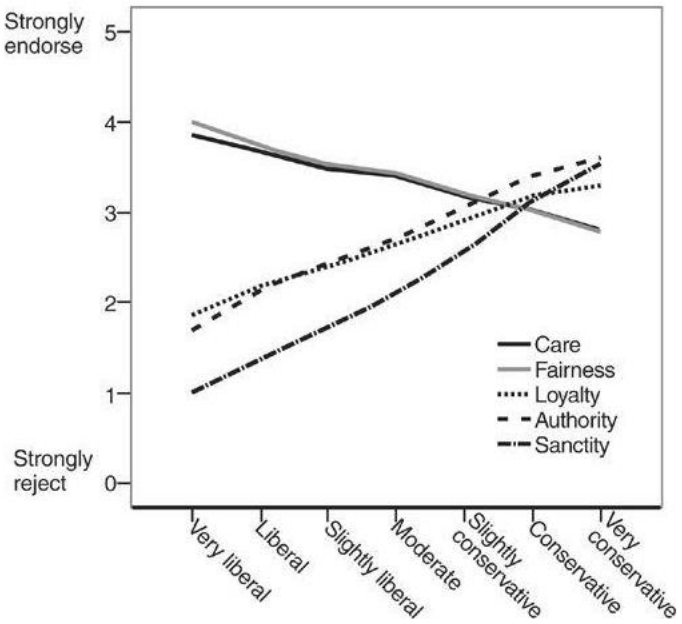
Source: McCrae and Costa (2003: 53).

Correlations between one's distribution across the "Big 5" and behavioural phenomena are numerous, with one long-standing finding in political psychology suggesting that Liberals tend to score high in Openness – associated with creativity and a scorn for rules and systems – while conservatives score higher in Conscientiousness – associated with a more rigid, systematic mental process and greater attraction to individual responsibility; although, as we would expect, a stronger relationship is noted between personality and ideology than party affiliation[xii]. Particularly Open readers will be delighted to hear that the picture isn't quite so simple. For example, Hirsch *et al*.[xiii] break Conscientiousness into 'compassion' and 'politeness', finding that the latter is more common among conservatives, while the former tended to predict degrees of support for egalitarianism. Likewise, Gerber *et al*.[xiv] find that partisanship in general is particularly acute among Agreeable Extroverts[6].

Dissatisfied with the Big 5, Jonathan Haidt, one of this section's protagonists, connected last chapter's moral foundations to political ideology, finding that liberals show a greater preference for Care and Fairness, while conservatives consider authority and sanctity to be more sacrosanct[xv] (see below). However, as we have seen a) the *minimal group paradigm* tells us that group membership can be based on very little and b) a given situation can be interpreted in a variety of ways depending on the agent's *umwelt*, or sensory filter. At a more technical level, criticism of moral foundations

[6] For the interested (and sceptics) among you, the FFM is, in its origin, a nested hierarchy of traits. Early forerunners of the model tested a wide range of personality traits and found that may of these traits appeared together in their subjects, creating a list of higher order groups that became the 'big 5'. Many modern psychologists forget these origins and treat the big 5 as some kind of preordained, genetically-imbued facets of the mind, which has given rise to some quite spectacular claims over the years.

considers whether measurements of one's moral foundations reflect ingroup norms or the individual's own moral compass[7] [xvi], and attempts to replicate the relationship below have been mixed[xvii]. Further, Jarudi shows that sanctity/purity – that includes measures of individual disgust – depends on the object; disgust towards certain food correlates more with liberals, whereas sexual disgust is more characteristic of conservatives[xviii]. Additionally, it isn't clear whether, for example, 'care' and 'fairness' are mutually dependent (does one care more for fair people? When is it fair to care?), and how this could even be established. Although an interesting starting point, Haidt's moral foundations have struggled when put under the demanding microscope of scientific rigour[8].



Elsewhere, research traces political ideology to an individual's sensitivity to uncertainty and threat. Bonnano & Jost[xix] find that rightward shifts in ideology were not associated with the hope of individual gain, but a lifting of the veil of optimism, as descent into depression, PTSD and cynicism resulted in more sympathy towards authoritarianism, inegalitarianism and meritocratic (as opposed to sympathetic) redistribution of wealth. In a similar vein, *terror management theory* predicts that heightened fear causes greater sympathy towards pro-war policy stances[xx]. John Jost and colleagues make a valiant effort to bridge that elusive gap between the individual and society. In their *elective affinities model*, Jost *et al*.[xxi] connect the psychological needs and traits of individuals to environmental factors. For example, the extent to which a particular voter has a need to analyse and is open to change is channelled through socially constructed notions of political ideology in order to arrive at a 'conclusion' regarding, for example, policy evaluation; this model emphasises the interaction between the mind and the rest of the world. Aside from 9/11, Funke, Schularick and Trebesch[9] analysed shifts in policy and voting behaviour from 1870-2014 and found that, in the wake of financial crises, ruling parties cede, on average, 30% of their vote share to parties attributing problems to outgroups – commonly minorities or immigrants[xxii]. Although this instantiates Jost's claim that the conservative mind, in particular, is highly sensitive to external, existential threats, the instability of immigration policy as a vote-winner[xxiii] tells us that perception of threat only serves to

[7] I.e. Is it the individual or the group that determines Haidt's moral foundations
[8] The authors admit as much (Graham *et al*. 2013)
[9] A relationship also found in the wake of the financial crisis of 2007-8 (Kern, Marien and Hooghe 2015, Kriesi 2012).

rally the troops when the electorate *at large* experience significant threat to their well-being. In other words, society-level shifts in thinking would appear to factor into ideological attachments.

Depending on the researcher, the effects of social identity and personality on political ideology are either treated as separate phenomena[xxiv] or as two sides of the same coin, as is the case made in this book. Teasing apart the extent to which the individual or group influences ideological allegiance, or even what individual- or group-level factors exist is a gargantuan – perhaps even impossible – task, which probably explains *The American Voter*'s summary of surrender: "partisans are partisan because they think they are partisan…Partisanship…is entirely a matter of self-definition."[xxv] Shrug emoji redeployed.

Partisanship in action

So while there has been some interesting findings on what causes individuals to tie their colours to the mast of one political group or another, the jury is still very much out. The widely-replicated minimal group paradigm, emphasising the arbitrariness of inter-group division, suggests that distinct elements of personality can be overridden by the environment to create somewhat unpredictable decision-making regarding group affiliation. More specifically, the individual can be hijacked by the environment to conform to the beliefs and values of the group. Chapter 5's Turner *et al*. described this process as "deindividuation", where the individual is flattened out into the group, whereas Haidt[xxvi] likens it to a "hive switch", turning the individual-self off and the group-self on. One way to activate this switch seems to be the manipulating of individuals' environments to make either competition or cooperation salient[10]. Descending one level further, cooperation – for example, Sherif's superordinate goals – evokes group-level pro-ingroup instincts, whereas competition causes us to a) sharply divide ourselves into ingroups and outgroups, and b) distinguish differences between ingroups and outgroups through negative evaluations of the latter and positive evaluations of the former. With this in mind, a partisan, according to the novel definition, has chosen a group that reflects his/her ideology and perceives that this group is in competition with other groups[11]. We now turn our attention to how this hive switch directly impacts the partisan's thoughts and actions.

An interesting facet of macro-level partisanship is that it tends to remain relatively consistent over time. According to Green and colleagues[xxvii], although certain events can cause partisanship to ebb and flow in the short-term, the distribution of American voters supporting one major party over another returns to an equilibrium in the medium-term. In order to overcome the issue of electoral system/cultural differences, Green presents similar findings from Canada, Germany, Italy and the UK[12]. At the individual level, similar trends are claimed, although the return to equilibrium takes considerably longer. Interpreting these findings, we may ask whether it is useful to consider how partisans were assessed. Firstly, it is very costly to follow individuals around for 20+ years recording

[10] Emile Durkheim spoke more to the human need to merge oneself into the group. 'Collective effervescence', as he termed it, that may occur during music festivals, sports matches or political rallies, rewards depersonalisation with a euphoric sense of group belonging that, according to some, is an essential characteristic of group fitness (Haidt, Patrick & Kesebir, 2008).

[11] We can all agree that, in politics, the smell of competition lingers long after elections, but as we will see later, there are certain conditions that can really kick up a stink.

[12] In the book, Green and colleagues spend a sizeable proportion of the book discussing the many methodological issues related to such data collection. From the availability and type of polling data between countries, to the unique political histories of Germany and Italy, to the criteria of being a partisan, drawing clear conclusions is rife with issues. It is also worth mentioning that anomalies were found in the stability of partisanship, particularly in the Canadian and Italian data sets.

changes of opinion. Consequently, a lot of the data we have is reflective only of society-level shifts. Secondly, according to which polling organisation data is taken from, a partisan could simply be an individual stating their voting intentions; the issue of considering incongruence between voting intentions and ideology is not well-understood in light of the often-leading wording of questions posed to would-be partisans. This somewhat dull, technical discussion does highlight the general trend that at the level of society, the proportions of support for the three most popular political parties tends to remain relatively stable (i.e. Even if party A drops below the level of support of party B, the latter will, over time, attract a similar percentage of votes). However, the volatility of individual-level partisanship is much harder to ascertain.

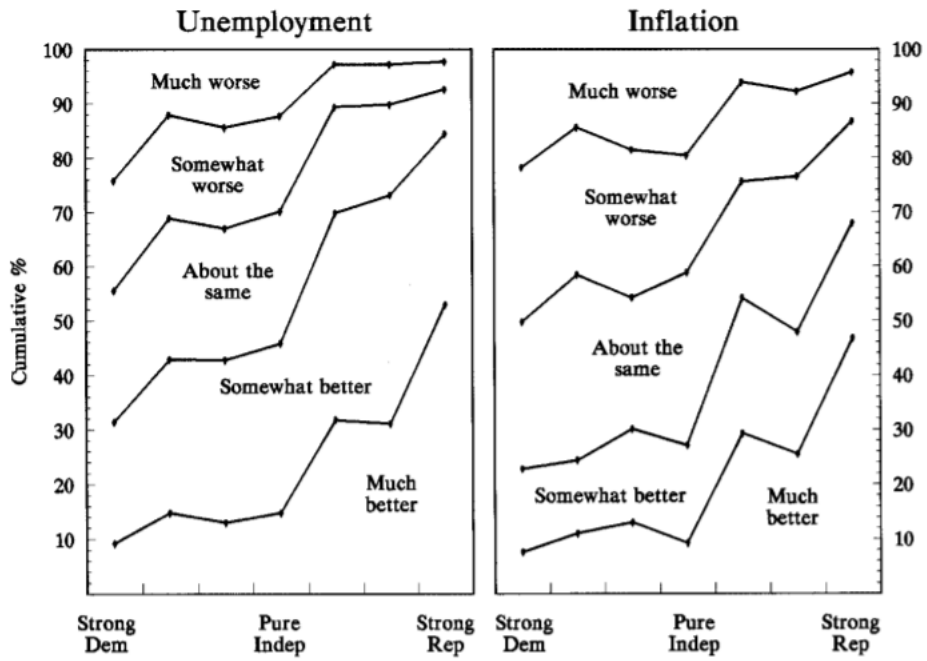
In other news, partisans, it shouldn't surprise you to learn, tend to be much more politically active due to their increased concern for ingroup members[13] [xxviii]. The downside of taking a greater interest in the political landscape is greater exposure to fellow partisans, whether they be ideological comrades or news headlines. According to Zaller's influential book *The Nature and Origins of Mass Opinion*[xxix], a key component of evaluating political information revolves around the voter's *umwelt*, or filter. Zaller's *Receive-Accept-Sample* (RAS) (just an awful name) model breaks this filter down into i) knowledge of the topic in question, ii) the instability of individual opinion and iii) availability bias. Voters with little knowledge on a certain issue – let's face it, most of us – will rely on inadequate heuristics to reach a decision. These heuristics are variable and context-sensitive; they may look to one or another ingroup member for guidance (social learning/conformity) or they may crunch only the data available to them (availability bias), the selection of which is subject to pre-existing beliefs. Contrary to Bayesian models of unbiased learning[xxx], which broadly hold that individuals update their internal models of probability when receiving new information, previous chapters made the case that both the *selection* and *processing* of information runs up against biases and heuristics that evolved to deal with entirely different decisions with both speed and frugality.

A great example of this comes from a study asking partisans to evaluate economic performance during the reign of Ronald Reagan (based on 1988 polls). Divided into groups that best describe their political loyalties – Democrat, Republican or Independent[14] – responders were asked to assess the country's performance in terms of numerical statistics on unemployment, inflation, spending on public education, and so on. In seven out of the ten issues presented, there was a sharp divide between the evaluations of strong Democrats and that of their mortal enemies[15]. As Campbell and colleagues noted decades prior, partisanship "raises a perceptual screen through which the individual tends to see what is favorable to [their] partisan orientation"[xxxi].

[13] The authors find that both general altruism for society as well as for ingroup members (fellow party cheerleaders) increase political participation.

[14] Along a 7-point scale from Strong Democrat (1) to Pure Independent (4) to Strong Republican (7). It should be noted that given the range of ideologies represented by independent parties, this widely-used scale has been criticised (e.g. Green, Palmquist and Schickler, 2002).

[15] Bear in mind that we're talking about things like inflation and unemployment that are not subject to opinion. The variance, therefore, can *only* be explained by the bias of partisanship.



Bartels (2002). Partisan evaluation of economic conditions 1980-88. P.135.

One would think, however, that the availability of actual statistics would resolve the debate; it doesn't really matter if Democrats underestimate reductions in inflation and unemployment rates under Republican leadership because we all have access to Google. As it turns out, however, the more complex issues become, the uncertainty that in part drives partisan decision-making creates a grey area of debate in which two opposing facts can be simultaneously true.

Cohen illustrates this with a brilliantly-designed study. Participants were shown a policy proposal either with or without the backing of a party leader. Republican partisans evaluating a government-funded jobs programme alongside Republican endorsement were more likely to regard the policy as "typically" Republican and, therefore, great[xxxii]. Furthermore, they were more likely to give justification along the lines of traditional Republican ideology, such as "teaches important job skills", rather than a similarly-justifiable conservative trope such as "wastes tax-payer money". Likewise, it doesn't take a leap of imagination to predict the Democrat's justification in support ("helps those in need") or in opposition ("doesn't help enough")[16]. Once the ingroup stance is recognised, we reach "a point on which people do not so much form opinions as choose sides"[xxxiii], which is intensified, as we have already seen, when the issue is perceived as moral in nature[xxxiv].

Just as religious texts can be relied upon to egg on all manner of good and bad behaviour, within any society's moral codes, there lies an argument in support for almost anything. The flexibility with which rationale falls in line with preconceptions is reflected in post-Humean indictments of reason. Just as for Hume, "reason is…the slave of the passions", Haidt likens the two to an elephant and the rider; although the rider, reason, appears to be driving the elephant, instinct, in reality, the rider has little say in proceedings[xxxv]. Comparing the writings of Karl Marx and John Stuart Mill, it is interesting that the two almost opposite utopias that emerge derive, in part, from two distinct definitions of liberty. For Marx, liberty is freedom from the relentless machine of capitalism that, through the

[16] To highlight this point, at the time of writing, Democrat senator, Alexandria Orcasio-Cortez, was joined by four Republicans in voting against a bill freeing $484 billion in fiscal support for those affected by the Coronavirus. AOC suggested the bill did not go far enough, while the fiscal conservatives complained that it went too far. https://www.businessinsider.com/aoc-tells-republicans-to-legislate-like-rent-was-due-2020-4

commodification of everything, forces us into a perennial pattern in which we exchange the fruits of our labour for commodities necessary to existence. For Mill, liberty is achieved away from the steely grasp of government, which has no place in people's lives but for the rare exception when state intervention would prevent harm. Still today, political arguments on both sides employ liberty as the basis of their rationale. It is frightening to think that beliefs, pushed as they are onto our consciousness by invisible forces, are often based on little more than instinct; more frightening still, as interviews with participants lay bare, that these invisible forces go undetected even when held in front of our eyes. Spinoza's cog revolves, spurred on by a deterministic machine, obstinately convinced that it turns of its own volition.

Continuing this theme, Cohen issued participants with newspaper articles on one of two redistribution policies: one generous and one stringent. Absent group-level evaluations (from Republicans or Democrats), pre-existing ideology (liberal or conservative) had the largest effect on which policy was chosen. When the group's stance was woven into the text, however, identifiers of the group were even more persuaded, even (actually, especially) when the group in question supported a policy that seemed to contravene its ideology (e.g. when the Republican stance was in favour of the generous policy). In a follow up questionnaire, participants generously attributed their opinion to a balanced weighing up of the pros and cons[17]. Cohen discourages readers to assume group influences involved less *consideration*. They didn't. The issue was that these group influences factor subconsciously into the evaluative process and therefore the arguments that were being generated in support of policy prescription or proscription appeared to derive from the group level *imperceptibly*[18][19]. Just to hammer the point home, don't think that intelligence can save you from the grip of partisan misevaluation. There is evidence that suggests that high IQ offers little insulation[xxxvi].

It is here we arrive again at a very important theme that needs highlighting. An important limit of agency is that the source of our decisions is often consciously undetectable; while the brain is a vast collection of voices, identity gives us the illusion of unity. It is for this reason that we are prone to taking credit for conclusions that emerged from the void left by diminished will. This is a big claim so let me shove one more study down your throat: Pickett, Silver & Brewer found that when inclusiveness was threatened (i.e. "you don't belong"), participants identified more with social categories of a group, and overestimated the size of the ingroup; whereas the opposite effect was observed when differentiation was called into question (i.e. "you're a sheep")[xxxvii]. Accuse someone of following the crowd and they highlight their individuality; make someone feel alienated and they stress group norms. Thus, if you ask an individual if they were following the group's lead or individually weighing up the pros and cons, which instinct do you think is it most likely to evoke?

Not only are our conclusions difficult to trace back, but they are often driven by ideological instinct. While personality-focused political psychologists such as Haidt and Jost attempt to draw out stable

[17] Methodological note: the authors also controlled for participants' a) prior knowledge on the policy issues and b) suspicion concerning the true nature of the study.

[18] This effect was found in other countries such as the Netherlands (Verkuyten and Maliepaard, 2013) and Switzerland (Colombo and Kriesi, 2016)

[19] I don't want to labour the point too much, but examples of partisan groupthink are plentiful. Chambers, Baron and Inman (2006) find that partisans exaggerate differences of opinion between themselves and political adversaries, creating an illusion of extremity in opponents' views. Chambers and Melnyk (2006) echoed these findings, adding that these false assumptions were based on the core values of the assumer rather than those of the opponent. For example, advocates of relaxed immigration policy "hate America/ns", whereas advocates of universal tax cuts are trying to "abet the rich elite/hate the poor". Speaking generally, the actions of others are interpreted through the filter of our own moralistic worldviews.

correlation between personality and political ideology, support for a certain group often depends on its reflection of core ideologies, which are tightly interwoven into our core identities[20]. You may recall, reader, that identity is shaped by distinctiveness; both at the group level, us versus the outgroup, or at the individual level, me versus the rest of the ingroup. Given that the range of possible ingroups is huge – one's family, football team fans, Londoners, fellow-LGBTQ identifiers, patriots, Bernie Sanders voters and so on – achieving distinctiveness depends on a) which ingroup is being used as a reference point at that moment, and b) the salience of outgroup threat in the terms described in the last chapter. Core identity, therefore, is context-sensitive, and depends on who/m the individual is seeking distinctiveness from. Remember, you may identify as a staunch Remainer, but in a world with no Leavers, this identity loses its distinctiveness and, therefore, its very *raison d'être*. Combine this with our need to be consistent and correct, and a throw-away opinion, when challenged by a perceived outgroup member, can suddenly become the reason we get up in the morning.

Group hierarchy

As discussed in the previous few chapters, the perceived hierarchy of groups in society have a big influence on the brain's hive switch. Through chapter 6's analysis of indigenous tribes and chapter 7's analysis of ingroup-outgroup division, we saw that one key component was competition, particularly over limited resources. Just as sports teams compete for the prestige of being champions, "partisans comprise teams that compete against one another for control of the state."[xxxviii] Even in countries that force parties into coalitions, perceived power lies with the party that sets the bulk of the agenda, resulting in winners, losers and four to five years of bragging rights (or every couple of months in Italy[21]). The resource in question is limited and of immense importance, and thus, far more likely to evoke the group-level types of thinking discussed previously. In support of this idea, Nau gives the example of seats in parliament or vote shares that reflect how these sparse resources are represented in the minds of voters[xxxix]. More specifically, the distribution of resources is a matter of perceiving how much 'we' have in relation to 'them'. Just as egalitarian tribes use levelling-mechanisms to cut down individuals who are perceived as possessing too much status, groups are sensitive to their own status in relation to others.

One mechanism for maintaining distinctiveness in a group that passes a certain critical mass of support is to overstate the size and/or strength of the opposition. George Orwell's observation in *Animal Farm* and *1984* that political loyalty can be strengthened through depictions of a country at siege is exemplified by Turkey's *Sèvres Syndrome*, which describes the perception that "there are forces which continually seek to disperse and destroy us, and it is necessary to defend the state against this danger"[xl], based on the Sèvres Treaty of 1920 in which the fallen Ottoman Empire was divided up among Western powers to the exclusion of the new Turkish republic. One's group can be considered distinctive if other groups seek its destruction; from top dog to underdog with the flick of a perceptual switch. One means of achieving this status is through negative appraisals of the media. Vallone, Ross, and Lepper took the emotionally-charged Beirut Massacre of 1982 and asked participants – either distinctively pro-Israeli or pro-Arab – to evaluate media coverage of the event, noting that recollections of coverage was tainted by their ideological loyalties[xli]. Further, participants feared that this perceived media bias would help to sway viewers in a dangerous direction[22].

[20] To refresh your memory, in chapter 5, we looked at James Marcia's theory of identity that suggested we feel free to explore possible identities as long as our core identities stay in tact.

[21] #makeyourbloodymindup

[22] This is particularly interesting in an era where 'deplatforming' and removal of online content is justified along precisely the same spurious lines. In the UK, the BBC is either a "right-wing mouthpiece" evidenced by its

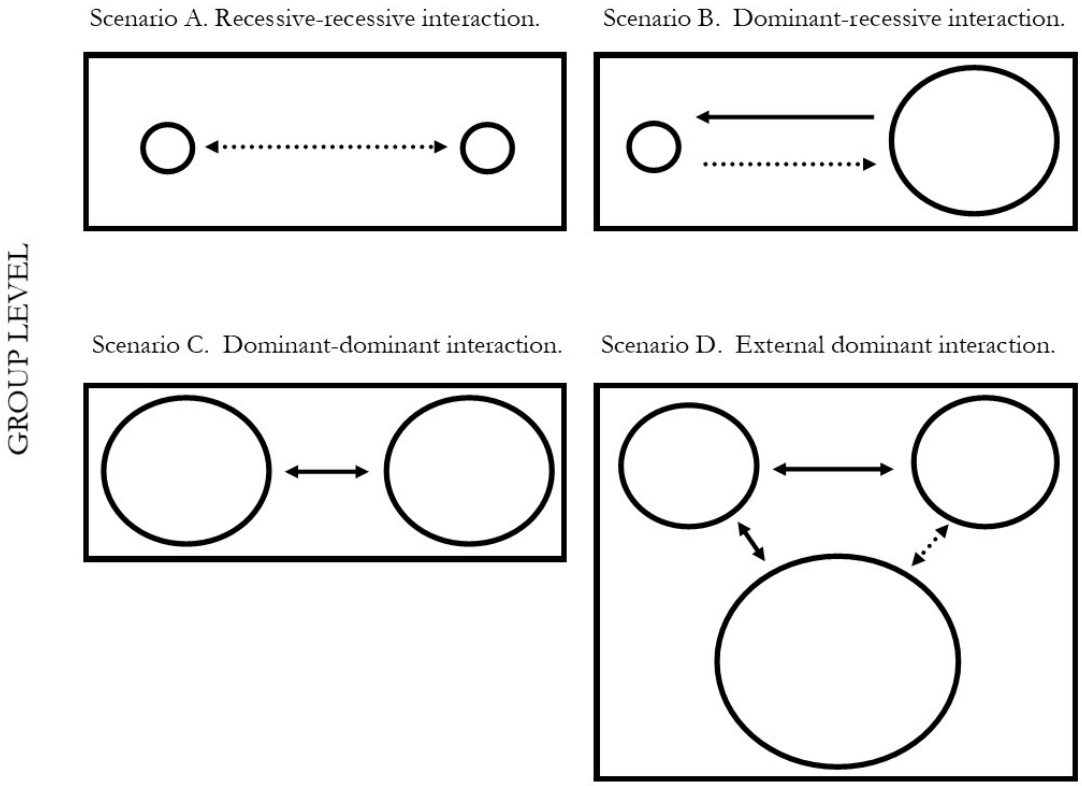
Hilariously, perceptions of bias shift considerably when the ruling party changes. Partisans of a once-subordinate party previously mocking the gullibility of voters falling for media propaganda tone down their criticism, while the newly-deposed party blame their demotion on media propaganda[xlii]. When representatives of both sides of the political debate are given platforms, cherry-picking evidence in support of oppositional media bias is pretty easy. "People categorize media into partisan groups much like they categorize people into groups"[xliii]. The compelling narrative of being embattled on all sides and striving for victory against all odds causes Reason to artificially enlarge the outgroup, but of course, reader, your assessment of media bias is balanced and fact-based, right?

Connecting status and identity, Abrams tested the extent to which the relative status of an individual's supported party represents a core identity. While support for a major party was seen as an extension of something akin to common sense, or related to familial ties, support for a minority party – in this case, the Liberal Democrats and Scottish National Party, competing in British elections – was commonly seen as a distinctive part of individual identity[xliv]. If fervour for the 'favourite' is less than for the 'underdog', how is it that the major parties are able to sustain a strong base? Abrams speculates that many members carve out a sub-group within the larger group, whether it be membership of a local constituency, a coterie advocating policy reform in a certain area, or, in the case of the 2016 Brexit referendum, furthering the ideology of another minority party (UKIP). Political identity, then, requires a sense of individual distinction. In precisely the terms described by social psychologists[xlv], if the group/party is too large, a smaller sub-group will be carved out to maintain this distinctiveness.

However relative status is ascertained, we know that individuals are very sensitive to their place in society, whether it is the individual within a group, or an individual's group within a society. Evolution, gripped with the importance of cohering large groups, has shaped us to congregate into distinct groups whose strength is marked by the extent to which values and norms converge. Given what we've learned so far, it may be useful to operationalise – think systematically about – how groups of different sizes interact. Allow me to present the *perceived group hierarchy model*[23].

status as a government-funded Royal Charter organisation, or part of the 21st century "liberal elite", depending on who you ask. This also speaks to the futility of political neutrality or 'centrism'; you're either with us or against us.

[23] The fanfare is due to this being, for once, an idea not stolen from other smart people, but original to this book.



As we can see, in this model, relative size really does matter. In scenario A, two relatively small groups (in a given society consisting of larger groups) exert little influence on each other (dotted arrows) causing little partisan sentiment, whereas in scenario B, one large group exerts considerable influence (full fat lines) over its utterly insubordinate rival, while the small group's influence is negligible. The American Green party and their followers have very little influence on Democrats, while the latter very much set the tone for the former. Followers of a party of this size, due to their political ineffectiveness, may either defect to or share their loyalty with a larger group embodying comparable values[24]. Scenario C depicts a typical two-party system in which two large parties of similar sizes impact each other significantly. When group size is both large and similar to a rival group, partisan sentiment increases, entrenching and intensifying positive ingroup and negative outgroup evaluation. Scenario D introduces an external rival group of significant size. The influence of this group on smaller but still large groups depends on relative ideologies; the greatest impact of the larger group is on the smaller group *of an opposing ideology*, intensifying partisanship in the smaller group, which, in turn, intensifies partisanship in the other smaller but still large group. An example would help here.

When then-incumbent Prime Minister, David Cameron, announced in February 2016 that the UK would hold a referendum on EU membership, I think both sides would agree that few would have predicted a win for Leave. Perceptibly, Leave were recessive and Remain dominant, exerting little influence on each other according to scenario B. However, as pro-Leave Conservatives 'welcomed' UKIP supporters into their ranks, Leave passed a critical mass and grew to the point where its presence was being felt. In the build-up to the referendum in June of 2016, the UK is best reflected

[24] Although, in the spirit of rebellious distinctiveness, it is possible that individuals give up the battle for political resources in favour of identifying exclusively with David over Goliath. Voters of Green parties, can I get an amen?

in scenario C. Partisanship went through the roof. Add to that the big bad wolf, the EU. Pro-remain members of the public, scientific community, celebrity stardom and, of course, the EU political elite were bundled into the same outgroup, giving pro-Leave voters the sense that they were threatened on all fronts, further intensifying partisanship and causing the Leave ingroup to swell. Pro-Leave partisans emboldened pro-Remain partisans and vice versa, back-and-forth, from individual, to ingroup, to outgroup, then back again, in a recursive process that is still tangible years after the vote, and will likely remain so for years to come, until at least one side is able to be the bigger man and walk away. It's the gift that keeps giving, due, in large part, to the persistent *perception* of competition among Brexit-related ideological groups; scenarios C and D are still in effect.

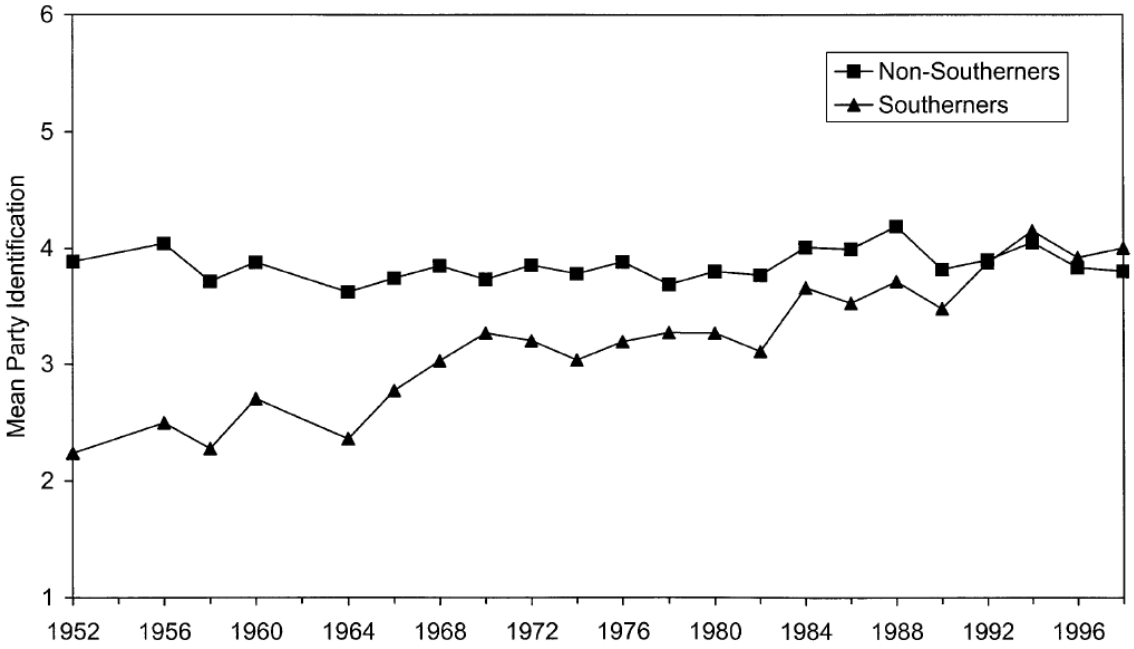
Leadership

Finally, a discussion on partisanship would not be complete without considering the role of group leaders. Whether politicians, journalists or social media influencers, leaders are seen to embody one's core political ideologies and set the agenda for public debates on all sides, as evidenced by studies discussed above.

However, the co-dependence between the individual and environment rears its head once again. Do political leaders set the tone or are they merely capitalising on the passions of the masses? Certain research comes down in favour of leaders originating ideology[xlvi], whereas others insist that the influence works the other way round[xlvii], while others, still, allow room for bidirectional influence[xlviii]. On the one hand, it appears as though uncertain and dangerous times, in line with previous chapters as well as Jost and colleagues' work, push people to look to influential members of society to form opinions, with core identities reflecting the principal characteristics of one's ingroup. For example, Funke, Schularick and Trebesch's finding that financial crises pushes voters further rightwards[xlix] is reflected in UKIP's Nigel Farage, or the U.S.'s Donald Trump. However, UK Labour leader between 2015-2020, Jeremy Corbyn's surge in popularity similarly reflects troubled times. His followers attributed British economic stagnation not to EU overreach or unfettered immigration, but to the incumbent Conservative Party's decision to fight bloated public debt with large cuts to government spending (aka austerity). The core ideology that Corbyn represented was compassion towards the less fortunate, who were seen as those most impacted by cuts to public services[25]. It is little surprise, then, that during the influx of Syrian refugees in Europe in the wake of the Syrian civil war that began in the early 2010s, the right bestowed negative characteristics on incomers – lying about their age; unskilled; not fighting for their country; economic immigrants – whereas the left focused on the positives – skilled; victims; representing a boost to the economy. Each side cherry-picked specific examples, most of which contained at least a kernel of truth, and held them up as representative of the larger group. Jost's elective affinities model suggests that would-be leaders are chosen on the basis of the individual's particular brain and, for example, the uncertainty of the political landscape. It is some combination of leaders' social status, rhetorical prowess, position within a political party and hairstyle (I'm thinking of you, Adolf) that causes the masses to elevate them to a position of leadership. From this point on, as long as the leader continues to embody those values, he/she will remain top dog.

[25] At the extremes of research in political science, this policy direction was even labelled 'social murder' (Chernobas and Hudson, 2009).

On the other hand, we know that leaders can fall out of favour. In the UK, as the country edged closer to enacting the result of the referendum, the possibility of reversing the decision became of critical importance to many Labour supporters. Although many insist that the Labour leadership were clear in their stance on Brexit, many members, whose initial support rested on anti-austerity and pro-compassion aspects of political identity, felt that their anti-Brexit identity was not being effectively reflected by the leadership, dulling Corbyn's support[26]. More interestingly, it may surprise non-American readers to learn that, once upon a time, southern America was once a Democrat stronghold. Voters advocating small-state and individual-freedom policy directions gravitated towards the Democrats throughout much of the U.S.'s history, but after the Voting Rights Act of 1965, extending voting rights to African Americans, the Democrats began appealing more exclusively to a new generation of Liberals who saw civil rights as their core ideology[27]. As political rhetoric



became more concentrated in the area of social justice, conservative voters started shifting slowly towards the Republicans who capitalised on the shift, and began emphasising individual liberty (see above). As Green, Palmquist and Schickler write: "People maintain their partisan identities as long as their image of e partisan group remain intact."[l] Thus, when the political landscape shifts and core identities realign, leaders unable to embody this change fall out of favour.

A final phenomenon connected to partisanship, core identities and leadership is how partisans tend to follow the ideological positions of leaders as long as their core identities remain front and centre. Purely anecdotal evidence for this comes from American foreign policy. In February 2015, Democrats (26%) showed more sympathy towards Russia than Republicans (19%). However, Trump's break from anti-Russian rhetoric and stress on developing relations led to a reversal, with February 2019 data showing Republicans (30%) were warming up to the Russians with respect to Democrats

[26] Please note that, of course, the story is far more complex than Brexit. For example, the Labour party has been severely fractured since it lost power in 2010, and Corbyn's support within the party has never been similar in proportion to support among members, rendering the party unable to present a 'united front'.
[27] I'm going to throw this out there. I think a big cause of seismic shifts in political ideology are generational. The young look to seek out a strong position in contrast to their scornful elders. This, if true, would be yet another example of identity shaped by inter-group opposition.

(19%)[28]. Trump's support of Russia was, I hope most can agree, not a key driver of his enormous popularity, but perceptions of outgroup opposition caused many Republicans to rush to Trump's defence in *all* policy areas. In this case, core ideology represents a policy pivot around which political ideology can shift. As we saw in chapter 5, individual identity can move around as long as the core identity stays intact. Naturally, given the need for individual distinction, partisans do not identify support for a leader as the root of their new stance, citing, instead, rational processing of information in line with research discussed earlier in this chapter. This is, of course, true of Democrats whose somewhat ironic accusation of "election meddling" was commonly cited as the cause of their position shift, rather than reactionary opposition to outgroup values[29]. Underlying this spurious policy pivot is, once again, distinction from the outgroup. For partisans, sharing common ground with political opponents is an unbearable thought; thus, even when opinions align, partisans will seek out distinctiveness: perhaps their stance is more nuanced or perhaps their opponents are disingenuous populists fibbing to win votes. As long as there is no way to access the thoughts of others, the goalposts can always be moved to paint one's team in a more positive light than one's opponents.

Conclusion

This book started with a discussion on agency and rationality, showcasing a range of examples on how our approaches to decision-making – heuristics – are often misapplications of techniques developed by our ancestors living in entirely different worlds. We came to see the brain as housing a somewhat dysfunctional family consisting of instincts engaged in regular battle to control the actions of the larger organism. Just as early philosophers carved out a defence of free will despite being couched in a seemingly deterministic universe, we too assume authorship over the both the inputs and outputs that appear in our minds. In reality, the human brain, with its finite storage and processing power, struggles to distinguish between relevant and irrelevant stimuli in a chaotic world with more stimuli than you can shake a stick at. Thus, the heuristics that came to guide us away from a grizzly demise prioritised the collection and processing of stimuli that best promoted survival.

As the brain evolved and new members of the family were welcomed, a degree of organisation was needed to allow the family to work together more effectively. Somehow, somewhere, consciousness was elected supreme leader, unifying what had become a very diverse group under the banner of "me". Of the newest members, most came on board as consultants offering their expertise on how best to deal with external organismic families; compassion, empathy, deception, revenge each played a role in expanding the limits of the group to achieve world domination. As essential as consciousness' sense of unity was to the functioning of the organism, our supreme leader was way out of its depth. A growing family of brain regions, evolving relations between family members, growing numbers of cohabiting organisms and an environment that changes every time you blink; all consciousness could do was to keep doing its essential job, badly. Thus, a conflict arose between the job description of identity – to maintain unity – and its actual capacity, inconsiderately leaving us with a diminished will utterly convinced of its own omnipotence.

The various shortcuts that were developed have been described in this book: learning from pleasure and pain, allowing ancient members of the family (fear, anger, pleasure, disgust and the others) to

[28] Gallup data cited in the following article: https://www.nbcnews.com/politics/meet-the-press/democrats-gop-move-opposite-directions-russia-views-n1097751

[29] I should state for the record that this is theoretical. For my explanation of events to gain validity, it would require extensive historical investigation accompanied by a shit load of polling data.

have a say in making sense of the new world, social learning, hierarchy and social status, competition and cooperation, right and wrong. These various elements begin life as an inchoate infant, are shaped by their environments and, in turn, have a hand in shaping *it*. Our beloved supreme leader keeps the propaganda machine running – "the central committee is in control" – while, in reality, the innumerable family members organise themselves as they see fit. In an insanely complex world of over 7 billion people, each with their own tinpot supreme leaders, it should hardly be surprising that those shortcuts don't quite cut the mustard. We apply the rules of a very old game to the new world; we pledge allegiance to ideologies for non-ideological reasons; we compete for resources that we don't need because we *need* to compete; we arbitrarily divide ourselves into groups then justify prejudice and persecution (positive or negative) on that basis; we are individuals and we are members of groups; we compare ourselves to each other every second of every day; and yet, we do all this believing ourselves to be fully in control.

Dear Partisan,

You may not be guilty of all the transgressions mentioned in this book, but how would you know? What means do you have of justifying your thoughts and actions in relation to others? As research has shown, we are one ingroup-outgroup division away from electrocuting someone we've never met. As I look at political discussions in today's world, I am dismayed at how we seem capable of treating each other. Faceless immigrants are likened to pestiferous insects while "punch a Nazi" campaigns inexcusably excuse violence. The point is not that you are currently an unreasonable partisan, it is that you will always have the capacity to be so by virtue of simply being human. Irrationality, as you may have understood the term in this book, is an incurable affliction that always threatens to seep into our thoughts and ensures that we must remain ever vigilant. This is not a self-help book. There is no single strategy that will help you take charge of your inner family. You have your own experiences, your own triggers, your own strengths and weaknesses. All I can suggest is: do your best to not be a dick.

That lovely thought aside, I have one final goal. If, indeed, there is little hope of overcoming our nature, are there ways we can tweak our environments to allow the better angels of our nature to run the show? In the third and final act, we turn our attention to three social institutions that have a profound influence on our thoughts and behaviour: markets, democracy and meritocracy.

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[i] Asch, 1948, p.253
[ii] Campbell, Gurin, & Miller, 1954
[iii] Campbell, Converse, Miller, & Stokes, 1960
[iv] Nau, 2016, p.212
[v] Green, Palmquist and Schickler, 2002
[vi] Jenssen, 2016
[vii] Blais *et al*'s, 2006
[viii] Green, Palmquist and Schickler, 2002, p.29
[ix] Bettencourt *et al*., 2001
[x] Hyman & Singer, 1968
[xi] Stanley & Niemi, 1995
[xii] Carney, Jost, Gosling, & Potter, 2008; Goldberg & Rosolack, 1994
[xiii] Hirsch *et al*., 2010
[xiv] Gerber *et al*., 2012
[xv] Haidt, 2003
[xvi] Jost, 2012

[xvii] Iurino, 2018
[xviii] Jarudi, 2009
[xix] Bonnano & Jost (2006
[xx] Landau *et al*., 2004
[xxi] Jost *et al*., 2009
[xxii] Funke, Schularick and Trebesch, 2015
[xxiii] Hammar, 1985
[xxiv] Bartle & Bellucci, 2009; Greene, 2002
[xxv] Campbell, Converse, Miller, & Stokes, 1960, p.100
[xxvi] Haidt, 2013
[xxvii] Green *et al*., 2002
[xxviii] Fowler & Kam, 2007
[xxix] Zaller, 1992
[xxx] Achen, 1992; Green, Palmquist and Schickler, 2002
[xxxi] Campbell, Converse, Miller, & Stokes, 1960, p. 133
[xxxii] Cohen, 2002
[xxxiii] Ellsworth & Gross, 1994, p. 23
[xxxiv] Verplanken & Holland, 2002; Wood, 1999
[xxxv] Haidt, 2013
[xxxvi] Stanovic, West & Toplak, 2016
[xxxvii] Pickett, Silver & Brewer, 2002
[xxxviii] Green, Palmquist and Schickler, 2002, p.83
[xxxix] Nau, 2016
[xl] Kissane, 2008
[xli] Vallone, Ross, and Lepper, 1985
[xlii] Duck, Terry and Hogg, 2016
[xliii] Stroud, Muddiman, and Lee, 2014, p.875
[xliv] Abrams, 1994
[xlv] Tajifel *et al*., 1971; Turner *et al*., 2006
[xlvi] Baumgartner and Jones, 1993; Zaller, 1992
[xlvii] Monroe, 1979; Page and Shapiro, 1983
[xlviii] Hill and Hinton-Andersson, 1995; Jacobs and Shapiro, 2000
[xlix] Schularick and Trebesch, 2016
[l] Green, Palmquist and Schickler, 2002, p.139

PART THREE
INSTITUTIONS

Chapter 9
Markets

This final part is essentially a discussion on what political scientists and economists call 'institutions', which are basically the rules that structure social systems. For example, how we organise elections (or whether to hold elections at all), whether or not central banks or judges should be independent from government, and (seamless segue) how we shape markets. Thinking on institutions has evolved considerably over the last half a century. Whereas once we looked at the institutions of developed countries as the ideal model that simply needed transposing onto developing countries, we now recognise that the path to development is far more important a consideration than the destination. While much work has already been dedicated to this path, this book will focus on the nature of developed institutions and how they serve the agents I have thus far described.

The modern theory of markets began with Adam Smith's 'invisible hand', was extended by Walras' model of supply and demand and then enshrined in Arrow and Debreu's mathematical demonstration of *general equilibrium*, for which they won the Nobel Prize in 1972. Across a given market, the intersection of supply and demand is thought to rest at an equilibrium point that reveals to us a stable price. Experimental evidence of this equilibrium has been provided by Vernon Smith[i] and Plott[ii] whose lab-created markets managed to create a stable price where none previously existed. This theory has tempted many to assume that the ability for prices (and markets more broadly) to regulate themselves – guided by the benevolence of supply and demand – is sufficient to justify reduced state intervention. However, this conclusion fails to consider the extent to which prices reflect the relationship between market principles and economic agents.

This chapter will attempt to summarise the logic of markets and then scrutinise whether our understanding of the human mind aligns with this logic. There are five key elements to consider in the design of a market: free-flow of information, ensuring agreements are upheld, fostering of competition, protection of property rights (but not overprotected) and minimising negative externalities[iii]. We'll take these one-by-one.

Information

Long before the fall of the Iron Curtain late last century, Friedrich Hayek argued that central planning is doomed to fail due to the ability of markets to capture and reflect large volumes of ever-changing information. In his 1945 essay *The Use of Knowledge in Society*, he writes:

"…the knowledge of the circumstances of which we must make use never exists in concentrated or integrated form but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess. The economic problem of society is thus not merely a problem of how to allocate…resources… It is rather a problem of how to secure the best use of resources known to any of the members of society, for ends whose relative importance only these individuals know. Or, to put it briefly, it is a problem of the utilization of knowledge which is not given to anyone in its totality."[iv]

Similarly, the spirit of Adam Smith's 'invisible hand' suggests that individuals, operating in accordance with their wants, needs and desires, can harness the information they garner to benefit both themselves and society; little central orchestration is needed with the invisible hand doing the heavy lifting.

As we look at the world in the 21st century, it is difficult to argue against this point. Central planning, at the scale employed by the Soviet Union, for example, has long been abandoned as markets (with varying degrees of regulation) have sprung up across the globe. And yet, problems abound. Markets, similar to culture, serve as a repository of information that combine to generate prices that satisfy buyers and sellers. Where market regulation is poorly-designed, poorly-enforced or absent entirely; where access to information is impeded, the flow of that vital information that helps agents to gauge prices runs up against interference.

Take the traditional bazaar as an example, which, as far as we know, has been around since at least 3000 BC in Persia[v], although it's likely that as soon as homo sapiens groups started intermingling, trade soon followed. They emerge whether you like it or not, as exemplified by the emergence of trading in prisons and WWII prisoner-of-war camps in which cash was replaced by cigarettes, prices fluctuated according to supply and demand and those price changes caused changes in prisoner behaviour[1]. However, in undeveloped markets such as these organic bazaars, "the level of ignorance about everything from product quality and going prices to market possibilities and production is very high."[vi] In such a market, knowledge is power and power is profit, regardless of which side of the transaction you find yourself. The incentive for the seller is to hide information so as to permit discretionary prices that extract maximum profit over each individual consumer. The buyer can be co-opted into this subterfuge with the claim that he or she is getting a good price (especially relative to other buyers). Thus, absent intervention, prices may reflect *asymmetrical information*.

While much of economic theory has been based on the assumption that buyer and seller have access to "perfect information" – and therefore that the prices determined by supply and demand reflect perfectly the needs and wants of individuals – Akerlof, Stiglitz and Spence showed in the late 1980s that only do market failures emerge from an absence of perfect information, but, in reality, imperfect information is the norm. To illustrate the point that netted the above economists a joint Nobel Prize in 2001, consider shopping for detergent. You walk into a local shop in a new country on the hunt for detergent, how do you decide which to go for? Do you, according to neoclassical theory, do extensive research across the entire market comparing quality and price? Even if this were possible, of course you wouldn't. You look at the cheapest, go to the next cheapest, give it a whiff,

[1] According to one British prisoner-of-war in a German camp, prices would increase when new prisoners arrived, which caused individuals to start stockpiling food, allowing them to shift supply up in tandem with increased demand and, in doing so, stabilising prices.

then stick it in your basket[2]. Consumers are deprived of information by a whole host of factors: time constraints, budgets, pre-existing preferences, dodgy marketing and generally, giving enough of a shit to actually inform themselves[3]. Any money lost by the consumer by means of information deprivation has been labelled an "ignorance tax" by Joseph Stiglitz[vii]; one we pay, for better or worse, on a daily basis. In a famous paper, George Akerlof described a car market containing high-quality (peaches) and low-quality (lemons) vehicles. As only sellers truly know whether they have a peach or a lemon, and with the buyer working with a limited budget, the seller is incentivised to meet low prices with only the lowest-quality cars, pushing out peaches and leaving us with a 'market for lemons'.

One obstacle to the free-flow of information is the costs of acquiring it. While this may seem to be a strange notion, especially in the age information, Ronald Coase demonstrated that *transaction costs* can make information expensive[viii]. A company looking to hire a new regional manager must spend time and money looking for the right recruit; although the internet has made this much easier, huge companies such as Indeed and LinkedIn skim enormous sums facilitating this process. Once a shortlist of suitable candidates has been sourced, more time and money is poured into interviews, negotiating and drawing up a contract. Finally, the HR department continue to busy themselves with maintaining the staff roster, disciplining breaches of contract, offering onboarding training and generally supporting staff throughout their time with the company. Coase's transaction costs, therefore, are 1) search and information costs, 2) bargaining and decision costs and 3) policing and enforcement costs. As the example above illustrates, the cost of information explains the existence of intermediaries whether in recruitment, sourcing global suppliers of microchips, or credit rating agencies who collect and sell information on potential borrowers. To a large extent, the rise of big data is indicative both of the high premium that information commands, and the fact that the concept of perfect information overlooks the dynamism of information; no matter how much information you have, you can always have more.

While organisations responsible for collecting information will always exist, the power that medieval European guilds were able to carve out for themselves gives us insight into how knowledge bestows considerable market power. As states sought to increase tax revenue, the concentration of information within guilds proved invaluable to governments attempting to gauge prices and wages. This often resulted in rulers having little choice but to give guilds considerable rule-making latitude. Guilds would suppress wages, limit competition by forcing vendors to acquire licences and bloat prices[ix]. There are parallels here with the notion of 'self-regulation' – particularly in the financial sector – in which banks, seen as more enlightened than governments concerning the markets in which they operate, are often trusted to devise and enforce their own set of rules[4].

In developmental economics, which looks at how economies develop and grow over time, imperfect information has been a source of concern. In credit markets, for example, lenders often lack information about the credit-worthiness of borrowers, leading to high interest rates and stymying

[2] As an aside, we can consider this a heuristic which, as we will see, is a far more common approach to economic decision-making than cool calculation.

[3] It's worth mentioning that you can give too much of a shit. Our good friend Herbert Simon (1956) distinguished between maximisers and satisficers – the former painstakingly thinking through every decision, and the latter using fast and frugal heuristics for all but the most important of deliberations. To the horror of economists, most of us aim for a stress-free, satisficing existence.

[4] Helleiner and Pagliari (2009), for example, explain that the derivatives market was allowed to self-regulate, away from the steely claws of national and transnational governments, until the 2008 financial crash disinterred some fateful conflicts of interest.

efficient allocation of resources[x]. Another example comes from underdeveloped goods markets. Whereas in developed countries governments are able to set and enforce regulations on quality and safety so that death by dodgy produce is minimised, this is not so much the case in more informal economies where regulation is either parsimonious or poorly-enforced. Of course, we rely on government agencies for our minimum informational needs, but for greater depth in quality comparison, we look to independent watchdogs (such as Trustpilot), aggregated reviews or reputable retailers[xi]. British consumers can buy 11p cans of tomatoes safe in the knowledge that although their culinary exploits won't be winning any awards, they won't bring about premature death. Chinese consumers, however, have faced existential threats from fake eggs, melamine-infused baby formula and unregulated exotic meat imports.

In summary, "a market works badly if information does not flow through it."[xii] The price mechanism as described above cannot function if buyers and sellers lack the necessary information to make informed decisions. Aside from deception, diminished will still poses severe limitations on the flow of information between individuals. For example, our notion of price can be anchored, as is the case when we see a product reduced from £150 to £50; we are more likely to pursue an investment if we have already "sunk" time or money into it; we are manipulated by our own expectations – people enjoy a Budweiser with a few drops of lovely vinegar…until you tell them[xiii]. Even if we avoid falling into the trap of assuming we are all consumed by the panoply of biases offered up by behavioural economists (chapter 3), it shouldn't be too hard to convince you that the brains that engage with markets are not designed to sift through information to the extent that would result in optimal decision-making. Therefore, the assumption that a completed transaction is justifiable by virtue of being a market outcome seems pretty silly.

Contracts and trust

As the great prophets Beyonce and Lady Gaga once said: "Trust is like a mirror, you can fix it if it's broken, but you can still see the crack in that mother fucker's reflection". The ever-present possibility of deception, particularly in large-scale societies, severely hampers our ability to trust. This is no less true in the bazaar. One key role that markets play is ensuring that agreements are honoured and, when the completion of the contract depends on future uncertainties, risk is priced.

One prime example concerns the development of state debt. It is widely believed that the creation of systems of taxation followed a thirst for conquest. Military technology underwent a rapid evolution, with the infantry revolution in the 14th century, artillery revolution in the 15th and the fortification revolution in the 16th century placing an increasing financial burden on states. Furthermore, soldiers (and later, mercenaries) need salaries, supplies and swords; the existential battle for power and prestige, particularly between European states, necessitated an ever-increasing rank and file. According to historian Thomas Dandelet: "[France] increased the size of the army from an estimated…50,000 to 75,000 in the late sixteenth century to an estimated 125,000 to 150,000 soldiers after 1635…this increase in size was simply an attempt to catch up to Spanish forces…"[xiv]. The ballooning costs of war forced monarchs to come into conflict with various domestic 'estates', such as the Church, nobility and courts, whose bountiful treasuries were highly-coveted. Those states able to exert control over these estates, achieving degrees of absolutism, were best-placed to raise fearsome armies[5]. Costs of war, however, soon outpaced the limits of tax collection, and states began to depend more heavily on foreign debt. This is when the benefits of an unchecked, absolutist

[5] For example, when France's Louis XIV died in 1715, he left a mountain of debt leading to the creation of the *chambres of justice*, which threatened to investigate debtors' finances (all of which were damningly dodgy due to pervasive clientelism) unless they agreed to a haircut.

state waned. According to Stasavage, the reputation for monarchs to default on debt led to significant interest rates both domestically and abroad[xv]. While city-states (often ruled by merchants whose role as both lender and borrower gave them a vested interest in monitoring debt) developed representative assemblies that disciplined borrowers, states generally did not. The power realignment in England in the wake of the Glorious Revolution, putting fiscal policy almost entirely in the hands of parliament, England's representative assembly, put an end to the never-ending cycle of European sovereign default via the creation of long-term government bonds[6], allowing England greater access to low-interest debt[xvi].

Today, we can see how financial markets discipline government spending both through interest rates, and independent credit rating agencies who conduct analyses of a government's political and economic behaviour to arrive at a "credit score". Markets allow its participants to substitute trust for risk-pricing; lenders are able to evaluate the chances of recouping loans through interest rates, and borrowers are punished for present and past financial mismanagement.

As the last section noted, one piece of information markets convey is quality. European guilds would certify both producers[xvii] and products[xviii]. As we saw, guilds often used the right to issue quality certifications as protectionist barriers to entry, but towards the 16th century, government-run quality gradation systems emerged in Venice and England, the latter forming the "aulnage" office, a government office that extracted taxes from trade[xix]. Indeed, the introduction of graduated systems of quality only emerged when the state's power relative to guilds increased, as exemplified in France in the 1780s when non-guild products were stamped "*libre*" – a mark signifying independent artisanry[xx]. Nowadays, the European single market, whose collective GDP stands at around $18 trillion at the time of writing, comes with more regulations on safety and quality than you can shake a stick at. A consumer in the EU can rest assured that her children will not be killed by a rogue block of faulty LEGO and, if the advertised and actual quality of a good are too misaligned, they have the full weight of the European Commission's consumer rights on their side. This is all to say that we don't necessarily need to look deeply into a seller's eyes to figure out whether we are about be shafted, as trust is supplanted by market regulation.

Another piece of information that markets convey is reputation. If the seller is left unaccountable, he can offer low quality goods or renege on agreements. In the last section, we saw an example of this from early debt markets in which sovereigns were punished for fostering an untrustworthy reputation, while in today's more transparent markets, a country's reputation is reduced to a one-to-three-letter grade issued by credit rating agencies. Spanning the temporal gap between these two eras, Gorton offers us an explanation of how technology progressively lends itself to market transparency[xxi]. In the early 1800s, an independent U.S.A. tried and failed to establish a central bank, spurring states to inaugurate their own banks who issued banknotes against local depositories of gold and silver. Although during the period of 1837-1863, half of these banks failed and counterfeit currency made up around a third of cash in circulation[xxii], rumours of trustworthiness spread from coast to coast, intensified by communication technologies such as the telegram and railways. I recently found myself shopping for wireless headphones, googling reviews of obscure

[6] This quite ingenious means of raising the £1.2 million (probably like £72 gadzillion in today's money, give or take) needed to build a fearsome naval fleet involved a) giving the Bank sole access to the Royal Treasury, b) granting the Bank alone the right to print money and c) instead of taxing, attracting investors whose cash was exchanged for IOUs that became legal tender (and netted some sweet interest). The money was raised in 12 days.

manufacturers. Failing to dispel my concern for the reputation-less Cool Soundz™, I opted for Motorola.

An important role that government has historically played in building markets is that of standardising units of measurement; as Rosenthal writes: "All commerce depends upon uniform standards of weights and measures. Without such standards there can be no definite commercial order, nor will transactions inspire the confidence that must precede trade…"[xxiii]. Although standardisation of weights and lengths reach back to the Normal conquest of England in the 11th century, standardisation across England and Scotland remained incomplete until the late 19th century. "A survey made in 1632 by Hugh May, the King's Clerk of the Market of the Household, found, for example, that in the West of England 10 gallons to the bushel was the norm, but that elsewhere 12, 16, even 20 gallon bushels were in common use"[xxiv]; the regional discrepancy in measurements caused regular disputes between traders with buyers pushing for the highest value of measurement, and sellers the lowest. The opposing incentives of buyer and seller led to plenty of instances of chicanery. The branch of government employed to deal with early market regulation, the Clerk of the Market, produced, marked and sealed official weights for distribution to vendors. However, the army of clerks lacked the numbers to prevent counterfeit weights from staging a clandestine coup. This led even Classic Liberals such as Jeremy Bentham – grandfather of *utilitarianism* – to implore the government to 'advise' traders on standard units of measurement[xxv]. As governments became better able to tax both domestic and international trade, their efforts to impose and enforce regulation on measurements allowed market participants to overcome mistrust and solve another information problem. Only in unregulated, illicit markets do we have to take our purchases home and weigh them, if you catch my drift 😉

Another example of government standardisation is in the issuing and guaranteeing of currency. One of the earliest issuers of currency was Croesus, king of Lydia, who issued coins of guaranteed purity in the 5th century BC. Although the prevailing story is that money emerged to enable value to be divisible[7], David Graeber (2013) challenges this idea, suggesting that sovereigns took an interest in issuing currency due to the advantages of *seigniorage*: as currency printing monopolists, kings and queens were able to profit either directly, by substituting precious metals in coins with less valuable metals[8], or indirectly, by paying citizens for services then taking a bit back in taxes[9]. Irrespective of its origins, the stability and general trustworthiness of a government/central bank is intrinsic to its currency's value, which is reflected in foreign exchange markets. An infamous example is the case of Zimbabwe in the first decade of this century; Robert Mugabe ordered the printing of masses of Zimbabwean Dollars to finance (you guessed it) war efforts against the Democratic Republic of Congo, hiding a lot of their expenditure and concealing the extent of money creation. As inflation soared, the central bank responded by printing more money (and in doing so, depriving markets of information). By 2008, (hyper)inflation had reached the kind of numbers usually left to children's verbal creativity (89.6 sextillion percent). A similar situation occurred relatively recently in Venezuela where excessive money creation brought about hyperinflation that reached around 1,700,000% in

[7] For example, Adam Smith gives the example of Scottish villagers exchanging nails for beer. Money was thought to reduce every item to an absolute, divisible monetary value to reduce complexity in trade.
[8] The British pound sterling (GBP) takes its name from silver sterling, a silver alloy consisting of 92.5% silver and 7.5% ground peasant bone. When the pound was pegged to precious metal reserves, this 7.5% minus costs of minting was seigniorage profit for the crown.
[9] Graeber recounts the French conquest of Madagascar as an example. When General Gallieni dissolved the 350-year-old monarchy and exiled Queen Ranavalona at the end of the 19th century, one of his first acts was to create and mint Malagast Francs and levy a tax called the *impôt moralisateur* (moralising tax) to punish them for their audacious resistance to French colonial aspirations.

2018. The depredation that followed can be traced straight back to the relationship between what a government does with money and consequent investor confidence; as confidence drops, as does demand and, by extension, value. Any country looking to raise money abroad is subject to the cold discipline of international markets.

A final principle worth discussing in relation to trust in markets concerns rule of law. In his wide-ranging book, *The Origins of Political Order*, Francis Fukuyama draws out an important theme from the canons of political development: human beings always seek out means of favouring their ingroups – particularly, family and friends – a tendency, known as patrimonialism, that undermines the kind of impartial governance that large societies demand[xxvi]. If a contract is awarded to a brother-in-law as opposed to the lowest bidder, society loses. From a legal perspective, if an appeal is launched by the disgruntled competition and judges are influenced by royal whispers, we can only conclude that the law does not apply equally to everyone. Contrary to Hayek's small-state philosophy, Fukyama reminds us that a country requires a strong state to create and uphold non-discriminatory rules of the game. Decades of research into the development of institutions tells us that rule of law does not simply appear overnight; for example, it was courts imposed by the new Norman King of England (incentivised by the revenues generated for the Crown's settling of disputes) in competition with corrupt, local Anglo-Saxon courts that set the wheels in motion towards rule of law in England. In a very human sense, self-interested individuals look to circumvent rules while institutions, acting (hopefully) in the public interest, react to them in a perennial back-and-forth, shaping markets that (hopefully) benefit society at large. This hopefully reminds you of the importance of analysing all things human from the individual, to the group, back to the individual. Individuals to culture; economic actors to markets.

Competition

In classic Darwinian evolution, the source of each instance of genetic alteration lies in competition. In chapter 6, we looked at multi-level selection theory, according to which, even superior forms of cooperation are the result of competition at the group level; those groups better able to work together have an ecological advantage over less cooperative groups. This operates both at the level of the individual genome, and of culture, which is also subject to competitive evolution. It follows, therefore, that markets evolve through similar means. Indeed, despite his scepticism towards the longevity (and moral fibre) of capitalism, Karl Marx was impressed by the dynamism that markets offer. In a similar vein, Joseph Schumpeter coined the term *creative destruction* to describe the evolutionary process whereby inefficient firms are destroyed by market forces, in order for more efficient firms to take their place. Schumpeter, who shared Marx' suspicions on capitalism[xxvii], wrote: "The fundamental impulse that acts and keeps the capitalistic engine in motion comes from the new consumers' goods, the new methods of production, the new forms of industrial organization that capitalist enterprise creates. The opening up of new markets, foreign or domestic, and the organizational development … illustrate the same process of industrial mutation - if I may use that biological term - that revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one"[xxviii]. In *Wealth of Nations*, Adam Smith suggested that competition among self-interested individuals, as if guided by an invisible hand, "promotes [the interest] of the society more effectually than when he really intends to promote it."[xxix] Competition for limited resources acts as an impetus for innovation.

However, all competitions need rules and economics is no different. While markets are fantastic repositories of information and, as Hayek observed, possess the capacity to efficiently allocate resources, efficiency is usually defined by those with greater proximity to policy-makers, often at the expense of those furthest away. An illustrative example comes from the International Monetary

Fund's (IMF) macroeconomic policy through the 1990s, whose prescribed rules of the game insisted on developing countries dropping all barriers to trade (liberalisation). In *Globalisation and its Discontents* Joseph Stiglitz discusses several examples of premature trade liberalisation's[10] ruinous effects[xxx]. The logic of liberalisation is that when country A has a 'competitive advantage' in producing a certain good, costs of production will be lower than country B; therefore, by allowing country A's goods to enter tariff-free, consumers can benefit from lower prices. However, as Freidrich List long-ago[xxxi] – and Ha-Joon Chang more recently[xxxii] – have pointed out, all developed countries liberalised very slowly over time, given that when the floodgates of foreign imports open, local producers tend to be drowned in competition that wipes them out and results in an overreliance on imports. Despite the enormous benefits of competition, accompanying rules and regulation are essential to shelter the losers and factor in long-term impacts.

Economics places markets on a scale from 'monopoly' to 'perfect competition', with the latter representing the optimal state when buyers can choose from a range of sellers, the competition among whom force them to lower prices until they reach 'marginal cost' – the lowest possible profitable price. When one firm's share of a given market crosses a certain threshold – when its position becomes too monopolistic – buyers' choices are constrained, and prices can rise well above marginal cost. There are various ways this can happen, but when it does, antitrust law comes into effect and attempts to inject competition into the market, wither by breaking monopolies up (e.g. Microsoft circa 2001), or removing barriers for other organisations to enter (e.g. Google, 2019). Sometimes, however, there are cases concerning 'natural monopolies' in which one firm alone must supply a good or service[11]. The most common examples are utility firms such as providers of electricity, gas or telecommunications, whose services rely on complex, expensive infrastructures that are constrained by physical space. Of course, multiple firms could erect their own network of pylons and wires but the possibility for competitors to recoup these enormous costs are negligible – and even if they were, it's hard to imagine people tolerating row after row of duplicate pylons all over the countryside. Absent rules, monopolistic markets produce prices far north of marginal cost, provide little incentive to innovate towards lower input costs that would otherwise cause prices to decrease over time. For this reason, governments have long experimented with ways to inject competition when possible, and/or regulated against some of monopolies' more insidious tendencies.

British nationalised industries saw huge declines in both labour and capital productivity[12] through the 1970s and 1980s, particularly in electricity and railways[xxxiii]; good money propped up bad industries, and bosses were too-often subject to the vagaries of the political cycle. The story so far dovetails with paradigm shifts in economics. In the early-to-mid 20th century, Walrus' depiction of markets reaching an equilibrium within an environment of perfect competition was shot down by John Maynard Keynes whose prescriptions focused on fixing market failures with government intervention. As Keynesian macroeconomic tools proved impotent against the 'stagflation' – inflation + (productivity) stagnation – many asked: if public firms were being told "to behave as if they were private firms operating in competitive markets…why [was it that] they were in the public sector at

[10] Tariffs are essentially taxes on imports that vary from sector to sector. The lower these tariffs drop across the board, the more 'liberalised' trade becomes; the higher tariffs are, the more 'protectionist' an economy is. By way of example, the most liberalised market by far is the European Single Market, which boasts 0% tariffs across the board between member states. Those wanting to export agricultural goods into the EU, however, face tariffs of up to 32%.

[11] For the sticklers, here's a more academic definition: "where a single supplier is able to serve the entire market at lower total cost than any feasible combination of two or more suppliers." (Ricketts, 2006, p.41)

[12] Simply, how much bang for your back you get from workers and investment.

all?"[xxxiv] Cue: Big Maggie T. The logic of privatisation was to (re)impose the discipline of the market on national industries; "The take-over threat, the bankruptcy constraint, the direct intervention of shareholders with a significant personal stake, and the granting of stock options were all ruled out by state ownership."[xxxv] The dilemma was two-fold: how to isolate the natural monopoly elements of the industries, opening the rest to competition (*vertical disintegration*); and how to incentivise natural monopolies to act as if their market share was under threat. Concerning the first, it wasn't always obvious. For example, the Conservatives' decision to separate track from signal infrastructure in the railway industry was, particularly from a safety standpoint, a disaster[xxxvi] and was finally reversed in 2003. As for the second, competition was introduced through auctions in which firms bid for fixed-term monopoly contracts and are (still to this day) subject to price ceilings based either on the firm's rate of return or input costs (labour, raw materials, fixed/sunk costs etc.) However, input costs can be enormously variable depending on, for example, the price of oil, technological advances, shifts in international trade and, especially for developing countries, currency volatility. Nowadays, developed countries have amassed great expertise that can be employed to analyse industries in search of a price that more or less sits pretty atop a firm's marginal cost. Competition introduced in bidding for contracts has been supplemented by more accurate data on input costs across an entire sector, preventing companies from being able to inflate their own costs; problems abound, but this case study, hopefully, sheds some light on the complexity of shaping certain markets.

An area that captures the best and worst of competition is intellectual property. Most economists agree that patents offer a strong incentive to innovators, encouraging them to spend their own time and money developing ideas in the hope of being rewarded with monopoly rights over the use of the good or service that the idea gives birth to. Yet, as we have learned, monopolies are anathema to markets and thus we are left with a seemingly irreconcilable trade-off: destroy a powerful incentive or destroy competition. As discussed above, regulators have developed tools to tame the greatest excesses of unavoidable monopoly markets, but there is a deeper problem at hand. "Patents successfully generate inventions while inhibiting their use."[xxxvii] A life-saving drug developed in the U.S. and protected under trade agreements cannot be produced elsewhere without incurring the wrath of a team of well-paid plaintiffs willing to cross oceans to dispense justice (that wonderful profit motive at work).

India, for example, does not permit patents on essential drugs. Similarly, South Africa passed a law in 1997 granting a royalty to inventors, while production is managed by the state (*compulsory licensing*). They calculated that this would cut costs by between 50-90%. Brazil did something similar with AIDS drugs, causing PhRMA (a coalition of U.S. pharmaceutical companies) to lobby for trade sanctions on offending governments. The issue came to a head in 2001 when 39 drug companies launched a lawsuit against South Africa for a breach of international IP law. The case quickly became a PR nightmare with the companies in question accused of profiting from the AIDS epidemic. The dropping of the case later in the same year was interpreted as a precedent permitting the copying of drugs for domestic manufacture in poor countries. Defeated, some companies negotiated lower prices for poorer countries while others agreed to sell at the cost of production (in exchange for government-led procedures to prevent the exporting of the lower-cost drugs). The trade-off between the profit motive and public welfare is encapsulated in the many debates that took place during the WTO's Doha round that broke down in the late 2000s, in part due to an inability to settle on a definitive intellectual property agreement that appeased all parties. Furthermore, intellectual property stymies the ability of innovators to build on pre-existing ideas; the majority of the ideas that contributed to this book lie behind the paywalls of academic journals (the profits of which

manage to entirely circumvent the pockets of academics) or within the pages of excessively-priced books[13].

National representatives gathering to discuss international trade during the WTO's Doha Round.

Finally, discussions of intellectual property lead us to classical property rights, fortunately one of the least controversial market institutions. Although by no means the progenitor of the idea, David Ricardo formalised the logic of property rights in an 1824 essay titled *Parliamentary Reform*, in which he warned government that (even the threat of) appropriation of property would strip away the motivation of actors to make efficient use of it. More formally, "without property rights, individuals will not have the incentive to invest in physical or human capital or adopt more efficient technologies."[xxxviii] More broadly, "economic institutions are also important because they help to allocate resources to their most efficient uses, they determine who gets profits, revenues and residual rights of control."[xxxix] Even Karl Marx recognised the social benefit of strong property rights (albeit from a less individualist angle)[xl]. Acemoglu *et al*. explain that, during the middle ages in Europe, as merchants and the gentry enriched themselves – particularly via cross-Atlantic trade – they were able to challenge the monarch's monopoly on power by raising their own armies. In England, this culminated in the Civil War of 1648 and the Glorious Revolution, distributing property rights to a slightly less concentrated coterie of elites.

Another example of this comes from Karol Boudreaux whose research in Rwanda and South Africa demonstrated that liberalisation of property rights in favour of coffee growers led to significant productivity (and, by extension, material) gains for proprietors[xli] as well as the economy at large[14]. An important point to re-emphasise here is that institutions such as markets are the result of various groups in a society either vying to advance their own interests or pushing back against policies that run counter to their own interests. As North has emphasized, "institutions are not necessarily or even usually created to be socially efficient; rather they, or at least the formal rules, are created to serve the interests of those with the bargaining power to create new rules."[xlii]

Although solidifying property rights remains an important part of economic development, it is not the only path. Yang in *Calamity and Reform in China*, recounts that a 1978 initiative by local farmers in Anhui province to allow agricultural surplus to be bought and sold was taken up by Chinese

[13] There are some very interesting suggestions on how to resolve this problem, which are honestly just too long to cover in this chapter. I invite interested readers to head over to Dean Baker's solution to effectively nationalise the patenting system (Baker, Jayadev & Stiglitz, 2017).

[14] Rwanda emerged from a brutal Genocide and from 1994, under Paul Kagame, undertook a series of ambitious economic and social reforms. While under the previous regime, coffee plantations had been managed entirely by the state, liberalised growers were able to manage their own budgets, diversify products, cultivate ties with foreign buyers, and were thus incentivised to improve their production techniques and strategies.

officials in 1984. Whereas Communist policy had previously forced farmers to produce a certain quota of agricultural goods, the eventual *township and village enterprises* programme provided incentives for farmers to improve their practices by permitting markets to distribute surplus according to regional demand[xliii]. This is a rare example of achieving market outcomes without establishing (full) property rights, demonstrating that, like morality, culture, law and any other social construct, there is no definitive rulebook to follow.

Negative externalities and market efficiency

Markets, as aggregators of diverse, often opposing interests, have the potential to give rise to undesirable consequences; economists call these *negative externalities*. One salient example today is carbon emissions. Firms, through their attempt to maximise profit, choose methods of energy generation that are cheap and efficient, yet highly pollutive; absent the threat of sanctions, it is in their interest to spurn socially responsible methods of waste disposal in favour of dumping into public spaces[15]. Externalities are an example of market failures that Keynesian technocrats sought to resolve through various types of regulation. To demonstrate the difficulty of manipulating markets towards a more environmentally-friendly future, let's take a quick look at how the EU has reacted to both the Kyoto protocols (1997) and Paris Agreement (2015).

From 1992, the EU opted for a command-and-control[16] style of regulation that imposed carbon emission limits on firms operating within the European Single Market. This was met with fierce resistance from firms both on the grounds of sovereignty and infeasibility. These types of regulations are costly in terms of: establishing emissions limits that differ depending on country and industry; modifying these limits as the world changes; and enforcing limits at the micro-level (all examples of Coase's transaction cost). The policy was abandoned in 1997 with a market-based approach proposed by the European Commission in 2001 and implemented in 2005. In Phase I, the EU Emissions Trading System (ETS) allocated 'emission rights' and then allowed those rights to be traded on specific markets[17]. While it may appear abhorrent to some that one could buy the right to pollute, the question to ask is: did it work? Bayer and Aklin[xliv] note that, as each phase of the EU ETS programme reduced the total allocation of emission rights, CO_2 emissions were cut by one billion tonnes between 2008-2016, which translates to a reduction of 3.8%. Naturally, we can't attribute all of that progress to the ETS programme, but markets do allow firms to essentially shift emissions from those industries ahead of the curve to those facing greater structural obstacles to green transitions; information that would be incredibly costly – if not impossible – for regulators to obtain. Governments can set decreasing CO_2 emission limits and let markets distribute those new limits according to supply and demand[18]; decrease the value of a CO_2-dependent firm's stock price relative

[15] A case that made global headlines in recent years occurred in the city of Flint, Michigan, which came to a head in the mid-2010s. Factories (and individuals) had been dumping waste in the Flint river for decades and when the city switched their water supply to the river (and left the water untreated), over 100,000 citizens were exposed to dangerously high levels of heavy metal neurotoxins.

[16] A very-much top-down form of regulation that tells industry what they can and can't do. Read on for a contrasting style of regulation.

[17] It is worth noting that while we would all like to live in an emissions-free world, transitioning is disruptive and costly; for example, Delarue, Lamberts & D'haeseleer (2007) point to the bloated costs of switching from coal-based to gas-based power generation. These costs, unfortunately, offset by public insistence to 'just get on with it'.

[18] Some other effects include increasing the costs of unclean relative to clean power production, incentivising firms to make the switch (and innovators to supply the relevant technology).

to increasing emissions rights costs; and increase R&D spending on clean energy technologies in the private sector[xlv].

Firms are not the only culprits of market failures; governments can be greedy bastards, too. While markets can be wonderful, they can exacerbate problems if power distribution is too imbalanced. Joe Stiglitz recounts an extremely corrupt and patrimonial – favouring friends and family – Russia emerging from the collapse of socialism in the 1990s with a wave of liberal reforms aimed at transitioning towards a liberal, market democracy. Due to the lack of accountability and transparency, however, assets and contracts were awarded to those closest to auctioneers. Prices that were no longer fixed by the state caused rapid hyperinflation, wiping out savings almost overnight and hitting nascent export industries hard. In all, Russia saw a 50% drop in GDP and 60% drop in industrial productivity during the 1990s[xlvi]. The behaviour of managers under privatisation in the early 1990s didn't change as there were no bankruptcy laws, stock market or industrial competition to discipline them. The pre-market tendency to solicit subsidies, bail-outs, tax cuts and breaks precluded Schumpeter's creative destruction. As many economists now recognise, developed institutions such as those discussed in this chapter cannot be copy and pasted onto developing countries because the balance of power between the state and various groups in society is needed for institutions to be seen as acting in the common interest and, therefore, legitimate. Institutions develop slowly, in tandem with the essential transition away from patrimonialism towards a depersonalised set of institutions that act in the public interest, rather than the narrower interests of family and friends. Just like our early human tribes, the structure of a social system is a reflection of its internal balance of power.

Finally, before shaking your fists at bosses and politicians with too much fervour, let's put consumers under the microscope. One of Keynes' assumed causes of irrational market activity as 'animal spirits' at play. Hyman Minsky, a post-Keynesian economist writing mainly in the 1970s and 80s, devised a theory of market instability that decomposed these animal spirits into stages. According to Minsky, as increased debt levels lead to growths in output and wages, lending practices are relaxed; the positive news from markets spill out across an economy with downturns out of sight and out of mind. Relaxed lending leads to bad debt and a general overleveraging of firms and banks. Thus, when there is an external shock (say, a global pandemic), the overleveraging and bad debt make themselves known and destabilise the system. Human optimism (and, of course, plain old greed) is the downfall of market stability. More recently, George Soros made a similar point with his theory of *reflexivity*. Although somewhat vague, Soros suggested that markets do not reflect reality, but *perceptions* thereof. Positive and negative feedback loops between current and expected future prices lead to a state of market disequilibrium, pushing back against the classical theory of equilibrium mentioned at the beginning of this chapter.

Reflexivity and animal spirits harken back to bank runs – mass depositor withdrawal in fear of bank implosion – introduced in chapter 5; whether such behaviour is caused by Shiller's 'narrative economics' or other cerebral conspiracies, markets can inadvertently awaken the wrong voice in consumers' minds, whose insidious whispers can bring about chaos. Moreover, in a system comprising millions of complex organisms, anticipating which voices will be stimulated can be little more than a guessing game. Creators and analysers of markets over the years have sought to find patterns in how individuals – whether they be firms, government or consumers – react to changes in their (economic) environment. While patterns almost certainly do exist, their discovery must be founded on an accurate representation of those complex little beings we call humans.

Agency

"The market is not omnipotent, omnipresent or omniscient. It is a human invention with human imperfections. It does not necessarily work well."[xlvii]

Aside from offering a quickfire summary of the logic of markets, this chapter has two main goals. The first is to demonstrate that the logic of markets is not one born of a bourgeois conspiracy but an organic social system that has, and will always, exist in some form. The foundations established in this chapter set the scene for next chapter's transposition of everything we've learned about agency onto markets in the general form they assume today; an area of analysis that economics leaves much to be desired. We have seen how financial markets are distorted by heuristics that extend far beyond the simple 'utility-maximisation' dogma that is still the glue that holds much of economic theory together. We are blinded by both optimism and pessimism; even if we do have access to enough information, we are incapable or unwilling to harness it to its fullest extent; we are inconsistent[19] and, by extension, so are prices. What is sorely needed is a dynamic model of agency that has, at front and centre, the relationship between the ecologically rational mind and its particular environment.

The second point relates directly to partisanship. This chapter has hopefully underscored the horrible complexity of designing markets, as well as their inevitability. Yet, political perceptions of what markets should look like, and who should control them are perpetually reduced to partisan tropes. Let's highlight this with an example.

As a general principle, the left and right are locked in an eternal battle, the result of which produces an economy that expands to the benefit of a range of groups. The left like entrepreneurs, as long as they're not too rich while the right like foreigners as long as they're not too poor; the macroscopic balance achieved by means of this battle is not to be understated. However, disdain for the rich and suspicions towards profit and self-interest serve as a lens that cause the left to dismiss much of the private sector as all but incapable of servicing the public, and vouch for government to assume responsibility for a range of public goods and services (or everything, depending on how far to the left you lurch). However, while the excesses of self-interest are evident among private firms, *public choice* theorists such as Mancur Olson and James Buchanan have compelled us to question the incentives of the political class, who are themselves flawed human beings. The examples of post-Soviet Russia or even modern-day Venezuela instantiate the tendency for those in power to seek to further the interests of themselves, or their chosen circles. With Donald Trump offering key positions to members of his family and Boris Johnson awarding his brother lifetime peerage in the House of Lords, even developed political systems do not entirely insulate against the temptation to scratch a back or two.

For the left, private sector excesses are *ipso facto* sufficient justification for nationalisation despite public management's underperforming track record. For the right, on the other hand, this chequered record is *ipso facto* sufficient to justify minimal government intervention in markets that only serve to distort the market. Yet, as Ha-Joon Chang points out, there is no such thing as a free market; governments will always have a critical role to play in making and upholding the rules of the game. Further, free market enthusiasts are quick to justify the status quo by virtue of it being a market outcome; if person A paid price X, the gods of supply and demand have decreed it thus. However, information asymmetry, external shocks, power imbalances, as well as the innumerable neurological inequalities between us distort these forces (and that's before we even get to

[19] Aside, from the evidence offered in previous chapters, Stiglitz and Becker (1977) demonstrate four areas – addiction, habitual behaviour, advertising and fashion – in which our tastes are subject to the vagaries of the environment.

morality!). Likewise, our inner partisan shrivels our willingness to recognise that our stances belong to our ingroup, in opposition to the outgroup, instead attributing them exclusively to the wisdom of our free will. The public-private debate is a false dichotomy; both sectors possess their own strengths and weaknesses and, to my knowledge, there is no evidence that one always produces better outcomes than the other. The debate should, instead, be focused on designing regulation that achieves desired outcomes, then it really doesn't matter who's overseeing the operation (although, as we've seen, regulation is itself a bewildering can of worms). The fact that it is largely ideology that lies behind perceptions of markets is reinforced, I believe, by the right's recent embrace of Trumpian protectionism in the U.S. and the British left's embrace of the ultra-free market E.U.; stances, one could argue, that are driven predominantly by reactions to their political opponents.

Missing from this discussion on markets has been the morality of economic systems. I have hinted that not all market outcomes are 'fair' and, although I timorously side-stepped elaboration, you should start to see how embracing diminished will forces us into a moral grey area as regards who deserves what. Further, markets are not isolated social systems. Rather, the rules and norms that markets live by, spill out into everything we do. As Michael Sandel writes: "Markets are useful instruments for organizing productive activity. But unless we want to let the market rewrite the norms that govern social institutions, we need a public debate about the moral limits of markets."[xlviii] In the next chapter, we will explore one approach to assessing these moral limits by analysing one core institution that navigates much of our moral thinking: meritocracy.

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[i] Smith, 1982
[ii] Plott, 2000
[iii] McMillan, 2003
[iv] Hayek, 1945
[v] Pourjafar *et al*., 2014
[vi] Geertz, 1978, p.31
[vii] Stiglitz, 1985
[viii] Coase, 1937
[ix] Ogilvie, 2019
[x] Aleem, 1990
[xi] Stiglitz, 1985
[xii] McMillan, 2003, P.43
[xiii] Ariely, 2010
[xiv] Dandelet, 2014, p.223
[xv] Stasavage, 2011
[xvi] Velde and Weir, 1992
[xvii] Gustafsson, 1978
[xviii] Torras, 1986
[xix] Endrei & Egan, 1982
[xx] Hafter, 2007
[xxi] Gorton, 1996
[xxii] Chadhuri, 2014
[xxiii] Rosenthal, 1964, p.409
[xxiv] Hoppit, 1993, p.83
[xxv] Bentham, n.d., lxxxvii
[xxvi] Fukuyama, 2012
[xxvii] Rosenberg, 2011
[xxviii] Schumpeter, 1950, p.82-83
[xxix] Smith, 1776/1977, p.594
[xxx] Stiglitz, 2003
[xxxi] List, 1841
[xxxii] Chang, 2010

[xxxiii] Hannah, 2004
[xxxiv] *ibid*, p.98
[xxxv] Ricketts, 2006, P.43
[xxxvi] Bowman, 2015
[xxxvii] McMillan, 2003, P.35
[xxxviii] Acemoglu, Johnson & Robinson, 2005, p.387
[xxxix] *Ibid*, p.387
[xl] Pejovich, 1982
[xli] Boudreaux, 2007
[xlii] North, 1993, p.3
[xliii] Yang, 1996
[xliv] Bayer and Aklin, 2020
[xlv] Zhang and Wei, 2010
[xlvi] Stiglitz, 2003
[xlvii] McMillan, 2003, P.14
[xlviii] Sandel, 2010

Chapter 10
Meritocracy

Whether we're talking about a promotion, a firing, being rich or poor, punishment for a crime or rewards for heroism, assessments of whether a series of thoughts and actions *deserve* the outcomes that follow – what we might call a system of meritocracy – lie at the heart of how our societies are structured. Our philosophers from chapters 1 and 2 struggled to contemplate how a world of diminished will could find room for moral responsibility: if we aren't in control, how can anyone deserve anything, good *or* bad?

In the past few decades, there have been a number of books decrying meritocracy. *The Tyranny of Merit*, *The Meritocracy Trap*, *Success and Luck: Good Fortune and the Myth of Meritocracy* all catalogue a number of ills that such a logic brings to bear on society. This chapter will tread cautiously on ground covered by the above volumes albeit with a greater focus on agency. What previous volumes have missed is a discussion on why meritocracy has become such an important element of ruling factions across the world. With this in mind, and in a similar fashion to the last chapter, we will first begin with a look at some of the struggles of early state-builders in order to gain insight into the logic of meritocracy. The rest of this chapter will contrast the logic of both markets and merit with the realities of human agency.

Wanted: qualified back-scratchers

As mentioned in previous chapters, the evolution of states tends to follow a similar pattern. In *The Leviathan*, Thomas Hobbes saw the state as the rightful monopolist in the inevitable market for violence. In similar terms, North, Wallis and Weingast[i] posit that the formation of states was a means of limiting humanity's violent nature, which they claim, absent impartial policing, is only possible in groups of approximately 25 individuals. Whether or not you agree with the man-as-mad-ape thesis, the main argument is that all states exist along a spectrum from 'natural' to 'open-access' characterised, in large part, by the impersonality of ruling factions; the more a state evolves, the less it relies on personal relationships to govern. To illustrate this point, let's return to Fukuyama.

During the Warring States period in China (5th century BC), the familiar call to war put pressure on dynasties to broaden tax revenues. However, the power of landowners and permeation of sinecures within ruling factions thwarted such aspirations. Further, a uniquely Chinese form of serfdom led to unproductive land-use and a disgruntled underclass unwilling to take up arms (or do any work, for that matter)[ii]. An example of this is the *well-field* system in which land was awarded on the basis of loyalty ("tributes") to the landowner; as state resources concentrated increasingly on war efforts, Chinese serfdom "began tottering in the first days of the Eastern Zhou and came to complete bankruptcy during the period of the Warring States."[iii] In perhaps the earliest example of bureaucratic reform, the enlightened statesman Shang Yang devised and implemented principles of what scholars now call *legalism*. Aside from standardising weights and implementing a primitive version of rule-of-law, Yang restructured the admissions procedure for government positions; instead of granting leaders the freedom to elect and promote whomever they wanted, prospective applicants were now required to sit an exam to demonstrate their knowledge of classic literature. With typical Chinese elegance, he wrote: "Favoring one's relatives is tantamount to using self-interest as one's way, whereas that which is equal and just prevents selfishness from proceeding."[iv] Legalism's other legacies were the abolition of the feudal well-field system in favour of a partially free ('usufruct') system linked to land productivity quotas; and the abolition of inherited power and assets, both of which were reallocated upon the owner's death. Although legalism was fraught with

problems – most notably the conflict it invited between Confucian loyalty to the family versus the Legalist loyalty to the state – its purpose was clear: to depersonalise institutions in order to mitigate patrimonialism – favouring of family and friends.

In a somewhat more bizarre chapter of human history, we turn our attention to the Ottoman empire's issues with patrimonialism. A civilisation based on military rule, the Ottomans suffered from what Fukuyama describes as the 'reverse principal-agent problem'; while commands in hierarchies usually filter downwards from superior to subordinate, in military governments, the hierarchy of the military and that of government are one in the same. While all subordinates seek out the positions of their superiors, high-ranking Ottomans were able to use their political positions to climb the ladder. Even worse, checks and balances at the top of the chain were all but non-existent, meaning that if you made it to top dog, you could pretty much do what you liked. The Ottomans' – in a tradition that dated back to the 9th century – solved this problem by enslaving children (usually from conquered lands in South-East Europe), indoctrinating them into the Islamic militaristic tradition, promoting the best into the military class (Janissaries) with the cream of the crop making their way into the highest positions in the Empire. This system of *devshirme*[1] was expected to counteract the evils of patrimonialism by entirely stripping away ancestral loyalty in place of loyalty to the state. These slave soldiers were prevented from marrying before the age of 40 and any children they bore were, in Plato's Republic style, ejected into society to keep the temptation of nepotism at bay. Reminiscent of the Unsullied in *Game of Thrones*, childhoods consisted of rigorous training, which, in the absence of familial loyalty, was highly meritocratic. Ultimately, this particular institution was unable to resist the pull of patrimonial machinations, however, with the Ottomans eventually reverting to tribalistic hierarchies.

These stories highlight the appeal of devising systems based on merit. While 'natural' states are effective at keeping violence at bay and orchestrating a degree of division of labour, the tendency to favour one's ingroup, whoever that may be, stymies progress, whether it be perverting the course of justice, denying the ascension of able bodies into higher positions or unjustly allocating sparse resources. Max Weber recognised that bureaucracy was necessary precisely to avoid the inefficiencies common in a patrimonial organisation[v]. We can all agree, I hope, that basing societal structures on merit beats favouritism; the question is: how can we possibly define merit?

"We will never abandon those who, through no fault of their own, must have our help but let us work to see how many can be freed from the dependency of welfare and made self-supporting."

"I do not know anyone who has got to the top without hard work. That is the recipe. It will not always get you to the top, but should get you pretty near."

"Opportunity and responsibility: They go hand in hand. We can't have one without the other."

"We need a new settlement on welfare for a new age, where opportunity and responsibility go together." "[We are] committed to meritocracy. We believe that people should be able to rise by their talents, not by their birth or the advantages of privilege."

Reagan, Thatcher, (Bill) Clinton and Blair. Four leaders together spanning the period from the fall of Communism to the dawn of the 21st century (in two countries that represent the pinnacle of modern capitalism). Seen together, we can distil some of the core elements of meritocracy.

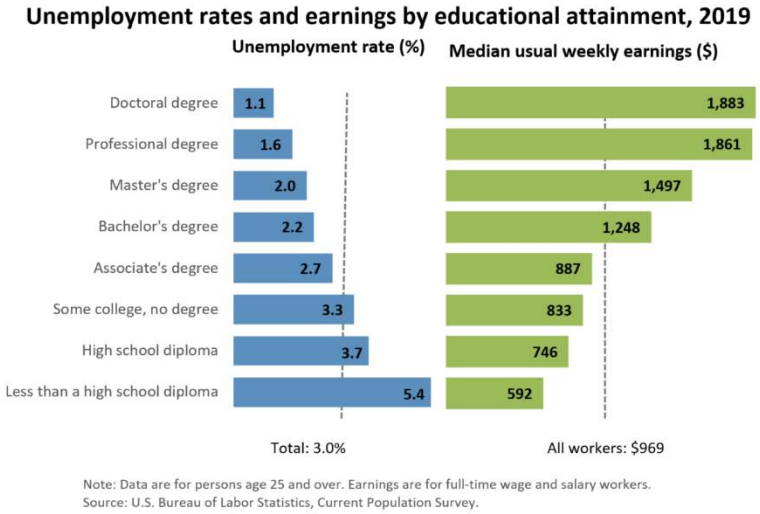
[1] Although this was the Turkish term, Islamic caliphates had been practising this for centuries, creating a class of *Mamluks*. Between 1250 and 1517, this slave class overthrew their overlords and ruled over modern-day Egypt and Syria. After the Ottomans gained control, they made sure to tweak their re-education programmes.

The first is equality of opportunity; if all citizens are presented with the same opportunities, then all individual potential in a society will be realised and give rise to a distribution of income that best reflects individual merit. The existence of some form of welfare system in every developed country speaks to the recognition that some people find themselves on an unequal footing "through no fault of their own". Perhaps the most important opportunity that guides an individual towards material success is education; people born in deprived neighbourhoods, of uneducated parents, or generally with more concerns than most, have fewer opportunities to reach their potential. The role of universal education as a means of addressing this disadvantage will be our first focus. Then, as one works their way through the education system and eventually the working world, their success, we are told, is dependent upon hard work: "opportunity and responsibility go hand in hand". But where does hard work come from and do we all have the same potential to work hard? Answering these questions will be our second task.

The limits of education

Primary education became both free and compulsory in the UK at the end of the 19th century with secondary education becoming universal and compulsory until the age of 14 in 1918, rising to 16 years old by 1964. The picture in the U.S. is complicated by states' autonomy over education policy and racial segregation, but compulsory primary education began in 1852 with Massachusetts and concluded in 1918 in Mississippi[vi]. Secondary education followed a similarly unequal pattern of development but the main building blocks of modern, compulsory primary and secondary education were enshrined at the Federal level in the Elementary and Secondary Act of 1965. Particularly in the wake of the Second World War, a consensus emerged for the state provision of equality of opportunity through free, universal education.

Across the developed world today, there is a robust, consistent connection between education levels attained and future income and unemployment patterns, which begs the question: if educational opportunities are provided equally to all, why aren't we all churning out degrees?



A part of this is likely genetic; a part family background. Estimates of genetic influences on educational attainment and income vary enormously, from 25-80% depending on the age of those

studied and which other variables you control for i.e. family background, relative socioeconomic status, peer performance, parenting styles, school types etc.[vii] Later in this section we will look into what schools try to teach to better prepare students for the working world, but the strong correlation between academic achievement and 'general intelligence'[2] [viii] – IQ – suggests that simply raising IQ through education could help to alleviate inequality of opportunity.

Among poorer families, up to 60% of IQ variance is environmental and close to 0 genetic; among affluent families, this is the reverse. This apparent contradiction lends weight to the theory that genes provide an IQ 'first draft', that, as chapter 6's Marcus put it, the environment then revises. Even more interestingly, the effects of genes on IQ vary depending on age: "Heritability increases linearly, from (approximately) 20% in infancy to 40% in adolescence, and to 60% in adulthood. Some evidence suggests that heritability might increase to as much as 80% in later adulthood but then decline to about 60% after age 80."[ix] This tendency, labelled 'the Wilson Effect', suggests that IQ is bound by a degree of determinism with the influence of nature imposing itself incrementally throughout one's life, irrespective of nurture's endeavours. Political scientist, James Flynn, takes this to its logical conclusion: "Recall what a trend toward meritocracy means. The more meritocracy, the more good genes for IQ go to high-status occupations, the more bad genes to low-status occupations. The genes are passed on from parent to child, so the more meritocracy, the more of an IQ gap between upper- and lower-class children."[x]

The authors of *The Bell Curve*, Herrnstein and Murray[xi], found significant IQ disparities between Black, White and Asian Americans. Putting aside the authors' bonkers policy recommendations[3], their empirical findings have generally withstood scrutiny. The average IQ differences between ethnic groups in America are puzzling: Jewish (113), East Asian (106), White (100), Hispanic (90) and African American (80)[xii]. Herrnstein and Murray (claim to) remain agnostic as to whether between-group differences in IQ are down to nature or nurture, but it would seem odd to conclude that melanin could be responsible for IQ differences, especially given that White Europe has intellectually dominated the planet for such a tiny slither of human history. If anything, these findings are evidence of the environmental impacts given the sparse opportunities afforded to African Americans since their introduction to the land of opportunity. Attempts to separate genetic from environmental impacts have generally found small parental (particularly paternal) effects on educational outcomes[xiii]; this may be parents' levels of education or parenting styles, although the latter is experimentally very tricky as it relies on guessing what types of parenting might be best and subsequently how to recognise and measure these styles. Elsewhere, cognitive development has been associated with socioeconomic status[xiv], parents' vocabulary[xv] and even the ability to delay gratification, a discussion we'll get onto later. As this book has argued, the form a mind assumes is shaped by the incomputable accumulation of individual human moments that can no more be reduced to educational curriculum than it can free will. As Heckman writes: "It would be incredible if 15 to 23 years of environmental influences including the nurturing of parents, the resources they spent on a child, their cultural environment, their interactions with their children and the influence

[2] As well as one of IQ's hype men, working memory (chapter 3) (Alloway & Alloway, 2010).

[3] The authors' belief that IQ gaps would only increase over time led them to call for the shrinking of state-provisioned welfare, fearing a "custodial state" in a "high-tech and more lavish version of the Indian reservation for some substantial minority of the nation's population." In particular, policies that "subsidize…births among poor women, who are also disproportionately at the low end of the intelligence distribution" – by which they mean benefits for single mothers – should be halted. Not wanting to invite controversy, the authors also extended their finding that immigrants tend to be lower on the IQ spectrum to conclude that too porous a foreigner filter will inevitably invite social conflict.

of the larger community on the children could be summarized by a single measure of education, occupation and family income in one year."[xvi]

So what are we to conclude from this mess? Somewhat frustratingly, "any comprehensive theory for the impact of family background must incorporate both nature and nurture components. Any theory that focuses on only one of these will be incomplete."[xvii] As for why there can be such disagreement among researchers, Otto, Christiansen and Feldman write: "in the analysis of IQ data, heritability is often found to be around 70% when common environment is ignored but only 30 to 40% when it is included. Clearly, an estimate of heritability is only as good as our knowledge of the factors that are important in determining a trait".[xviii] In other words, while there are often large correlations between IQ and genes, separating those correlations from the countless other environmental factors is extremely difficult; therefore, such estimates should be taken with a generous pinch of salt. Returning to the role of education, it is unfortunate that a large portion of studies bigging up the influence of education on future success don't actually look at what happens in schools; they simply assume that, after controlling for genes, parents and wealth, whatever is left (the statistical 'residual' effect) must be education[xix]. While there have been many studies staging successful interventions (particularly in cases of disadvantaged kids)[xx], long-term effects, if measured at all, tend to be small[xxi].

The extra attention and resources that these programmes offer do not reflect realistic solutions. Public education is limited by state resources – teacher quality, classroom sizes, school resources etc. – and environmental conditions – crime rates, cohort behavioural issues, home life etc. – which leads us to consider the disheartening possibility that equality of opportunity is simply unattainable. And given that educational meritocracy rests on achieving such equality, perhaps educational outcomes are not as meritorious as we would hope.

Furthermore, a key feature of national curricula around the world is an essentialist approach to education that gathers together a basket of desirable knowledge covering the sciences, mathematics and the humanities, which are seen to constitute the foundations of a well-rounded citizen. However, what psychologists call 'semantic knowledge' – the storing of factual information – fades over time if underutilised. It will surprise nobody that studies confirm that we retain very little of what we learn at school[xxii]. Of course, many will argue that school also teaches you how to think. Maybe so. However, even if we are able to uncover the arcane secrets of pedagogy that imbue students with heightened cognition (whatever we decide that is), we would need teacher training programmes to effectively convey those secrets as well as teachers to both internalise and deliver said education while dealing with large classrooms, behavioural issues, administrative demands, exam performance pressure, implacable parents, and so on. Those looking to education as the panacea to inequality should understand that even if we get education right, there are too many external obstacles to make any real waves, at least today.

Sharp readers will have noticed a(nother) contradiction in the narrative. If the effects of education are so weak, how can it be that more education leads to fatter wallets? To answer that, let's hear from Harvard's Michael Sandel.

Credentialism

Between 2011 and 2018, William Singer, owner of Key Worldwide Foundation and the Edge College & Career Network, took around $25 million from 33 wealthy families in exchange for inflating college entrance exam results and greasing palms to open up the back door into some of the U.S.' most prestigious institutions. *Operation Varsity Blues* came to a head in 2019 when 53

people, including Singer, were charged with bribery, fraud and a sprinkling of other white-collar crimes. On average, each of the 33 families had stumped up over $750,000 to get their kid admitted into an Ivy League college. This case is symbolic of the weight that an Ivy League (or any top global university) education carries and part of the wider phenomenon known as *credentialism* – a form of prejudice based on academic qualifications.

Credentialism has pragmatic origins. Both the markets for labour and educational institutions rely on quantifying the capacities of the mind, achieved by enshrining them in qualifications largely comprised of standardised exams. As demand for high-skill labour[4] has increased, the stakes have risen. Inordinate amounts are spent on preparation for exams such as the GMAT and SAT in the U.S. as well as GSCE and A levels in the U.K. Those unfortunate enough to be born without English as a mother tongue must achieve a satisfactory level in the IELTS or TOEFL exams in order to gain access to the most prestigious higher education institutions. There is a clear hierarchy in higher education according to institution – with the Ivy League and Oxbridge heading up global rankings – and degree type (Economics, Computer Science, Law and Engineering are currently the most in-demand). The demand for qualifications by employers – in many cases above the level of supply[xxiii] – has led to yearly increases in spending on exams both by households and governments[xxiv]. Given the importance of examinations, enormous pressure is also put on schools to provide graduates with qualifications that allow them to meet their career aspirations. At the level of secondary education, this has flattened out education by virtue of teachers and tutors feeling obliged to 'teach-to-the-test', thus shifting focus towards exam techniques and short-term retention of facts[xxv]. In short, the labour market demands evidence for cognitive capacities; schools and universities filled that need by providing qualifications, remaining entirely accountable when they fail to do so. The end result is that schools are, by design, 'exam factories', supplying society with the credentials it craves, with consideration for practical skills relegated to the ancillary. As we've seen before, however, the most valuable credentials tend to concentrate overwhelmingly among the more fortunate.

Two-thirds of students at Ivy League universities come from the top 20% of families[xxvi]. In the UK as of 2017, 81% of Oxbridge's intake come from the top 31% of families[5], and are taken overwhelmingly from the richer regions in the South-East of England. The wonderful stories of individuals overcoming all odds to graduate from Harvard with honours are heart-warming and no doubt a testament to social progress, but they are an exception to the rule that social mobility in a climate of credentialism remains limited[6]. The depressing conclusion is that so much of our success depends on qualifications, and yet so little of academic achievement depends on education. While it's understandable that credentials have come to meet the need to symbolise requisite knowledge, they fall far short of enabling the kind of social mobility advocates of meritocracy argue for[7].

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[4] You may have heard (especially recently in the UK concerning post-Brexit immigration policy) the terms low- and high-skill labour. It's useful to note that these terms are used by economists not to look down on low-paid workers, but as a taxonomy of jobs categorised, loosely, by how many years of education are required.

[5] A number that has increased since 2015 (Lammy, 2017)

[6] The World Economic Forum produces rankings of social mobility across countries but given that its index takes into account access to technology, social protection and working conditions, it seems to be a better metric of equality of opportunity than the actual incidence of disadvantaged citizens climbing the social ladder (WEF, 2020). On the other hand, the OECD's metric predicts how many generations it would take for low-income individuals to reach the country's mean level of income. Suffice it to say the OECD average is 4.5 (OECD, 2018).

[7] It's important to stress here that this argument is not calling for the abolition of education. Rather, the formal education system found in the developed world is limited in its attempt to maximise abilities in the context of labour market demands. Fredrick Deboer (2020) takes this argument further than I would in *The Cult of the*

Just work harder

"I believe we can keep the promise of our founders, the idea that if you're willing to work hard, it doesn't matter who you are or where you come from or what you look like or where you love. It doesn't matter whether you're black or white or Hispanic or Asian or Native American or young or old or rich or poor, able, disabled, gay or straight, you can make it here in America if you're willing to try." – Barack Obama, re-election speech, Chicago, 2012

Missing from the discussion of education and lying at the heart of meritocracy is the notion of hard work. It is, of course, true that some people work harder than others and that this differential can have a huge impact on maximising the potential endowed on us by genes and the environment, but why does this differential exist? Can the indolent become diligent? There are plenty of people insufficiently motivated by the prospect of material success – we'll call this the interest factor – but nobody *wants* to hang out on the bottom rung of the social ladder; nobody consciously chooses to shirk their way to material misery. Many of us simply give up on a goal more quickly than others – we'll call this the willpower factor.

In chapters 3 and 4, we looked at the relationship between willpower and impulse control, particularly in the context of gambling and addiction. Let's reinvigorate this discussion by moving away from extreme cases. In perhaps one of the cutest products of scientific investigation, the famous Marshmallow Test puts kids alone in a room with a marshmallow for a few minutes and offers them a reward (a second marshmallow) if they can resist the urge to gorge[8]. The results of this and follow-up studies offer several interesting conclusions. Impulse control (one of willpower's duties) is almost non-existent until the age of around 5 (I wants, I eats); enhanced willpower is strongly correlated with academic achievement and career success[xxvii]; and the key environmental factor that willpower-jedis have in common is richer parents[xxviii]. In a related study, Baumeister put hungry students in front of chocolate chip cookies for a period of time before subjecting them to an unsolvable puzzle[xxix]. Those whose impulse control was pushed to the limit gave up after 8 minutes, a rubbish score compared to cookie-eaters who went on for a whole 20 minutes. The resulting theory – that willpower is like an exhaustible muscle – was termed *ego depletion*[9]. Let's look at a few examples of this effect in action.

Way back in chapter 4, we took a look at the agency-stripping neurological changes that take place in the brains of addicts. The reward value that the addictive substance carries increases to the detriment of reward values of other stimuli[xxx]; this effect is so extreme that impossible quantities are needed in order to reach satisfaction resulting in a perpetual lack of satiation[xxxi]. Regarding decision-making specifically, the neurochemical payoff for delaying gratification is subjectively weaker, causing addicts to become more susceptible to short-term thinking[xxxii]. Relatedly, cocaine addicts were found to be less capable of inhibiting responses, especially when they entail strong emotions, which has been observed both at the behavioural and neurobiological level[xxxiii]. These examples

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Smart, but he makes the above case in impressive detail. A further point is that the role of the individual teacher is not to be understated. Most reading this will hold very dearly the memory of a high school teacher or two, some of whom may have even inspired career and other life choices. Teachers can be incredible, inspirational human beings, but it is the educational *system* as a construct that falls far short of expectation; great teachers exist *in spite of* such a system rather than *because* of it.

[8] You really have to watch this: https://www.youtube.com/watch?v=QX_oy9614HQ&ab_channel=IgniterMedia

[9] There is some controversy surrounding ego-depletion. Carter and McCullough ran a meta-analysis in 2014 concluding that there was a publication bias preventing opponents of ego-depletion from making their case. An even more recent meta-analysis (Dang, 2017) suggested that the extend of ego-depletion depended on the task. We'll draw our own conclusions a bit later.

suggest that addicts suffer from weakened willpower due, at least in part, to its overclocking. Addicts often ruminate obsessively on how to go about getting their next fix[xxxiv]; Lowenstein suggests that while short-term abstinence isn't too tall an order, it is the long-term managing of addiction that depletes willpower, particularly during periods of withdrawal[xxxv], "making succumbing increasingly likely."[xxxvi] A fundamental principle of ego-depletion theory revolves around the idea that the more you engage willpower, the weaker it becomes[10]. It will surprise nobody that the more temptation you surround an addict with, the more likely it is that they will give in to it; thus, even without the neurological changes addicts undergo, their willpower reserves are commonly in the red. These are extreme examples again, but stay with me.

Psychologists Megan Oaten and Ken Chang compared the willpower of students undergoing exams to those enjoying downtime[xxxvii]. Stressed students observed unhealthier diets, increased alcohol and nicotine consumption, poorer emotional control and less dedication to household maintenance (so, little changed). If you remain unconvinced by lazy students acting lazier, other researchers have found similar effects among humans with better developed prefrontal cortexes[xxxviii]. "What stress really does…is deplete willpower, which diminishes your ability to control…emotions"[xxxix] as well as those internal voices that tempt you to stray from the path of righteousness.

Drilling further down into ego depletion, it appears as though willpower can be conserved in the same way a long-distance runner conserves energy throughout a race. When participants were told that they had a cognitively demanding task coming up, they were able to use fewer resources (and perform worse) during an initial task in order to go full throttle (and perform better) in a subsequent task[xl]. However, it doesn't seem that this ability is particularly conscious; driven, as it is, by the individual's motivation. When faced with a series of self-control-heavy decisions, we earmark the most important ones for our full attention, and put much less into others. Next time your wife is disappointed by your lack of imagination in picking out curtains, just quote this research and I'm sure she'll be cool[11].

There are some caveats to the theory of ego-depletion that deserve a mention. Firstly, Caroline Dweck – progenitor of the *mindset* theory that suggests psychological limitations (e.g. intelligence) can be overcome with a shift in mindset – applied her theory to ego depletion, finding that individuals who believe willpower to be unlimited manage to evade the kinds of depletion described in the paragraphs above[xli]. There are reasons to be cautious of these findings[12]; the most important of which is: what are we supposed to conclude? That belief alone nullifies exhaustion? Working your brain, including exercising self-control, is tiring. We cannot stop ourselves from feeling tired purely by believing that tiredness does not exist, which seems to be the implicit suggestion. However, Dweck and her colleagues do raise some important challenges. While using willpower does tend to deplete reserves, some individuals do seem to either have more reserves than others, or at least use

[10] An important point to make here is that a lot of the methodology surrounding go depletion has been called into question during psychology's so-called 'replication crisis', during which, attempts to replicate results by different researchers failed. The controversy falls predominantly around the tasks used to deplete willpower as well as the means of measuring depleted willpower (Lurquin & Miyake, 2017). Although readers should, as always, remain sceptical, I believe we can interpret research as strong anecdotal evidence for the effects of sustained use of willpower on some of the brain's other functions.

[11] This also, I believe, moderates those decisions you maximise and those you satisfice. Satisficers may well be much better at scraping together opinions on mundane topics than maximisers.

[12] Other drawbacks include: low sample sizes, variable effect sizes, a hitherto lack of replication, self-reported questionnaires that somehow are able to separate participants into two diametrically opposed camps (regarding perceptions of willpower depletion), inability to separate the *belief* in ego depletion from *simply having* more willpower reserves.

those reserves more completely. I suggest that this difference is partly neurobiological (nature and nurture set a willpower reserve capacity) and partly motivational; the more motivated you are to do something, the more effort you will put in, and the more deeply you will dig into your reserves. Human beings are capable of superhuman feats, none of which have been achieved without high levels of motivation. In conclusion, some people are able to go for longer if we hold motivation constant, but add high motivation to a high willpower reservoir and you have the recipe for meritocracy's very own homo economicus – *homo assiduus*.

The late Harvard psychologist and free will sceptic, David Wegner, devised a peculiar challenge for his students. He and colleagues asked participants to imagine a white bear, then he asked them to try to push the bear out of mind and ring a bell when they failed to do so. The results are relatable: the act of trying to push a thought out of one's mind counterproductively keeps the object in frame (something insomniacs consciously imploring the onset of sleep can no doubt testify to). Try as they might, that white bear was going nowhere[xlii]. Acts of willpower are often attempts to persevere in something you want to do, but they can also be attempts to avoid thoughts or actions; in the latter case, especially, homo assiduus seems even more illusory.

Under the hood

Our search for willpower in the brain takes us back to the prefrontal cortex; to a region of the brain just down the road from chapter 4's Nucleus Accumbens (NAc) affectionately named the anterior cingulate cortex (ACC). We may recall that the NAc plays a key role in decision-making, particularly in reacting to a disparity between an expected and actual outcome. The ACC is a significantly larger region that imposes itself both on executive processes in the prefrontal cortex (dorsal) and emotional regulatory networks (ventral) involving the amygdala (fear/threat responses), the limbic system (other emotional responses) and the hippocampus (long-term memory) among others. Accordingly, the ventral stretch lights up when participants have to suppress emotions, such as holding in a snigger when an old lady farts on the bus; with the dorsal part kicking in when dealing with conflicting stimuli, such as when confronted with a bearded giant in a dress introducing them self as Maria. Although research is still very much in its infancy, studies have found that ACC size impacts executive control[xliii]; that development differs among individuals from a very early age[xliv] and that there is a considerable heritable component that moderates ACC size and function[xlv]. Digging deeper, researchers have also uncovered a unique group of cells called the *Von Economo* neurons (VEN)[13] present in humans and great apes, but no other primates. These neurons have been linked to empathy, social awareness and self-control. For example, VENs "are specifically and selectively attacked in the early stages"[xlvi] of frontotemporal dementia[14], a condition associated with a loss of emotional regulation. The same authors suggest that the architecture of VENs implies that they are "built for speed" and likely act as messengers between distant brain regions, particularly salient in activities involving intuitive judgements. Little research has been done on individual differences, but it is likely that they follow a similar developmental pattern to the ACC, NAc and anterior insula.

At several points of this book, I have used the metaphor of 'many voices' in the mind competing for control over thought and behaviour. Neuroscientist Antonio Damasio reifies this metaphor at the neurobiological level. The *somatic marker* hypothesis states that emotions leave their mark on various neurological processes such as decision-making and self-control; in general, the stronger the

[13] Located in and around the ACC and another region called the anterior insula.

[14] Although we associate dementia with memory loss, the condition is an umbrella term for the onset of neurodegeneration – neuron suicide. The most common form (50-70% of cases) of dementia is Alzheimer's, which mainly attacks the brain's long-term memory hub – the hippocampus.

marker, the greater role it plays in the above processes[xlvii]. Thus, within the networks discussed so far in this section, the relative development of brain regions involved in evaluating or suppressing certain signals must be offset against the strength of those signals. Strong somatic markers in combination with a relatively weak NAc and/or ACc results in a (behaviourally-speaking) lack of willpower.

Burns and Bechara build on somatic markers by categorising neural networks into the *impulsive* and *reflective* systems, which broadly align with the theory of dual systems – slow and deliberate vs fast and instinctive – introduced in chapter 3. The authors conclude that a loss of willpower occurs in the context of "(1) a dysfunctional reflective system and (2) a hyperactive impulsive system"[xlviii] i.e. when impulses are stronger than our ability to perceive or control them[15].

Finally, cognitive load. Very simply, the higher the burden placed on the brain, the greater the cognitive load and, in line with ego depletion, the less efficient it becomes. According to Sweller, heavier loads are characterised in a number of ways: complexity of information, element interactivity (pieces of information presented simultaneously), amount of information, and so on[xlix]. Aside from the somatic marker-executive function dynamic discussed above, the capacity of cognitive load is also moderated by working memory, which, as you have certainly already guessed, varies among individuals[l].

In summary, the ability to work hard can be traced back to the interaction of various brain networks connected to one another by paths that differ in strength and efficiency both within a single mind and between a group of minds. Research from neuroscience and psychology suggest that these differences are, at least in part, the work of nature, while the effects of nurture are unclear. The story of diminished will, while not entirely ruling out the capacity for self-improvement, in combination with the story of willpower, suggests that the capacity to work hard is not something we can take much credit for. If meritocracy is the rewarding of those who, through nature and nurture, are anointed willpower deities, then great. But in the absence of an 'us'; if the accolades belong to genes and culture, meritocracy loses much of its legitimacy. With this in mind, let's deal with the moral limits of markets.

Markets for mortals

One core rationale that shapes markets is that, like democracy, they are facultative – they confer choice. Market democracies are loath to put restrictions on capital flows, prices, firm growth, and other forms of economic activity, with taxation representing the principal means of influencing economic decisions. In essence, to choose is to process of the kind of information we looked at in the last chapter – product quality, reputation, value vs price etc. However, as we have seen, this process is subject to enormous variation from one brain to the other, resulting in a spectrum of decision-making outcomes from life-affirming to life-destroying. As Barry Schwartz writes in *The Paradox of Choice* "choice no longer liberates, but debilitates."[li] The paradox in question, as we have already seen, is the discordance between our need for (and belief in) autonomy and our lack of sovereignty over disparate cerebral networks. Yet despite our limitations, given the freedom to do so, people choose to have a choice.

[15] Unsurprisingly, the authors champion reform of the criminal system that takes neurobiological disadvantages into account.

It is this fundamental psychological need that inspired Libertarianism, a school of thought that holds individual freedom of choice as its core tenet. Chapter 8's musings over the many interpretation of freedom are refined by Political Philosopher Isiah Berlin who distinguished between positive and negative liberty; freedom to do something vs freedom from something or somebody.[lii] In the case of Libertarianism, the distinction between the two is somewhat blurred. It is, at its heart, an anarchical philosophy pitting the sovereign individual against the overbearing state, encapsulated by Milton Friedman's observation that "many people want the government to protect the consumer. A much more urgent problem is to protect the consumer from the government." The version of choice within markets in the 21st century is a reflection of both positive and negative liberty; the desire for individual autonomy *in direct contrast to* government intervention. In contrast, modern Liberalism – left-leaning schools of economic thought – pits both the individual and collective against the constraints of capitalism; the freedom to paint, to travel, to read and to live is impinged upon by a system that fetishises material gains. On both sides, choice is curtailed by a lazily-conceived chimera. Economist and philosopher Amartya Sen suggested that any justification for freedom of choice must entail considerations of societal and individual well-being[liii], but of course, in the same way that the brain amplifies one instinct over another, individuals vary in their normative theories[16] of what constitutes a good society. As this book has sought to illustrate, liberty, both at the individual- and group-level is subjective, ambiguous and inconsistently-defined.

So in love with choice are we that even in its absence, we invoke its name. In James Twitchell's analysis of advertising, he notes that cigarette producers, unable to offer qualitatively different products, opted instead to sell lifestyles, such as romancing a fine-looking young lady by blowing smoke affectionately in her face (see above)[liv]. Wine-tasters evaluating the quality of a range of wine made their decisions based on fake prices devised by yet more devilish researchers[lv] [17]. Elsewhere throughout this book, we've seen other examples – from day-traders[lvi], art-dealers[lvii], everyday

[16] A normative theory paints a picture of the way the world 'should' be.

[17] This finding also seems to be true of wine experts as discovered by a traitor to his nation, Gill Morrot (Morrot, Brochet & Dubourdieu, 2001)

consumers and voters[18] – of how misapplied rationality can lead the brain astray. Another paradox of choice is the discomfort it causes us to consider that, on making a decision, our fingerprints are nowhere to be seen. As Smilansky pointed out in chapter 2, our conscious existence is founded on the need for agency. Human rectitude can be found kneeling at the altar of the one true religion, *choicism*.

However, there is a trade-off between information and free choice that can be exemplified in the relationship between doctor and patient. *The Silent World of Doctor and Patient* suggests that greater involvement by patients has improved medical practices due to increased accountability for doctors; however, the doctor's expertise relative to that of the patient is substantial. Here we see another instance of the principal-agent problem; the doctor needs to be held accountable, but those they are accountable to lack the knowledge to play their role effectively[19]. "What patients really seem to want from their doctors…is competence and kindness. Kindness of course includes respect for autonomy, but it does not treat autonomy as an inviolable end in itself."[lviii] On the one hand, having a greater say in one's diagnosis (in the absence of a Biology doctorate) is a recipe for disaster. On the other, doctors don't always get it right. For example, Tatsioni, Bonitsis & Ioannidis note that it can take 10 years for doctors to stop prescribing useless drugs[lix]. Medication that passes the first wave of clinical trials are marketed heavily as the cure for an ailment; doctors, who don't really have enough time to read every new clinical study, often outsource their advice to pharmaceutical industry-sponsored literature[lx] resulting in a culture of overmedication. From principal to agent, individual doctors are simply not able to hold the pharmaceutical industry to account[lxi]. Choice is a double-edged sword; the essential accountability it permits is subject to the machinations of those mischievous many voices stealing the thunder from diminished will.

In yet another pox on the house of choice, feminist movements decrying the pressure society puts on women cast doubt on the principle of choice. The average American woman spends approximately $300,000 on beauty products in her lifetime. Libertarians would be ill-advised calling this choice free when magazines, movies, TV, billboards, parents, friends, lovers and rivals all carry the unabating, unhealthy message that beauty is something worth spending to attain. Liberal economists' response, in my experience, is to accept exceptions to free choice in cases like these,

[18] Those feeling defensive over attacks on their field should bear in mind that instances of bias – no matter how numerous – do not necessitate poor decision-making in every possible instance. Summarising findings of biases in legal decisions, McKenzie writes: "Instead of ignoring that these well-documented biases exist, we should recognize that the "reasonable man," judge, or juror may not always rely on reason." (2013, p.104-5) In short, there is a difference between pointing out errors in a field and dismissing a field because of errors.
[19] The more we look around, the more this phenomenon rears its head. Voters-governments, credit rating agencies-banks, layman-car salesman, and so on…

without climbing down from their core *choicist* identity in the long-term. “Assimilate if you can, accommodate if you must”.

When we come to behind the wheel having reached our destination on 'autopilot', we made a number of decisions: how fast to drive, when to brake, accelerating when red makes way for green etc. Yet, as products of inattentional subconscious, can we classify these as decisions? Now moving from this decision to something more important such as, say, whether to have kids. Our attention is certainly devoted to the problem, yet much of the input still occurs in the subconscious; social comparison, the pressures of our biological clock, experience of kids, experience of parents, culture, religion, TV and so on. It is impossible for us to be aware of all of the mechanisms that are active during the process and, therefore, the decision clearly cannot be called "free". While markets, like the internet, are great at storing information, agents are severely limited in their capacity to collect, process and evaluate it. Although markets mitigate the influence of government on choice, they do nothing to halt the influence of our own tyrannical subconscious.

Moral markets

As the ballooning sales of cosmetics and pharmaceuticals highlights, the fact that an individual makes a choice is not a moral justification in and of itself. Of course, if we take this to its logical conclusion, we should all be sitting in an allocated home, eating meals chosen by others, working jobs meted out to us by genome-reading artificial intelligence. Our understanding of our own minds is not yet sophisticated enough to transition to the efficiency of a *Brave New World* (and anyway, our need for agency would never allow it. Sorry, Aldous), and so a more palatable solution is needed until the machines take over. Science has taken us as far as it presently can, but morality must now take over as we consider the balance between the wonderful affordances of markets and the self-defeating inadequacies of agency.

John Locke, who extracted considerable wealth from the slave-trading industry and lived under the benefaction of the Earl of Shaftsbury, considered inequality of outcome to be a theological inevitability. Locke’s worldview, however, was likely coloured by the tendency to associate material success with free agency. A series of studies by Berkeley Psychologist Paul Piff and his colleagues suggested that as one climbs the social ladder, humility is silenced by hubris, and compassion by disdain. Piff showed that drivers of more expensive cars stop at pedestrian crossings less frequently and cut off other drivers more regularly; richer students were more likely to take sweets reserved for kids, hold negative attitudes of those below them on the social ladder and cheat in a game of chance[20] [lxii]. A later study bolstered these findings with questionnaire reports connecting higher socioeconomic status with feelings of self-entitlement and narcissistic tendencies[21] [lxiii]. Although many have used findings of this ilk to unleash fury on the turpitude of the rich, I think it speaks more to the proclivity to associate one’s success with what one has chosen to do and failure with what has been done to them; critics of inequality jockeying for higher taxes on the wealth trigger self-preservation among their targets, leading to explanations of success (and failure) based on individual responsibility, rather than (mis)fortune.

On the other end of the socioeconomic spectrum, evidence suggests that the environment of the poor constrains cognition. In a seminal study published in *Science*, Haushofer and Fehr[lxiv] catalogue a number of ways in which this occurs. For example, the ability to sacrifice short-term gains for bigger

[20] In one of Piff’s public talks, we see videos of monopoly games in session where winners of rigged games attribute success to their own strategy rather than simply having twice as much money and dice rolls.
[21] The only attempted replication of this study I could find came from Clerke *et al*. (2018) who concurred with the original results.

and better long-term gains (time-discounting) is impaired. Further, risk aversion is higher among those of low socioeconomic status. Guiso and Paiella isolate environmental variables in order to demonstrate that it is poverty that causes risk aversion rather than vice versa[lxv]. Worse still, the frequency of negative income shocks (oh shit, no money) exacerbate this tendency[lxvi]. Readers convinced by the existence of ego depletion should not find these effects surprising. Life in poverty introduces a host of budgetary decisions that sap willpower, vitiating its effectiveness at a greater rate than those with more pecuniary latitude[22] [lxvii]. Beyond cognition, Nobel laureates Banerjee and Duflo show that the poor have limited access to credit due to a lack of collateral[lxviii]. Haushofer and Fehr conclude with the suggestion that there is "a feedback loop in which poverty reinforces itself through exerting an influence on psychological outcomes, which may then lead to economic behaviors that are potentially disadvantageous."[lxix]

To paraphrase the ex-finance minister of Greece, Yanis Varoufakis, for a transaction to be considered valid, both parties must be able to say 'no'. This, I believe, represents one principle that markets and the societies at large must incorporate. Varoufakis was referring to Greece's acceptance of the EU (and IMF) bailout terms in the wake of the 2008 Financial Crisis; the EU (via the ECB) were effectively threatening to withhold currency should Greece reject the Troika's[23] proposal, a stance that would have wrought economic catastrophe onto Greeks. Similarly, and as demonstrated by Sandel in *What Money Can't Buy*, in a (free) market for organs, only those able to pay market value may survive (and only those in need of cash would sell); an individual who sells his house and car for an organ has no choice (unless you consider death to be a choice). A single mother with her head marginally above the bread line cannot just "quit and find another job" regardless of how unhappy she may be[24]. Every time we fail to consider the constraints individuals face in their decision-making, the more we consign them to a life of self-perpetuating misery[25]. Is this meritocracy?

Towards a new meritocracy

In summary, this chapter began by underlining the rationale of meritocracy; it is a philosophy that seeks to ensure that the most able and best-fitting minds fill the various positions society creates – in contrast to a system of patrimonial clientelism, in which these positions are allocated on the basis of personal relationships. The early Chinese and Ottomans struggled with egregious forms of corruption and devised (with short-lived success) procedures of promotion founded on merit.

When we attempted to dig deeper into the concept of merit, however, we ran into some issues. Research from psychology and neuroscience revealed that a large portion of those attributes that society values owe their genesis to the genetic and environmental lottery. In particular, we explored ego depletion theory, which maintains that willpower a) differs in capacity among individuals, and b) is exhausted throughout the day. When we reduce hard work to its biological roots, we see diverse patterns of development shaped by nature and nurture independent of conscious control. Despite the consistent correlation between education levels and income, we find little evidence that education – after controlling for other variables – plays a significant role in enhancing our abilities, suggesting that credentialism – success awarded on the basis of qualifications – is something of a self-fulfilling prophecy.

[22] For some more examples of these types of ego-depleting decisions, see Baumeister and Tierney (2012, p.98).
[23] The IMF, ECB and European Commission.
[24] Although this may sound like a heart-string pulling example, it was my own mother's reality for years.
[25] Depression is 1.5-2x more prevalent among the poorest quintile than the richest (WHO, 2001); the poor suffer greater stress (Cohen *et al*., 2006) and stress leads to poor decision-making (Starcke & Brand, 2012)

Finally, we used these findings to inform the current state of markets, finding that success and failure operate on the mind and environment to create conditions that distribute individuals among the various rungs of society, independent of autonomous merit.

If you follow the argument that markets are very useful; that meritocracy justifies individual freedom *as long as outcomes lie within an agent's control*; and that control is severely limited, we now need to start moving towards a solution. I've spent so many pages detailing the problem that I won't be offering much here, but I will say, very broadly, that shapers of markets should take into account the fact that market outcomes are always guided by factors beyond our control, sometimes a lot, sometimes a little; sometimes at little cost to those involved, sometimes with dire consequences. Aside from figuring out which outcomes fall into which of the categories above, further difficulty to implementing such an ethos is the unwavering human conviction in our own agency and unwillingness to countenance incursions on it. To demonstrate that reform is within the realms of practicability, however, consider the following.

In 2018, over 800 British Steel workers were persuaded to give up their guaranteed pensions in exchange for a lump-sum, one-off payment. Company pension schemes have always entailed risk, with the firm betting on how long people will live (and thus, how much they will end up having to pay out), often being nudged to overspend by regulatory bodies concerned for pensioners, or simply losing that bet by virtue of ever-increasing life expectancies. Many recipients of these lump sums, as you may imagine, either misspent or misinvested, shaving their nest egg down to a meagre fraction of its original value, leaving their retirement plans in tatters. Their choice, their fate, right? Not according to the Financial Conduct Authority (FCA) who ruled that recipients were advised irresponsibly and intervened to offer impartial advice, ban certain pension providers and limit the influence of dodgy financial advisors. Interim Executive of the FCA, Christopher Woolard's ruled that many "transfers were not in the customer's best interests." Aside from the ability to say 'no' to an offer, this case study illustrates perhaps another area of reform to meritocracy: when a decision can lead to an individual falling below a certain material threshold, choice can be restricted[26]. Restricted by whom, though? The power balance in society, as well as the capacity for individuals and groups to make decisions for the good of society, will be explored in more detail as we turn our attention to our third and final institution: democracy.

I'll leave you with this. New York Times op-ed writer, David Brooks, received a letter from a highly-successful reader wondering how much of his success was of his own volition. Brooks, in what could be a foreword to this book, responded with the words: "as an ambitious executive, it's important that you believe that you will deserve credit for everything you achieve. As a human being, it's important for you to know that's nonsense."[27]

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[i] North, Wallis and Weingast, 2009
[ii] Fu, 2016
[iii] *ibid*, p.9
[iv] cited in Brindley, 2013, p.9
[v] Weber, 1905
[vi] Katz, 1976
[vii] Bjorklund & Salvanes, 2011; Ashenfelter & Rouse, 2000

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[26] Original story: https://www.ft.com/content/7000a01c-cd39-11e8-b276-b9069bde0956; recent update: https://www.fca.org.uk/news/press-releases/fca-sets-out-next-steps-improve-defined-benefit-pension-transfer-market
[27] https://www.nytimes.com/2012/08/03/opinion/brooks-the-credit-illusion.html

[viii] Mayes *et al*., 2009
[ix] Plomin & Deary, 2015 p.103
[x] Flynn, 2000, p.48
[xi] Herrnstein and Murray, 1998
[xii] Rushden & Jensen, 2010
[xiii] Sacerdote, 2007
[xiv] Duncan *et al*., 1998
[xv] Hart & Risley, 1995
[xvi] Heckman, 1995, p.21
[xvii] Bjorklund & Salvanes, 2011, p.220
[xviii] Otto, Christiansen and Feldman, 1995, p.48
[xix] Bjorklund & Salvanes, 2011
[xx] Ramey *et al*., 1990, Currie, 2001, Dumas *et al*., 2019
[xxi] Burger, 2010
[xxii] Barrantes *et al*., 2000 measure the effects from freshmen to senior years; Bahrick & Hall, 1991 over the course of life
[xxiii] Fuller & Raman, 2017
[xxiv] Kornrich & Furtsenberg, 2013; DoE, 2018
[xxv] Amrein & Berliner, 2002
[xxvi] Chetty *et al*., 2017
[xxvii] Shoda, Mischel and Peake, 1990
[xxviii] Watts, Duncan & Quan, 2018
[xxix] Baumeister, 1998
[xxx] Dackis & O'Brien, 2001
[xxxi] Hyman, 2005
[xxxii] Ainslie, 2001
[xxxiii] Kaufman *et al*., 2003
[xxxiv] Redish *et al*., 2008
[xxxv] Lowenstein, 2000
[xxxvi] Levy, 2011, p.103
[xxxvii] Oaten & Chang, 2005
[xxxviii] Ng & Jeffery, 2003; Stretson, 1997
[xxxix] Baumeister & Tierney, 2012, p.41
[xl] Muraven, Shmueli & Burkley, 2006
[xli] Job, Dweck & Walton, 2010
[xlii] Wegner *et al*., 1987
[xliii] Whittle *et al*., 2008; Drevets & Raichle, 1998
[xliv] Gerardi-Caulton, 2000
[xlv] Fan, Wu, Fossella, & Posner, 2001
[xlvi] Allman *et al*., 2011, p.63
[xlvii] Damasio, Everitt & Bishop, 1996
[xlviii] Burns and Bechara, 2007, p.270
[xlix] Sweller, 2011
[l] Engle, Kane & Tuholski, 1999
[li] Schwartz & Kliban, 2014, p.9
[lii] Berlin, 1969
[liii] Sen, 2018
[liv] Twitchell, 1997
[lv] Schmidt *et al*., 2017
[lvi] Jordan & Ditz, 2004; Garvey & Murphy, 2005; Statman, Thornley & Vorkink, 2006
[lvii] Greenleaf & Sinha, 1996; Beggs & Graddy, 2009
[lviii] Katz, 1984
[lix] Tatsioni, Bonitsis & Ioannidis, 2007
[lx] Keller, Marczewski & Pavlović, 2016
[lxi] Prasad & Cifu, 2015
[lxii] Piff *et al*., 2012
[lxiii] Piff, 2017

[lxiv] Haushofer and Fehr, 2014
[lxv] Guiso and Paiella, 2008
[lxvi] Bickel *et al*., 2016
[lxvii] Spears, 2011
[lxviii] Banerjee & Duflo, 2008
[lxix] Haushofer & Fehr, 2014, p.866

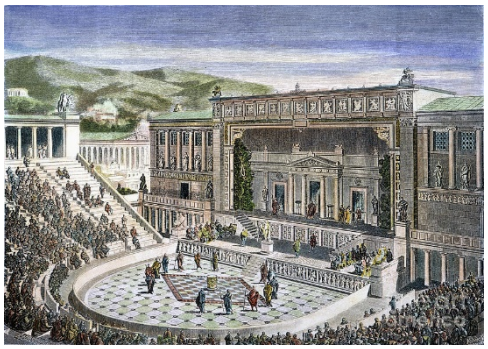
Chapter 11
Democracy

The fall of the Berlin Wall and the Marxist-Leninist project in Soviet Russia represented a champagne-popping moment for advocates of liberal democracy with Fukuyama, among many others, suggesting we had reached 'the end of history'; the blend of universal suffrage and open markets now stood unchallenged as the aspirational political endpoint. The debate was over.

Of course, it isn't that simple. There is not simply one form of arranging a liberal democratic order, and existing forms are not beyond reproval. Any criticism, however, must tread very carefully. It is no accident that the developed world from east to west has collectively reached a point whereby decision-making power has gradually filtered from the top to the bottom, just as it is no accident, as chapter 9 laid out, that decentralised markets are, by and large, preferrable to central planning. Although readers may guess that the many imperfections borne by voters will lead to an argument for 'less' democracy, any serious discussion in this direction must distinguish the baby from the bathwater. In considering the rationale that led the world to suffrage, we return, as we did in chapter 1, to the birthplace of democracy, ancient Athens.

Power to the (already pretty powerful) people

In line with Fukuyama's story of political development, power is either taken or ceded grudgingly – Athens was no different. Essentially a city state, Athens' wealth became dependent on landowners and the moderately prosperous farmers who protected the land. Throughout the 6th century BC, a variety of constitutional reforms extended executive decisions to all Athenian male landowners who would meet regularly in groups of up to 6,000 people to determine a range of issues chosen by those with the most political capital. Athens fluctuated between (often watered down) democracy and autocracy until Alexander the Great put an end to the experiment from 338 BC. For the few able to participate, Athenian democracy was more direct in nature than anything alive today, with the division between civil society and the state only brought into focus much later by Machiavelli and Hobbes. Furthermore, democracy did not bestow rights so much as obligations. As Pericles, statesman and big-time democracy advocate, said: "When it is a question of settling private disputes, everyone is equal before the law...we do not say that a man who takes no interest in politics is a man who minds his own business; we say that he has no business here at all."[1]



Aristotle and Plato weren't the biggest fans. In *Politics*, Aristotle scoffed: "the democratic idea of justice is in fact numerical equality, not equality based on merit...The result is that in democracies the poor have more sovereign power than the rich; for they are more numerous." He observed a

[1] At least according to Thucydides in *The Peloponnesian War* (431-404BC).

contradiction between two fundamental principles of democracy; the notion of political equality - "ruling and being ruled in return" – undermined the social freedom that decentralised power claimed to bring because the freedom of some is necessary impinged upon by the will of the majority. Similarly, Plato was highly critical of democracy which, he wrote, "treats all men as equal, whether they are equal or not" and allows "every individual [to be] free to do as he likes"[i]. Importantly, he speaks to the tendency towards populism, highlighting that "politicians … are duly honoured … [if] they profess themselves the people's friends."[ii]. Aristotle and Plato's criticism of the Sophists, whose wealth was made by imparting the art of persuasion[2], highlighted the idea that the *demos* – the common people – were too often pulled from reason by their mischievous black horse (see: chapter 1). "Political leadership is enfeebled by acquiescence to popular demands and by the basing of political strategy on what can be 'sold'. Careful judgements, difficult decisions, uncomfortable options, unpleasant truths will of necessity be generally avoided. Democracy marginalizes the wise."[iii]. It's hardly surprising, therefore, that Plato's utopia entailed dictatorship of the wise 'philosopher kings'. 'Classical democracy', in conclusion, although by no means the first example of public participation in politics[3], represented the first flirtation with democracy with a focus on civic duty towards shared rule.

Legitimacy

Aristotle's writings disappeared for a while and, by the time they re-emerged at the back end of the middle ages, the classical Greek philosophers had imbued the concept of democracy with fairly negative connotations – something akin to tyranny of the majority. Thomas Aquinas reflected this belief in his writings that favoured the by-then-omnipresent monarchic system of government. His benediction was conditional, however, on the monarchs' continued protection of what Aquinas called 'natural law', a term that Aristotle had loosely thrown around but became, during this period, symbolic of Christian values endowed by God. Thus, Aquinas began formulating an early conception of political legitimacy in which support for rulers depended on their ability/willingness to sanction acts such as adultery, homicide, homosexuality, infidelity and all the other stuff God hates[iv].

While one can hardly say that European kings and queens respected any laws that didn't further their own interests, Italian city states proved fertile ground for political experimentation of a more devolved nature. In *Models of Democracy*, David Held separates thinking on fledgling democracy into two categories: protective and developmental republicanism[4]. The city states of Genoa, Florence and Milan, for example, were ruled by factions of wealthy merchants either in a power-sharing republic, or, when bloody feuds elevated a hegemon[5], the more autocratic polity of *signoria*.

The developmental school of thought can be characterised by Marsilius von Padua who reasoned: "for since all the citizens must be measured by the law according to due proportion, and no one knowingly harms or wishes injustice to himself, it follows that all or most wish a law conducing to the common benefit of the citizens."[v] In other words, Marsiulius, foreshadowing Rousseau's political

[2] And from whom we have the derogatory term 'sophistry': eloquent but vacuous argumentation.
[3] If you expand the meaning of democracy to piecemeal participation in a selection of policy areas, as Isakhan and Stockwell do in *The Secret History of Democracy* (2011), we can stretch democracy all the way back to 1890BC at which time Middle Eastern City States such as Sippar permitted decisions concerning limited areas of justice, security and budgets, which were discussed by an upper house of nobles and lower house of commoners.
[4] From *res publica* – public thing – the term can be thought of as a limited form of democracy that permits the political involvement of certain groups. For example, Greek historian Polybius praised Ancient Roman Republicanism that involved mixed elements of monarchy, aristocracy and democracy.
[5] Think Montagues and Capulets.

philosophy several centuries hence, combined the civic duty of classical democracy with the common good, believing that the latter can be best achieved through deliberation and compromise. With his remarkably optimistic view of human nature, Rousseau, believing man to be born pure and free (sullied only by environmental perversions), he mused that the real problem of politics concerned "how to find a form of association which will defend the person and goods of each member with the collective force of all, and under which each individual, while uniting himself with the others … remains as free as before."[vi] Although not quite as individual-centric, Rousseau's defence of the people against 'government power' prefigured the Enlightenment's Classic Liberals, albeit with strong elements of classic democracy's civil duty; Rousseau saw political autonomy as a self-sustaining end unto itself, even going so far as to criticise the limited public autonomy afforded by English representative parliamentarians.

From developmental to protective republicanism, Machiavelli believed, in a similar vein to Hobbes later on, that, absent rule, men will simply tear each other asunder. Summarising Machiavelli's assessment of polities, Held writes "monarchy tends to decay into tyranny, aristocracy into oligarchy and democracy into anarchy, which then tends to be overturned in favour of monarchy again."[vii] Despite Machiavelli's characterisation of man's self-interested violent nature, he saw democracy as a means of achieving equilibrium through competition's tendency to prevent the concentration of power; lacking a counterbalance, power evolves into tyranny but add too much weight to the counterbalance and self-interested man consumes himself and all those around him. With this in mind, the state's role was not to uphold natural law, which he explicitly rejected, but to promote peace by tempering man's inherent aggression.

If Machiavelli's judgement was inspired by violent power struggles gripping early Renaissance Italy, Thomas Hobbes was equally guided by the depredations of the English Civil War during the mid-17th century. As was briefly mentioned in the last chapter, Hobbes' *Leviathan* called for a strong government to prevent man's natural state begetting "warre of everyone against everyone". All citizens necessarily enter into a 'social contract' in which they relinquish freedom in exchange for protection from their violent nature. Although Hobbes left little room for dissent towards the sovereign, he suggested that because individuals 'consent' to such a system, any beef they have with the sovereign should instead be re-directed at themselves: "he that complaineth of injury from his sovereign complaineth that whereof he himself is the author, and therefore ought not to accuse any man but himself, no nor himself of injury because to do injury to one's self is impossible"[viii]. In response, John Locke said what the rest of us are thinking: "This is to think that Men are so foolish that they take care to avoid what Mischiefs may be done them by Pole-Cats, or Foxes, but are content, nay think it Safety, to be devoured by Lions"[ix]; if we cannot be trusted to rule our humble selves, why would be succumb to the rule of those with the power to raise armies, change laws and dip into limitless state coffers? Reverting to Aquinas' version of protective republicanism, Locke's social contract stressed that legitimacy should be awarded to those able to uphold natural law.

In summary, political thought ruminated on by what criteria citizens could judge the quality of government whether it be protection of rights or protection from our self-destructive nature[6], a line of inquiry that sowed the intellectual seeds for the creation of national constitutions from France to the USA to define and enshrine what is expected of rulers. Where Aquinas and Locke circumscribed rights in accordance with religious doctrine, Rousseau and Machiavelli-Hobbes took diametric positions on human nature and accordingly prescribed various limits on political autonomy.

[6] There's that positive-negative liberty distinction again.

Groups and the individual

The French judge and philosopher Montesquieu, alive during the pre-revolution *Ancien Régime* in the 18th century, was something of a fan of the parliamentary system belonging to his cousins across the channel. The British constitutional monarchy, in place since the bloody civil war and beheading of Charles I in the mid-17th century, lay in contrast to the absolutist monarchies of other great European powers at the time: France, Spain and Russia. Montesquieu, going further than Locke, stressed the importance of breaking society down into its power bases – government, the aristocracy and the people – and treating them as competing interest groups in need of balancing. While Hobbes also discussed group conflict, his experiences led him to favour systems of absolutist central power whereas Montesquieu looked to the English Parliament as an effective means of checking the power of monarchs. The lower house (the House of the Commons) consisted of representatives of the people, the upper house (Lords) represented the aristocracy, both of which checked the power of the monarchy and of each other. Crucially, Montesquieu, observing the disregard with which French monarchs treated the rule of law, stressed the importance of separating the executive (government), legislature (law-making) and judiciary (law-ruling) branches of government.

Fast-forwarding to the 19th century, we return to the Classic Liberals whose promotion of democracy was similar in principle to that of the Frenchman but whose focus zoomed in from the group to the individual. Beginning from the idea that individuals look to get the best deal for themselves ('maximise their utility'), Jeremy Bentham and James Mill (John Stuart's old man) presaged the Public Choice theorists in suggesting that politicians – themselves utility-maximisers – are incentivised to abuse power if left to their own devices; individual democratic rights, therefore, protected individuals from an overbearing state, performing a comparable function to Montesquieu's parliament. Although this may seem to be a different way of saying the same thing, by dissolving 'the people' into individuals, Bentham and the Mills, building on Adam Smith's legacy, knighted competition, absent government meddling, the driving force of liberty. Democratic forces acting on the political economy, in other words, permitted the greatest expression of individual (and, by extension, collective[7]) utility[8]: "over himself, over his own body and mind, the individual is sovereign"[x].

J.S. Mill famously circumscribed the limits of government reach in accordance with the 'harm principle' the scope of which is determined by policy that prevents harm befalling citizens, including, it seems, economic harm, with government protecting "security of person and property and equal justice between individuals"[xi]. As many have since argued, harm is a thorny concept to pin down. Although Liberals past and present[9] prefer whittled down public sector involvement, they unfortunately ignore the capacity of markets – and competition in general – to strip individuals of liberty. Enter Marx and Engels. Among market participants, Marx sought to shift the object of analysis back to groups, dividing society between the bourgeoisie – owners of capital – and the proletariat – broadly, the working class. In *Capital,* Marx was among the first to observe that the

[7] For a brief discussion of Smith's logic, see chapter 9.

[8] It may interest readers to note that, on the grounds of individual liberty, Bentham and J.S. Mill were forceful advocates of welfare spending – free education, a minimum wage and sickness benefits – not associated with today's (neo)liberals. The classic liberals also wrote passionately in favour of expanding suffrage, with J.S. Mill one of the few pre-20th century writers to lament the political alienation of women (Mill, 1867/1997).

[9] A quick word about terminology. It is a quirk of history that the term 'liberal' is today associated with the left despite its roots with the thinkers described in these passages. In keeping with history, the term will apply to the latter in this chapter.

interdependence of finance and business leaves the system vulnerable to self-destruction as failure in one sphere metastasises into pressure across the whole system; the inevitable corollary is a cycle of upturns and downturns. As government relies upon both sectors for the bulk of its spending and achieving constant growth, regulation and policy have a tendency to favour the bourgeoisie over the proletariat[xii]. Thus, capitalism, in Marx' view, inherently skews rewards strongly in favour of the rich.

In *The Communist Manifesto*, Marx and Engels called for the democratisation of the means of production, believing the proletariat, having eventually grown tired of capitalism, would rise up and assume control of the state. While the Liberals were unwavering in their support for fairly extensive democracy, Marx and Engels were never clear on how a post-capitalist world would come to be. While some of his followers, for example Rosa Luxembourg, insisted that 'emancipation' of the working class could be best achieved through democratic participation, others, such as Joseph Weydemeyer, called for the more extreme 'dictatorship of the proletariat'. As we're simply concerned with the principles of democracy, we can summarise the battle between Liberals and Marxists as one that focuses on promoting individual versus collective freedom in the face of systemic oppression, whether that be the state or the economic system.

Finally, and in a similar vein to Marx, the Pluralists hold mass participation of interest groups to be an imperative element of political organisation. In a passage that could have easily been written by a 19th century Liberal, Robert Dahl suggested that "democratic theory is concerned with processes by which ordinary citizens exert a relatively high degree of control over leaders"[xiii]. However, more in line with Montesquieu, the Pluralists saw groups as overseeing each other, with equal competition in the marketplace of ideas resulting in harmonious compromise. Dahl, in his early writings, saw democracy as breeding a 'polyarchy' in which minority groups put pressure on the majority, although he later conceded that Marx' interdependence of capital and state permitted inter-group power differentials that nullified truly balanced pluralism[10]. However, the balance of interests, as history has painfully demonstrated, seldom takes place on an equal footing. Aside from access to resources, Mancur Olson's *The Logic of Collective Action* notes that the political success of groups also depends on the group's size as, firstly, individual gains are greater in smaller groups and, secondly, smaller groups host a less diverse array of interests[11] [xiv]. As Held summarises, "it is hard to avoid the view that, in part, many pluralist thinkers must have been so anxious to affirm the achievements of Western democracy in the postwar era that they failed to appreciate a large range of potential objections."[xv]

The above discussion reflects another series of principles key to democracy. Whether we see society as a bunch of individuals or groups, interests, stemming as they do from complex human beings, are impossibly diverse. Where one person or group finds themself in the hierarchy is a result of the system they exist within, with Liberals fretting about government shackles hindering individuals' ascension, and Marxists focusing on capitalism's injunction of the wealthy and government to depress the power of the working class. In different ways, Montesquieu and the Pluralists characterise democracy as providing an arena for multifarious interests to prevent one group achieving hegemony as well as simultaneously impeding the suppression of minority groups.

[10] Many Pluralists, including Dahl and David Truman (e.g. 1951) took this idea to its logical conclusion, suggesting that market outcomes reflected a fair battle between competing interests.

[11] I think it's interesting to merge Olson's logic with Weber's bureaucratisation; bureaucracy is an act of depersonalisation of a social system whose numbers have swelled to the point when informal interaction of its members, absent central control, destabilises the efficiency of the system. Diversity of interests, and the subsequent need to find compromise, requires the creation of fixed, impersonal procedures.

Cracks in the foundation

The drafting and signing of the American Constitution were overseen by a quorum of representatives from a handful of states that came into effect in 1787. Inspired by Locke's notion of consent, Montesquieu's checks and balances and the Liberals' individual civil freedoms[12], a series of documents that later became known as the *Federalist Papers* were released shortly after to offer intellectual weight to the Constitution's core principles. Among the three authors, James Madison's commentary makes for particularly prescient reading in the context of this chapter as well as the main themes of this book[13].

He began with a criticism of "theoretic politicians" who conflated equality of political power with equality of "possessions, opinions and passions". In a similar vein to Locke's belief that reason "is and always ought to be the slave of the passions" (see chapter 1), Madison believed that reason and self-love go hand-in-hand, rendering the voter incapable of separating logic and emotion. These facets of human nature combine dangerously with political discourse, paving the way for inevitable "factional conflicts", which "are sown in the nature of man"[xvi]. Like Marx after him, Madison saw war over property ownership as being a fundamental political battleground; however, while Marx determined that the battle would only abate with the abolition of property rights, Madison would have shaken his head at the notion, believing that humans will invariably organise themselves into hierarchies of power, regardless of whether power is symbolised by property ownership or any other totem of value. Instead, Madison sought a strong, knowledgeable state as the only feasible bulwark against man's tendency to factionalise, opting for a large body of representatives whose invested power would undermine the rational fallacies of the masses. Like many thinkers after him, he rejected people's ability to rule themselves through direct democracy, but permitted enough reason to allow for the optimal selection of representatives and the weeding out of "unworthy candidates". As we are well aware of today, however, factional thinking applies no less to representative than to direct democracy. Still fearing the "tyranny of the majority", Madison makes the same error of judgement as Plato, elevating philosopher kings to positions of power, albeit by democratic means. His ideas were predicated on the ability of republican democracy to elect a body of specialists who would then be able to protect the individual and group interests of the public. He saw the state as a (somewhat less monstrous) Hobbesian Leviathan that would minimise inter-group aggression and protect liberties and property rights from local tyrannies.

Another returning character, Max Weber, also characterised politics as a pattern of inter-group conflict. Unlike Marx, however, he didn't see these conflicts as rooted in class, but in status delineated by factors such as ethnicity, race, honour, prestige and religion (ref). Conflicts were not so much human nature, in Weber's mind, but rather a consequence of man's intellectual advances, which, while freeing us from the grasp of tradition and religion, precludes consensus, spelling "the fate of an epoch which has eaten of the tree of knowledge."[xvii] Bit dramatic.

For Weber, it wasn't democracy that was the saviour, but bureaucracy, which, paraphrased by Held, could be defined as "office hierarchy ordered in a pyramid of authority; the existence of impersonal, written rules of procedure; strict limits on the means of compulsion at the disposal of each official;

[12] Albeit one of the Liberals' intellectual predecessor, Edward Coke.

[13] Another fascinating entry into these papers is the baffling inclusion of presidential pardons. In one of Alexander Hamilton's contributions (no. 69), he does not justify pardons perse, but compares the power of the president to that of the King of Great Britain. In a later passage, he seems to believe that by imbuing state governors with equal powers of pardon, each will check the power of the other. As I write this, Trump has just finished pardoning 237 of his mates.

the appointment of officials on the basis of their specialist training and qualifications (not on the basis of patronage); clearly demarcated specialized tasks demanding full-time employees; and, significantly, the separation of officials from 'ownership of the means of administration"[xviii] The latter speaks to the principal-agent problem mentioned in chapter 9. In this, he disagreed with Marx' lamenting of the alienation of the worker[14], suggesting that such alienation, devoid of sentiment and connection with outcomes of work performed, was a necessary component of efficient state administration. Although informal bureaucracy can act as a counterweight to tyranny, Weber cautioned the reliance on public sector management inherent in Marxist-Leninist ideologies. While not denying the potential for excess growth of the private sector, Weber was prescient in recognising that the public sector is no less susceptible to swelling. Echoing Montesquieu, parliament is essential in curtailing the excesses of both government and the bureaucratic machine.

Building on this, his analysis of the evolution of parties is interesting. Starting from universal suffrage, plurality divides itself along a multitude of causes, with parties emerging to represent these diverse groups. Effectively gaining support requires the development of a party apparatus which, after a certain stage of growth, becomes a fully-fledged bureaucracy which parties come to depend on for sustained bids for power. Despite the array of ideology, the *raison d' être* of parties is to gain power in parliament and thus the party transforms into a vehicle for fighting and winning elections. These parties, in turn, become loyalty magnets to the electorate whose 'emotionality' he criticised in *Politics as a Vocation*[xix], deeming them unfit to judge public affairs. As such, he contemptuously labelled contemporary forms of democracy 'plebiscitary leadership democracy' given how indistinguishable elections had become from plebiscites. Influenced by psychologist Gustave le Bon, he characterised the electorate as highly influenceable beings whose "attempt at rational argument only spurs the animal spirits"[xx]. He writes that people are so distant from political issues that they struggle to collate the necessary cognitive tools and external knowledge when arriving at decisions. He also believed that the 'public mind' was too easily captured by groups with 'an axe to grind'. Despite these flaws, he, like Madison, seemed to simultaneously insist that the electorate are unable to distinguish between policy positions and yet can be relied upon to pick out good leaders.

Progenitor of 'creative destruction' (see chapter 9), Joseph Schumpeter was equally critical of the voter's mental capacities. To begin with, he rejected the notion of a singular 'social good', pushed from conceivable existence by the sheer diversity of needs and wants. From there, he extended the effects of advertising in shaping needs and wants to the political domain, following the conclusions of Plato and Aristotle in stressing the ability for political leaders to shape and control preferences. Alas, in keeping with the theme of this section, scepticism towards reason guided Schumpeter towards a democratic philosopher kingdom that he labelled 'competitive elitism': voters select leaders then sit on their hands until the next election, denied the possibility of any democratic power between these short windows. Critics such as MacPherson noted that far from being competitive, such a system would reduce competition to an oligarchic monopoly in which elites would be progressively less incentivised to respond to civilian demand as accountability withers away[xxi].

In summary, early proponents of democracy such as Marsilius von Padua and Rousseau, who saw the electorate as a check against the powers of aristocracy and the government, were joined by pluralists who further divided the electorate into smaller interest groups and whose enhanced role in the political process would lead to an acceptable compromise on a range of issues. Channelling

[14] One of the freedoms that capitalism deprives us of, according to Marx, is the separation of love for, and performing of, a craft; the demands of capitalists on workers alienates the latter from the joy of their work.

their inner Hobbes and Machiavelli, one forefather of the American constitution, James Madison, pointed to the tendency for groups to 'factionalise' around issues driven by their irrational nature. Schumpeter agreed and extended his analysis to politicians who were able to harness people's 'passions' in order to set the agenda. Weber's analysis suggested that as parties become politically significant, they morph into bureaucratic machines no longer formed around principles, but superficially structured to fight and win elections. Despite these criticisms, these sceptics, not willing to go as far as Plato in abolishing democracy, opted for a limited form of democracy in which the electorate do little more than elect representatives to run things.

Democracy: the dragon eating its own tail

Let's come up for air. One key principle of democracy we can distil is the insulation it offers against tyranny; England/Britain shifted away from absolutism towards the checks and balances of a constitutional monarchy, leaving it less vulnerable to the whims of tyrannical monarchs[15]. As time went by, the *demos* of Ancient Greece was fragmented into smaller groups while various powers – the legislature, judiciary, treasury etc. – shifted away from political leaders, forming their own increasingly-independent groups. Each of these groups – civil and government – considered and applied their expectations regarding the role of government; as power devolved away from the top, these principles of legitimacy became more important for leaders to gain and retain power.

In the early days, legitimacy was defined along Christian doctrines stressing 'natural law', which conferred natural rights to (wealthy) individuals. Tired of government favouring certain groups[16], the Classic Liberals called for less government intervention. Focusing on individual rights, the Liberals drove the debate to open up the democratic franchise to hitherto marginalised groups. As the resulting Industrial Revolution progressed, Marx noted the tendency for markets to exacerbate economic inequality, creating a market system that skewed gains towards business leaders to the detriment of the working class. Later generations of liberals defined legitimacy as the creation and maintenance of open markets, while Marx' successors sought to empower economically marginalised groups, both sides succeeding in expanding political participation into increasingly fragmented interest groups. However, the more state power that was transferred to everyone else, the more exponential the diffraction of interests became. Pluralists ensure that no voice goes unheard, but the nature of the human mind defies the possibility of realising a harmonious aggregate of these innumerable voices, with debate decaying into factionalist acrimony.

Theories of state *Corporatism*, such as that of Claus Offe, build on Weber's doctrine of bureaucratisation by suggesting that capitalism organises itself into ossified relationships between a state's many interest groups, who act above and beyond the reach of democratically-elected representatives. With so many interests to take care of, channels between powerful groups – say, banks and labour unions – and government become automated, elevated to the stratosphere above the heads of both citizens and politicians[xxii]. Lending weight to the deleterious expansion of interest groups, *overload government theory* tells a story of the evolution of democracy. Economic prosperity permits greater individual freedom (especially, from government); this freedom allows for interests to diversify and translate into a broader array of lobbyists; government, seeking to stay in power,

[15] As Fukuyama notes, this is no act of civic virtue, but simply due to the English aristocracy's decision to co-opt the underclasses in their war against the royals. In France, Spain, Russia and elsewhere, the aristocracy teamed up with their respective monarchies to the great detriment of the peasants.

[16] For example, Adam Smith, writing in the age of British Mercantilism, decried protectionist economic policy that closed off opportunities for those hoping to import certain goods or trade in goods over which a company had been awarded a 'chartered' monopoly.

accede to more demands for protection of rights and privileges; the resultant increase in involvement in civil society, invariably irking one group or another, is perceived as an encroachment on freedom[xxiii]; the more freedom bestowed, the more freedom people feel entitled to, the less space government has to operate. In a criticism similar to those levied against the Classic Liberals, expanding one person or group's freedom often means eating into another's; democracy, framed in this way, is the dragon gnawing on its own tail, destined to piss off more than it placates.

Given the artefacts of the mind laid out in this book, are we doomed to dogmatic discord in the political arena? Offe teamed up with Ulrich Preuss to answer with an emphatic 'no', putting forth a model of 'deliberative democracy' in which civilians engage in dialogue founded on a commitment to being fact-regarding, future-regarding (thinking long-term) and other-regarding (factoring in the interests of others)[xxiv]. Going even further, *impartialism* attempts to contribute a framework for how deliberations could be structured. Onara O'Neil suggests that proposals that entail principles not adoptable by one and all can be safely rejected[xxv]. Barry suggests that investigations could be made to ascertain whether all viewpoints have been adequately considered[xxvi]. O'Neil drills deeper, proposing that those opinions that impinge on the life expectancy and opportunities of others can be rejected under an impartialist framework.

And yet, the notion that humans can engage in such reasonable, good-faith discussion falls victim to the same logical fallacy of Mill's *harm principle* and Neoclassicists *homo economicus*: the idea that a principal motivator for political discussion is, or at least could be, agreement belies both findings from social science and history; the demands placed on human rationality are simply at odds with what we seem to want when talking politics: disagreement. Furthermore, as Gutman and Thompson write, "moral disagreement is a condition with which we must learn to live, not merely an obstacle to be overcome on the way to a just society."[xxvii] Human beings will always disagree on the way they believe the world should be and which issues should take precedence. We are a collection of ever-changing individuals locked in an ever-changing environment, figuring out the best way to organise ourselves in order that we and a dubiously-chosen subset of others are happy; debate – often acrimonious in spirit – is simply one corollary of this.

If there are elements of democracy we value enough to reject its opposite, authoritarianism, yet also elements that self-defeatingly evoke our baser instincts, what remains? Churchill's pithy admission of the quandary, "democracy is the worst form of Government except for all those other forms", certainly seems to be the default stance by the above democracy sceptics whose resolution involves leaning further towards the authoritarian end of the spectrum, solving one problem by ushering in another. Aside from history's many lessons on the tendency for authoritarianism to spell disaster, Held captures the human instinct that causes us to clasp our democratic powers so tightly: "while it is of vital importance to recognize the way in which individuality is structured by social forces, it is also important not to undercut completely the idea of agency. If one drops the notion that human beings are knowledgeable agents capable of making political choices, then it is but a short step to thinking that all that 'the people' need as 'governors' are engineers capable of making the right technical decisions about the ordering of human affairs."[xxviii] We simply cannot be denied the privilege of agency; or, put another way, we refuse to relinquish the closely-coveted power to shape our environments. However, 'less' democracy need not necessarily spell a slide towards authoritarianism, at least in the sense of transferring power from the people to the government. Instead, is it possible to tweak the systems of Liberal Democracy to coax out the better angels of our nature?

Unchecked power

To begin with, one key tenet of democracy is its focus on creating groups to check the power of other groups; to hold power to account. Absent checks and balances, power grows and tyranny ensues. But who holds the electorate to account? What are the consequences of a misspent vote? Universal suffrage was born of circumstances in which those originally given voting power did not earn it meritocratically, by demonstrating a keen knowledge of political and economic issues, but through privilege; this is the original sin of democracy, and set a terrible precedent for the mass expansion of the franchise. As more emerged from the shadows to be granted a seat at the table, the issues they were permitted to influence, as overload government theory recounts, increased to the point that everyone had a say on everything without the slightest consideration of merit. Despite this, applying meritocratic principles to democratic participation is a slippery slope.

To erode universal suffrage is to usher in the risk of oppression by those empowered by genes and early environment, or at least the underrepresentation of groups at the lower end of the socioeconomic spectrum. Therefore, we must strike a balance between efficient political decision-making and accountability; the power we take away cannot pose an excessive risk to the balance of power between the many groups in a society. The problem, however, when decrying insufficient accountability is that it leads to infinite regression. If the electorate are made accountable, to whom are these people now accountable? And then who watches over this next body of people? Some controversial figures throughout history have suggested that voting rights be awarded only to those above a certain IQ threshold, *geniocracy*[17]. Aside from the questionable relevance of intelligence on judgements of political issues and the very real possibility of tyranny of the intelligent, we have seen that intelligence itself is not meritocratically distributed. Perhaps exam boards could hire experts to design exams that would-be voters would have to pass in order to gain access to the ballot box. Our experience of such exams – whether to graduate from secondary education, become a citizen of a second country or hold the prestigious title of 'qualified first aider' – is that their necessary bureaucratisation inadvertently divorces content from purpose; will any set of questions effectively distinguish the politically qualified from the plebs? By what criteria can that ever be measured? By whatever metric, qualification requires the creation of an elite group who themselves would lack the accountability and objective know-how to devise and maintain such a system.

With the scene set, let me present some ideas on how we might modify our political systems in a way that marries diminished will and the key principles of democracy outlined in this chapter.

National boards

If removing voting rights cannot be undertaken on meritocratic grounds and presents the very real possibility of underrepresentation, how can voters be incentivised to take greater responsibility for their decisions through increased accountability?

There are two sides to this question: voters and politicians. The first lesson to learn from is the sheer breadth of issues that politicians engage voters in with neither side being particularly qualified to make judgements. This is because, in contrast to the conclusions of Madison, Weber and Schumpeter, voters apply the same faulty heuristics to the selection of leaders as they do to the evaluation of policy, as chapters 5-8 lay out, meaning the leaders we choose are not selected on the basis of rational deliberation, but of groupthink, ego-protection, identity-maintenance and facets thereof. As long as the range of issues we are consulted on remains broad, the likelihood that our votes reflect an adequate understanding of all/enough of them will be small. As noted in chapter 8,

[17] Such as French journalist Claude Maurice Marcel Vorilhon, aka Raël, who, in 1977, proposed such a system, launching a movement humbly known as the International Raëlian Movement.

our voting decisions reflect strong opinions on two or three key issues, meaning everything else – foreign policy, education, healthcare, immigration, social welfare, financial regulation, monetary and fiscal policy etc. – is determined by those leaders able to satisfy voters on those two or three issues; leaders who are themselves subject to ideology and lack in-depth knowledge on at least *some* policy areas.

One possible solution could be to streamline each policy area so that individual politicians run for individual portfolios in order to allow for greater specialisation and for voters to consider each vote separately. However, in reality, this will still evoke the voter's inner partisan and therefore it is unlikely voting rationale would move beyond the usual groupthink approach. Furthermore, because the basket of issues would remain just as open, policy areas would continue to be dragged around by the political machine, shifting in structure and funding every four or five years shaped by the ideology of able orators. In order to calm the partisan winds that uproot policy, political influence on policy decision-making should be minimised. With this in mind, I propose the creation of national policy boards, which will take a sizeable portion of decision-making power away from central government and place them in the hands of a collection of experts[18]. Ah yes, experts. More philosopher kings, I hear you cry.

Before I lose you, let's take a look at the British judiciary. In line with Montesquieu's recommendations, a key institution adopted by developed countries is the separation of the executive (enactors of policy – government) and the judiciary (deciders of legal matters – judges). As Montesquieu explained, to fail to do so creates a principal-agent problem in which the executive has an increased incentive to skew judicial decisions in its favour to the detriment of the rule of law. Of course, no judiciary selects its members with the consultation of the public who, of course, lack the requisite knowledge and experience upon which to base decisions (something we accept readily, while allowing the public to consult on complex matters of the political economy). At the highest level, vacancies among British supreme court justices invite qualified applicants to apply to a commission comprised of the land's most experienced and decorated judges, who must then engage in prolonged consultation with a long list of senior judges before sending a recommendation to the Lord Chancellor (a high-ranking member of government) who may veto a recommendation[19]. Beyond this stage, recommendations are passed up the chain to the Prime Minister before arriving at the Queen's parlour to be rubber stamped. Unlike, for example, the U.S.' system of selection[20], there is very little room for political influence throughout this process and the vast majority of issues are dealt with in-house[xxix].

Of course, the absence of political influence does not shield the judiciary from the temptations of venality, nor does it undercut subjectivity from creeping into decision-making (although the inherent checks and balances within the judiciary do) – the quality of the judiciary's function is a product of hundreds of years of institutional precedents. It does, however, prevent public and political opinion

[18] What follows should not be considered an airtight theory, but a broad outline of some practical solutions to the problems raised in this book. My sole intention is to generate good-faith discussion independent of political ideology.

[19] This has happened more often than you might think; although, due to the independence of the judiciary and thus ability to put the Chancellor under pressure, the reasons have tended to relate to the inexperience of proposed candidates rather than politics.

[20] In the States, outgoing presidents nominate a judge (whose political opinions are widely known) before being confirmed by the Senate – that's about as political as it could be. In a theme that we will return to, although U.S. Supreme Court judges usually represent both Republicans and Democrats, this inspires far more partisan competition than cooperation.

from pressurising, and thus biasing, matters within the remit of the judiciary. So why not apply these to policy areas?

Let's take education as an example. At the apex of a National Board of Education would sit a small committee of the most experienced education professionals in the country who would be responsible for selecting a range of, say, 20 experts – senior teachers, principals, academics, administrators[21] – whose job it would be to manage the budget set by parliament (more on this in the next section). How to distribute the national budget between regions, the national curriculum (and latitude therefrom), special needs (SEN) considerations, the role of examinations…all these aspects would be taken out of the hands of arbitrarily selected members of government and allotted to those best-placed to make decisions.

Let me try to anticipate some objections.

Firstly, in a nod to Hayek's observation that local information cannot be entirely known by central authorities, as well as to Montesquieu and co.'s work on the need for accountability, Board members would be accountable to a council of regional representatives who would lobby the Board for their regional interests. If a certain number of council members took umbrage, they could effectively veto a Board proposal and force amendments.

What about parents and their concerns? While the opinions of parents are an important counterbalance to decisions, they are not qualified by sheer virtue of having a kid in school[22]. While it is important that regional council members are chosen by those with a vested interest in local education, the power to influence policy must be earned. Parents, teachers, academics and Jim down the pub all have the possibility to influence their local Council but this right is purchased with time spent on Council matters. Whether it be attending meetings, distributing information, taking surveys, or simply engaging the public in discussions on matters of educational policy, suffrage should not be universal[23].

Finally, as the principle of National Boards could apply to other policy areas, and especially as there will undoubtedly be a range of teething issues in the beginning, I propose one further group, the National Boards Internal Affairs, be established to oversee the transition. A branch divided between the legislature and judiciary, Internal Affairs would determine criteria by which to assess the performance of the courts and make rulings when necessary. As scary as this sounds, their remit should be fairly narrow with a main focus on abuses of power. Cases could be filed by both National Board and regional Council members to deal with errors made in personnel selection, policy application, funding distribution etc. In the British Common Law tradition, precedents set by rulings would become the foundation of the National Board institution[24].

[21] These roles should not be considered definitive. How many and precisely who should have a seat on the Board would be a matter of lengthy deliberation within the field of education.

[22] As someone who has spent the last decade in education, I can't tell you how insufferably self-entitled parents *can* be.

[23] Time, of course, is a commodity not all of us possess in equal measure. While I could suggest that much of these tasks could be undertaken online, I am also open to other suggestions as long as they erect a surmountable obstacle to participation that encourages attainment of relevant knowledge.

[24] As institution researchers (see chapter 10) have emphasised, the success of institutions depends on far more than effective design; they are a product of bottom-up culture generation as much as top-down ingenuity. Aside from the need for time, the importance of exteriorising accountability was exemplified by Edward Snowden who gave us an example of how ineffective an oversight body can be when they are accountable to

There are a hundred and one holes I could spend another ten pages trying to patch up (probably pretty badly) but, as I mentioned, my intention is to show not just where the problems with democracy lie, but that we have not reached 'the end of history'; political systems will continue to evolve to deal better with an environment that never lets up. After having 'won'[25] the right to influence a wide array of political and economic issues, the idea of giving up those rights isn't one likely to gain much traction. Society is happy to deny a range of rights to children and teens in the knowledge that few are ready for the breadth of responsibilities the real world imposes on them; yet how many of us would be willing to admit that we may not be the best judge of all issues contained in party manifestos? Further to public resistance, it is unclear how many policy areas National Boards could be applied to. Healthcare is perhaps another feasible area but what about environmental issues? Tourism and culture? Foreign policy? These areas may require an entirely different solution, but as long as the problems laid out in this book remain in view, all is not lost.

Among the issues with National Boards is money. If government sets and distributes funding for National Boards, *they* have the leverage, opening the door to possible politicisation as funding is released only when certain centrally-determined conditions are met. At the same time, National Boards have the incentive to maximise their own funding, leaving us with something of a dilemma. This is where the Communist experiments of the Soviet Union and, most notably, China offer us an interesting solution.

Ten-year plans

As we know, autocracy tends to evolve into tyranny given the absence of checks and balances. One benefit, however, is the ability to make broad, long-term plans, safe in the knowledge that one party will remain in power throughout the period that the plan covers, and beyond. On the other hand, democracies are locked into the political cycle that, even when one party remains in power over several decades, can drag policy all over the place. Teachers, having just got used to one exam system, one style of administration and one curriculum, find themselves spending their summers getting to grips with widescale changes. If we accept that democracy probably trumps autocracy, and that the cause of the vertiginous political cycle is the competition that contemporary democracies bring out in us, the theme of reducing the basket of issues to be debated extends to solidifying a long-term, cross-party goals through ten-year plans.

While Stalin's five-year and China's ten-year plans cover(ed) the width and breadth of issues, any democratic plan would necessarily be much more conservative in order that responses to the changing world reflect the concerns of society's interests. While I'm not brave enough to make a full list of issues to be included, I reckon a good place to start would be budgets for departments or, in line with the last section, National Boards. To begin with, Council members from across the country would enter into consultation with the Board to determine (geographical and policy) areas most in need of funding. Board representatives from each department would then have the opportunity to present their case to parliament who would negotiate and fix annual budgets[26] over a 10-year period to be enshrined in the final plan. Both the passing of the plan and any subsequent modifications

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the same overlords (https://www.theguardian.com/law/2016/apr/30/fisa-court-foreign-intelligence-surveillance-fbi-nsa-applications).

[25] In reality, women, minority groups, men without property and late teens simply won the right to not be oppressed (as much). As this chapter has illustrated, the two – having a voice and having an opinion – are distinct phenomena.

[26] As a percentage of GDP rather than in absolute terms to allow for shifts in the economy.

would require a parliamentary supermajority (typically two-thirds) in order to insulate against political mischief.

Perhaps controversially, I propose that the above take place entirely behind closed doors. While transparency plays an essential role in holding power to account, that doesn't mean that its effect is always positive; as we've seen, more information is not tantamount to better decisions[27]. Councils and Boards are incentivised to maximise the means they have available, while parliament is incentivised to trade off the individual needs of Boards, and the national budget more broadly; the two should be able to find compromises without involving the public or media[28]. If, for some reason, parliamentarians act like big bullies and/or show unjust preferential treatment to one Board over another, accountability can be found in the upper house – the U.S. Senate and the British House of Lords[29], for example – who the Boards could petition if they deemed a parliamentary decision injudicious.

Conclusion

In this chapter, we have traced a select history of political thought as it pertains to democracy. In contrast to autocracy, democracy permits the representation of individuals and groups who feel underrepresented or mistreated by power; levelling the playing field for interest groups mitigates the possibility of any one group suffering due to societal power imbalance and enhances equality of opportunity across the country. Furthermore, distributing power across groups and creating *ad hoc* bodies serve to provide checks and balances so that power attainment has a ceiling, curtailing abuses of power. However, people power has grown far beyond cognitive capacities; the issues we have significant influence over, both on the part of voters and politicians, have grown extensively over time. We are a body of average intellect[30] making consequential decisions on highly complex issues. This is deeply problematic in cases of direct democracy such as referenda, but even within a more restrictive representative democracy, political leaders are chosen by means of heuristics not fit for purpose.

Part of the problem is that, unlike politicians, voters are not held to account for the votes they cast. Another part of the problem is that the scope of issues is so broad that it actively invites individual- and group-level competition that is inimical to running a country. If too many cooks spoil the broth, democracy's kitchen is so chocca that it's churning out bowls of lukewarm cat piss. By devolving certain issues – such as education and healthcare policy – to independent National Boards, party manifestos will become thinner and these areas will be less subject to the whims of the electorate and their chosen leaders. Further diluting political debate, the introduction of 10-year plans would allow representatives to make long-term commitments – to infrastructure projects, capital investments, department budgets etc. – immune to the often-arbitrary political cycle, albeit with an emergency break in case shit hits the fan.

Whether or not you buy into these proposals, I hope you recognise that as long as we base with impunity votes (that aggregate the pros on cons of a vast array of issues) on the output of

[27] According to QAnon.

[28] Of course, particularly disgruntled parties to this process can/will always leak perceived malfeasance into the public domain. C'est la vie.

[29] On the topic of accountability, much has been said of political ties between upper and lower houses. Although, in my view, much can be done to make the bicameral system operate more effectively, assume for now that we're talking about a perfectly impartial upper house.

[30] The UK has an average IQ of 100; the U.S. 98.

inadequate neuronal connections, we invite partisanship to lead us astray, incentivising us to waste energy squabbling over irrelevant trivialities instead of building bridges over splintered societies.

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[i] Plato, *circa* 375 BC/1974, p.375-6
[ii] *ibid*, p.376
[iii] *ibid*, p.51
[iv] O'Connor, 1967
[v] Von Padua, 1324/1932, p.48–9
[vi] Rousseau, 1762/1968, p.60
[vii] Held, 2006, p.78
[viii] Hobbes, 1651/2011, Chapter XVIII
[ix] Locke, 1689/1988, p. 372
[x] J.S. Mill, 1859, p. 69
[xi] J.S Mill, 1890, p.355
[xii] Marx, 1867/2010
[xiii] Dahl, 1956, p.132
[xiv] Olson, 1971
[xv] Held, 2006, P.292
[xvi] Madison, 1787/2009, p.18
[xvii] Weber, 1949
[xviii] Held, 2006, p.229
[xix] Weber, 1919/1972
[xx] *ibid*, p. 257
[xxi] MacPherson, 1977
[xxii] Offe, 1985
[xxiii] Brittan, 1975
[xxiv] Preuss, 1991
[xxv] O'Neil, 1996
[xxvi] Barry, 1989
[xxvii] Gutman & Thompson, 1996, p.26
[xxviii] Held, 2006, P.265
[xxix] Supreme Court, 2016

Chapter 12
Conclusion

We've covered an enormous amount of ground in this book. In this last chapter, I'd like to summarise some of the main points by grouping my arguments into core themes, add some lustre and tie up some loose ends. I had to bite my tongue regularly to avoid leading you too much towards my own conclusions but, in order to make some sense out of the less accessible aspects of consciousness, I'd now like to destroy all credibility with some wild speculations.

Determinism vs free will

In the first couple of chapters, we came across the Atomists of Ancient Greece whose belief in the atom's slavery to the immutable laws of physics led them to conclude that free will was nonsense. Later on, in the context of an omniscient Christian god, St. Augustine also struggled to reconcile God's knowledge of our past, present and future with free will. Either everything has been mapped out since the beginning of time…or it hasn't. As we saw in chapter 2, this either/or dichotomy is reflected in the *incompatibilist* position, which broadly states that as long as we are not the cause of our own actions, we are not in control of them. We are Spinoza's cog, whirring around in a machine, convinced of our own agency.

Its opposing school of thought, *compatibilism*, attempts to find some room for free will despite conceding that determinism is generally true. St. Augustine's brand of compatibilism, for example, suggested that God grants us the ability to distinguish right and wrong, which is itself an example of free will. More formally, William James came up with his *two-stage model* in which the world (laws of physics, God, the wife etc.) presents us with a deck of cards, which we may then pick from. As Schopenhauer wrote: "Man can do what he wills but he cannot will what he wills."

Then quantum physics came and fucked shit up. With Heisenberg's uncertainty principle, Schrödinger's bloody cat and electrons somehow being in two places at the same time, the determinism of Classical Physics was thrown into doubt. Arthur Eddington captures the excitement of free will advocates, writing that "if the atom has indeterminacy, surely the human mind will have an equal indeterminacy". However, greater uncertainty is no less ruinous to free will than certainty. Even if you decide that all this subatomic madness is applicable to the human mind, quantum mechanics exchanges certainty for probability, which itself implies chance, or, as C.S. Pierce labelled it, *tychism*; either way, we are robbed us of free will. The forces that deal us our hands – the causes of our actions – are probabilistic, and if it is chance that shapes the mind, it is chance that wears the trousers.

For modern free will proponents, such as Daniel Dennett and Robert Kane, conceding control over the causes of our actions is not sufficient to dismiss free will. For Dennett, we are in possession of the kind of free will "worth wanting", which is one that allows us to take responsibility for our actions. A common argument from such thinkers is that to trace all of today's thoughts and actions to the innumerable moments throughout human history would be *reductio ad absurdum* – the only logical conclusion would be that everything we do was caused by the big bang. How far are we supposed to go back? Did you shout at the bus driver because you woke up on the wrong side of the bed or because our primate ancestors kept beefing over chicks and real estate? The answer, of course, is both, but the fact remains that modifying these causes would yield very different behaviour. We'll return to this quandary momentarily.

Conscious reason vs unconscious emotion

A part of the challenge posed by the Atomists was that if the brain is comprised of deterministic particles, where does free will reside? Descartes took a swing and a miss, believing the physical brain to be separate from the immaterial mind – albeit connected by the physical pineal gland. Theories of Cartesian dualism, or any form of dualism that separates mind and brain, may well turn out to have some validity, although there is little support among scientists for sentient energy. Instead, philosophers and scientists looked to distinguish those parts of the brain responsible for what Jung called "mere compulsion", and those that housed the reason upon which free will relied.

Plato got the ball rolling with his metaphor of a carriage driver, reason, led in two opposing directions by appetite and love, manifested in horse-form. The division of reason and emotion became a prominent theme during the Enlightenment. For David Hume and Emmanuel Kant, reason and emotion were mutually distinctive entities, with the former suggesting that emotions – "the passions" – are really in the driving seat. Channelling his inner Plato-Hume, contemporary political psychologist David Haidt switched out horses for an elephant, suggesting that our driver, reason again, mounted on an elephant of the passions, to all observers, seems in control. Yet, if the elephant wants to turn, our helpless driver is powerless to follow.

Moving into the 20th century, Freud popped up and overlayed his own interpretation of the mind's internal battle. Through Freud's distinction between the conscious and subconscious, we see the role of conscious reason diminish in relation to the patricidal and maternophilic compulsions of the subconscious. The idea that human beings were subject to forces beyond their awareness kicked off a paradigm shift in philosophy and science, culminating in *dual-system theories*, exemplified by Daniel Kahneman's reactive and fast-thinking system 1 on one side, and the more deliberative system 2. In a nod to Freud's legacy, Kahneman and his late partner in crime, Amos Tversky, uncovered an array of biases that imperceptibly govern our thoughts and actions from behind the curtain.

On the side of reason were Neoclassical economists, whose models of economic theory relied on the perfectly rational, utility-maximising agent – *homo economicus* – able to calculate the probabilities of potential outcomes at the drop of the hat and select only those outcomes leading to the highest likelihood of material gains. Although economists have climbed down (a little) from such expectations of human rationality, homo economicus' shadow looms even within the debate halls of irrationalists. According to Teppo Felin and Gert Gigerenzer, dual-systems theorists still take perfect rationality as a baseline, with deviations thereof subsumed under the umbrella terms of irrational 'biases' and 'heuristics'. Reflected by Wason lamenting his subjects' inability to solve his 'four-card problem', researchers devise a problem, determine the most rational solution and hold our inevitable failure up as evidence of inherent rationality. Gigerenzer and his fellow 'rationality relativists' insisted that to think of the mind as containing two systems was slanderous, preferring to couch its foibles in the context of human evolution.

Ecological rationality is thus the idea that the shapes our minds take today are the result of challenges our ancestors once faced. Gigerenzer's 'fast and frugal heuristics' combine the recognition that, although the brain's processing power is limited, there are times it must act fast. For example, when a ball is hit in the air, instead of whipping out a calculator to figure out where the ball will land, our brains thought it more expedient to judge flight by the angle of the catcher's gaze; the more acute, the further the ball will travel. What Kahneman and others have called biases are examples of strategies the brain has developed over millennia to deal with a complex and ever-changing world. Sometimes – well, a lot of the time – the strategies employed are not fit for purpose. These can be thought of as examples of 'evolutionary mismatch'.

David Buss and Martie Haselton brought this idea to life with *error-management theory* (EMT), which traced mismatches back to their (likely) origins. If a cavelady wants to ensure that her babydaddy will stick around long enough to prevent wolves from feasting on her offspring's eyeballs, the long-term costs of her mis-imputing loyalty – false positive – are far higher than those of missing out on loyalty – false negative; the resultant heuristic is one that tends to guide women to assume the worst in men. The trade-off between false positives and false negatives underscores the importance of the environment in influencing thoughts and actions, both in terms of how the mind came to be, and its day-to-day operations.

The search for rationality's headquarters has taken on new life with the rise of neuroscience in the latter decades of the 21st century. We saw a few neuronal networks identified as possible candidates generally located in the prefrontal cortex just above the eyes. However, one key finding from brain researchers is how interconnected these regions are, with some of our more irresponsible networks hosting the rider's mischievous elephant. One example of this is how these interconnections give rise to the possibility of addiction; reward and punishment pathways – known as the *dopaminergic system* – can adapt themselves to offer rewards for some pretty awful things, such as nicotine intake or shoving coins into slot machines. While not all of us are coke addicts, research in the area of addiction shows us the power of unconscious compulsion. Highlighting a number of these compulsive networks, Damasio's theory of *somatic markers* suggests that our prefrontal cortex is helplessly bombarded with signals from every corner of the brain, with the resultant thought or action a function of which somatic marker, or voice, shouts loudest. Throughout this book, I have used the metaphor of the brain's 'many voices' representing a dysfunctional, patchwork family, all shouting over one another for the right to lead the organism – us – onwards. The so-called 'executive functions' that the prefrontal cortex performs are often little more than acts of plagiarism; we take responsibility for a thought or action, the suggestion of which is rooted in a careless whisper by a penumbral voice hidden from view. Furthermore, smart people are no less susceptible to suggestive whispers. Whoever you are, I promise you that you are highly adept at deceiving yourself, because who else would have more inside knowledge?

The environment

Central to debates on agency and free will is the influence of the environment on the mind. We might start by asking: do we make culture or does culture make us? In part 2, we came to understand that the answer is: both. The environment helps to shape the genetic evolution of the individual organism, who teams up with other such organisms to shape their environment, which then impacts which of the many voices take precedence, and so on. You simply cannot devise a theory of agency without taking the environment into consideration.

By looking at, for example, Chomsky's universal grammar, or 'general' intelligence, we saw that "nature provides a first draft, which experience then revises" (Gary Marcus). We are all born with the capacity to learn grammatical rules, but which rules we adopt is determined by the language we are immersed in as children. Given that there is a strong heritable component to IQ, it would seem that we are born with a possible IQ range, with the environment determining where within that range we end up.

Just as quantum mechanics emphasised probability over certainty, the brain you end up with in your late 20s and onwards is moulded by the genes you inherit and the environment you grow up in, neither of which are within your control. Fortune has to take the lion's share of the credit for what we think and do in the world; the little control we do seem to have is demoted to the role of diminished, rather than free, will.

Drilling more deeply into what we mean when we talk about the environment, we turned our attention to groups. Through Kevin Laland, Peter Richerson and Robert Boyd, we reframed the purpose of culture as being a repository of information that the latest generations can siphon off. It seems that some of our newest brain networks have been purposed towards social interaction, in particular our capacity to mimic others. Along with O.E. Wilson, all three of the above social scientists demonstrate that 'social learning' – one might say copying – lies at the root of human progress. On the flip side, so prone to copying are we that the resultant conformity heuristic becomes another example of evolutionary mismatch. As Solomon Asch and Stanley Milgram demonstrated in the mid-20th century, people are capable of entirely dismissing what they believe to be right in the face of sufficient peer pressure. Social learning, as with most phenomena discussed in this book, is a double-edged sword.

Going one step further, we analysed some of the main influences of conformity by taking a look at ingroups and outgroups. Tajfel's *minimal group paradigm*, as demonstrated by Sherif's 'Robber's Cave experiment', illustrated the variety of arbitrary ways we separate ourselves into 'us' and 'them'. Furthermore, once established, this division can be made more salient through subtle changes in the environment. Sherif was able to unify two warring factions of adolescents by creating *superordinate goals* – objectives that could only be accomplished under conditions of cooperation. Conversely, Mackie, Devos & Smith proposed that perceived threat of the ingroup from outsiders drives a wedge between factions, with Scheepers, Ellemers and Sintemaartensdijk even finding physiological responses to ingroup threat. Aside from existential threats to the group, where one's group is in relation to other groups is significant. Christopher Boehm emphasised how fundamental hierarchy is to human beings (and pretty much every social animal); we are born with a predilection to place ourselves either as individuals in relation to other individuals, or groups in relation to other groups. The salience of group hierarchy can be yet another environmental variable that moderates our tendency to divide each other up into teams. What we came away with was an appreciation of just how responsive group boundaries are to the environment, and how the intensity of group identity can utterly dominate our thinking, particularly in response to perceived threat.

Another way of framing the ingroup vs outgroup debate is to divide cognition between competition and cooperation. When we are faced with a superordinate goal in a group, our cooperative nature is evoked; we support, we empathise, we sympathise, we work together. However, when the threat of an outgroup is palpable, we look for contrasts, we find faults in others, we criticise, we fight. As chapter 9 showed, competition can be an incredibly positive force for both individuals and groups; yet there are times when it can be incredibly detrimental. All of us came into the world with the capacity for both cooperation and competition, and these capacities also come with their own environmental triggers. Just like we cannot control the onset of emotions, neither do we have much control over whether our competitive or cooperative voices are evoked, something that lies at the very heart of political conflict.

Identity

In light of the discovery that much of what we think and do is rooted in genes and early environment, we turned our attention to identity, which acts as an anchor, mooring us to the environment. As Damasio and Solms hypothesise, one role that consciousness evolved to play was to distinguish the subset of particles that comprise an organism from everything else. In order to learn from mistakes, we need to identify whether some awful outcome was because of us, or something else; we can only do that if we know what 'we' did. Identity, then, is the way our brain conceptualises the 'us', and therefore finds itself enmeshed in debates on free will.

Further to a theory of the self, we are also capable of theories of others' selves, which is known to psychologists as *theory of mind*, and is only made possible by those more modern, social neuronal networks. Theory of mind, however, is imperfect and influenced very strongly by our own identities both at the individual- and group-level. For example, Teppo Felin believes that even our perception of the world is affected by the relationship between the mind and the environment. An act of theft could be viewed both as reprehensible or justifiable, depending on the identity of the perceiver; a mistake by a politician, similarly, could be seen as forgivable or reprehensible, depending on one's political identity, with all kinds of imputed intentions ascribed to the sinner to justify one stance or another. In line with the theme of diminished will, the identity we come to possess plays a huge role in interpreting the world, so we took a peek under the hood.

In chapter 5, James Marcia described identity as something that fluctuates between exploration and fixedness, with the latter, "at a bare minimum", comprising fundamentals such as vocational aspirations and sexual orientation. Although perhaps misguided by the social values of the 1980s, Marcia's thinking was extended to represent 'core' identities that, once established by an individual, could enable explorations of other areas of identity. Later on in chapter 8, we applied this to party policy, seeing how as long as a party (or political leader) represented a group's core values – such as keeping immigrants out – followers readily adopt 'periphery' values – such as a new-found admiration for Vladmir Putin – into their political identity. Just like ingroups and outgroups, the outer boundaries of identity are as flexible as those of group division.

Harnessing the work of Jean Piaget, Sneed and Whitbourne suggested that new information is processed through a cognitive filter, before either being *assimilated* – incorporated into existing aspect of one's identity – or *accommodated* – responsible for a new aspect of identity to sprout. Honing in on this filter provided some insight about why accommodation can be so challenging: consistency is everything. What we've always held as core beliefs die hard. We reject new ideas – or find a way to assimilate them – because they would pervert the depiction of reality we've long relied on to navigate the world. Identity emerged to distinguish us from the rest of the world, and evolution favoured highly durable theories of both, leaving us with a sense of great unease when a theory is threatened. Apart from consistency, this identity filter is constructed by one or more ingroups, whether it be Jung's *archetypes* passed on by popular culture – the caring sister, the young entrepreneur, the sage old man – or opinions on what the world's problems are, how they were caused and how they can be fixed: political ideology. Partisanship, then, is simply a flammable mixture of both this need for consistency and groupthink.

Another facet of this filter is that it is subconscious. As Felin proposed, we each have an *unwelt* constructed, which serves to extract small segments of what our senses perceive for processing. While at the extreme – loud sounds, bright colours, quick movement – we are all alike, over time, these umwelts are shaped by our own unique experiences and cause our very perception of reality to differ from individual to individual. Research on eyewitness testimony, for example, shows us that not only do witnesses provide different visual and ordinal reconstructions of events, but can even be manipulated by interrogators to invent details[1]. Not only does this spell disaster for our ability to collate and process information, but it further diminishes will. The uniquely imperfect version of the world we see is passed to us by our subconscious, leaving the sources of our conclusions unknowable. As Cohen demonstrated, the exact same political policy can be interpreted in vastly different ways *depending on which political leader proposed it*. If the majority of the brain, including its identity, its perception of the world, the voices that inhabit it and the relationship they develop,

[1] Elizabeth Loftus has worked extensively in this area (Frenda, Nichols, & Loftus, 2011; Loftus, 2005)

all occur outside of conscious thought, it strikes me that claims over authorship of what the brain outputs are rather optimistic.

One fear I have is that, in demonstrating that a part of your soul is partisan, you will integrate the realisation into your identity, wearing your partisanship as a badge of pride, rendering explicit a facet of yourself that was once implicit. Although this is highly likely, it would represent a failure on my part; a failure to distinguish between having a political preference and systematically closing the door to other possibilities, even those emerging from across no man's land. It is in our nature to create enemies in order to hate them, and take enormous pleasure in doing so. However, it is important to remember that, to these instincts, as much as you are adept at convincing yourself otherwise, the process by which we identify enemies is entirely arbitrary. It matters that we hate, not who we hate; justification for the 'who' only tends to occur after the fact.

Free will

Throughout this whole book, a voice has been niggling at me. If all of this is true; if free will is an illusion, then what is this thing called consciousness? Peter Wessel Zapffe once wrote that human consciousness is tragically overdeveloped, resulting in existential angst. In his 1933 essay *The Last Messiah*, Zapffe referred to it as "a biological paradox, an abomination, an absurdity, an exaggeration of disastrous nature". Humans have developed a need that cannot be fulfilled, since nature itself is meaningless; to survive, he argues, humanity has to repress this damaging surplus of consciousness. *True Detective*'s Rustin Cohle (played by Matthew McConaughey) cheerily noted:

"I think human consciousness is a tragic misstep in human evolution. We became too self-aware; nature created an aspect of nature separate from itself. We are creatures that should not exist by natural law. We are things that labor under the illusion of having a self, a secretion of sensory experience and feeling, programmed with total assurance that we are each somebody, when in fact everybody's nobody."

Could it be the case that, in promoting our survival, evolution took things too far, imbuing us with a bloated sense of agency? Readers sufficiently convinced by the preceding arguments may implement small changes in their lives that reflect the reality of their minds; and yet, is this implementation not a product of free will? I admit that I have chosen to characterise what we do have as *diminished* rather than *no* will because, perhaps self-deceptively, there does seem to be some things we have control over. While it may be guilt or shame that discourages me from throwing plastic bottles on the ground, my consciousness seemed to be able to write a program that primes my *umwelt* with greater sensitivity to future bottle-disposing moments. I agree with Dennett that to define the cause of a thought or action only by rewinding time to the cause's cause is ridiculous; any moment we take as a cause, unless it is the beginning of time, will always be arbitrary and itself caused by other past moments. However, in the context of debating agency, to dismiss causality altogether in support of a "free will worth having" is no less ridiculous. Just because it's impossible to find the ultimate origin of behaviour, it doesn't mean its origins are irrelevant.

With this being said, whittling free will down to its emaciated exoskeleton does not necessarily mean that humans can simply relinquish all responsibility. Far from it. Debates that pit determinism against free will make a false distinction. Whether the trajectory of living beings is subject to deterministic forces is only relevant, I believe, if we are able to discover the universe's central algorithm; perhaps the future is knowable but as long as we don't know it, it doesn't really matter.

In Ted Chiang's short story *What's Expected of Us*, the universe's algorithm has been uncovered by a machine called the Predictor. After countless failed attempts to outsmart this omniscient AI, humans

despair at the knowledge that free will is a myth, refusing to feed themselves or act morally in a world without the meaning that personal responsibility carries. Let's imagine I, the Predictor, tell you definitively that everything we do is preordained, what would you do differently? I would argue: very little. We may well be little more than complex robots but knowledge of our programming does not alter the programs' functioning.

Damasio remains optimistic about our chances of unlocking the arcane secrets of consciousness, writing: "the time will come when the issue of human responsibility, in general moral terms as well as on matters of justice and its application, will take into account the evolving science of consciousness."[i] However, I'm going to have to side with the 12th century's Jalalu'ddin Rumi on this one: "There is a disputation [that will continue] till mankind is raised from the dead, between the Necessitarians and the partisans of Free Will". Taking my own advice, I'm sitting on the fence on this one.

Moral accountability and social systems

Morality was not a human invention. Any social animal must contribute to a set of rules that promotes the well-being of the group's members. Chimpanzees have their own concept of 'fairness'; "honeybees who are more likely to remove bee carcasses from their hive have more offspring, and birds who keep their nests tidier are less susceptible to being preyed on,"[2]. Moral responsibility does not require free will; it simply requires that the form our societies take promote the well-being of individuals that inhabit it. Rewards and punishments are aspects of society that guide behaviour towards group well-being. Therefore, in the context of mutually-beneficial coexistence, it doesn't really matter whether an individual can be held entirely accountable or not as the nature of the environment – with its incentivising rules and sanctions – will remain an essential consideration either way. Put another way, the problem of moral accountability in the absence of free will can be solved by weaving incentives into a social system that usher forth our more desirable neural networks.

In part 3, we broke down the environment into three examples of social systems – markets, meritocracy and democracy – each of which provides a set of rules that govern our thoughts and actions within specific social domains. Regarding markets, I described some of the cognitive mechanisms that affects our participation in markets – such as the importance of social comparison and our limited ability to absorb and process information – confirming that many of our decisions are influenced by factors beyond conscious awareness. We also saw that markets embody some of the more socially beneficial elements of competition, allowing the cream to rise to the top. However, in the context of merit, attributing success to genes, to the environment, to the miniscule accumulation of knowledge and cognitive patterns by cultural transmission – to elements beyond our control – can help to mitigate the hubris that success inevitably breeds. While the ideas in this book should not lead readers to demote the neurologically-and environmentally-privileged among us – the world will always need philosopher kings – it should cause us to reconsider the plight of those who don't "make it"; in particular that the inferior circumstances that meritocracy's losers find themselves in are perhaps not as consciously-determined as many are willing to admit. What emerged from chapters 9 and 10 were some suggestions on how these institutions could be tweaked to maintain appropriate incentives, while factoring in diminished will. Firstly, for any transaction to be valid, an individual must have the capacity – both mental and situational – to say 'no'. Secondly, a limitation on individual freedom could be defined according to the possibility of losing everything; if

[2] For more on animal morality, see Delgado & Sulloway (2017).

there is a chance that a decision could plunge an individual below a certain minimum material threshold, that decision should not be permissible.

Merit, as we saw, becomes tricky to define once the limitations of diminished will are made apparent. Specifically, one's ability to work hard is largely determined by genes and early environment; by Damasio's somatic markers – many voices – versus prefrontal brain networks that struggle to keep them in check. We are not, despite what meritocracy's champions tell us, *homo assiduous*, capable of working harder or being smarter by sheer force of will alone. The power we do have is over the shape societies take and the incentives they bring to bear. Although rational in its genesis, Michael Sandel's *credentialism* – that the merit of an individual is defined by his qualifications – is an example of detrimental incentives. However, as the evolution of patents showed us, getting these incentives right can often be an impossible trade-off. Similarly, although many political commenters sing the praises of regulation as a panacea to many of society's ills, chapter 9 illustrated just how hard such a process can be.

An institution that combines the logic of both meritocracy and markets is democracy; politicians market themselves in the marketplace of ideas and gain positions of power on the basis of how fit for purpose they are. Our exploration of early state-building in both chapters 10 and 11 revealed how the ancient worlds of China, Greece and the Ottomans sought ways to overcome some of humanity's less meritocratic tendencies. Francis Fukuyama's ambitious work highlighted early civilizations' battles with *patrimonialism* – the awarding of benefits on the basis of personal relationships. In a similar vein, Hobbes and Machiavelli took the view that government's role was to protect man from his own violent self. In order to avoid these baser tendencies from spilling out into society, members of a society acceded to a 'social contract' in which they cede power to a central body in exchange for some peace and quiet. This contract, however, became subject to conditions that government would need to meet; a state's 'legitimacy' was dependent on how well it performed its role.

Further, Montesquieu, in admiration of England's post-civil war parliament, stressed the need for groups to divide power in order to avoid tyranny. Although he focused on the division of policy-making, law-making and judgement-making, more modern scholars, for example the *pluralists*, emphasised the need for all of society's groups to have a seat at the table. However, in line with chapters 6 and 7, James Madison decried the tendency for voters to factionalise and bring about political conflict. People's tendency to readily adopt the opinions of their ingroups and reject those of the outgroup renders them, according to Madison and Schumpeter (as well as Plato and Aristotle), irresponsible evaluators of both policy and leadership. As we delved deeper, the fact that voters are unaccountable for their votes offers up a poor incentive to democratic participation.

In order to provide examples of how these institutions could be rejigged to positively manipulate incentives, I discussed the prospect of National Boards, which could take responsibility for key policy areas, such as education or healthcare, thus taking power away from those lacking the knowledge to effectively hold power to account. As long as political systems coax forth our inner partisans, the chances of us uncovering a truly meritocratic system of selection will remain slim.

Challenges

Regardless of whether my suggestions in chapter 11 have any practicable merit, I can't say that I'm all that optimistic. As Smilansky and others have discussed, the reality of diminished will is obscured by the illusory projection of free will our minds have evolved to cast. So in need of agency are we that, even if you can relinquish agency at an intellectual level, the many voices of instinct will inevitably undermine you in the heat of battle. This is why self-help is largely a myth. To understand

a thing is a far cry from incorporating into your character. It may feel wonderful to post a stoic meme on Instagram or engage in daily mindful meditation, but all that positive thinking goes out of the window when somebody bumps into you without apologising or the indifferent customer service lady on the phone won't pay out your insurance claim. Reason, for all its good intentions, is the slave of the passions, and the passions can't be reasoned with.

To deny yourself agency is not as simple as it sounds. You need the humility to be able to admit error (all the time), to cede power that you can't be trusted with and hand it willingly to those who can; the patience to forgive the many moral transgressions that occur in your vicinity on a daily basis; the compassion and empathy to understand why these transgressions happen in the first place. While we are all capable of Buddha-like moments, we are too inconsistent to walk the bridge between illusion and reality. And yet, maybe there's an outside chance that we can start consciously writing programs that make us more sensitive to those moments when a realistic recognition of diminished will would better guide our behaviour. In my experience, change is possible, but only begins in earnest upon developing a disgust for an aspect of one's character. Do any of your inner voices disgust you? Actually, don't answer that. I don't even want to know…

Applying this to systems, while many of us would claim to be disgusted by a certain facet of society, the disgust itself, as well as interpretations of causes and solutions, are blinkered by partisanship. As chapter 8's *perceived social hierarchy* model suggested, the extend to which we care about something is often a function of how much other people care about it. Ingroup support and, especially, outgroup opposition almost single-handedly shape our political views. We have reached the pinnacle of Liberal Democracy in which freedom of speech and free media are held as non-negotiable institutions to be protected by blood and sword. Yet, do the perverse effects of social media not cause us to pause and contemplate the trade-off? Are each of our opinions just as valid as others? We have a surplus of personal opinion swimming indiscriminately around us with no in-built mechanism to help us distinguish the good from the bad, relying, instead, on biased perception and inadequate processing capabilities. Freedom of speech hands the microphone to idiots and being an idiot is largely consequence-free, as long as there are enough idiots who concur, which partisanship ensures will usually be the case. Assuming the illusion of our own grandiosity is here to stay, the range of topics for which our opinion matters should be constrained. We all know this but, so far, we have been unable to come up with a way to fairly circumscribe limitations. What this book has attempted to do is to hold the problem, as I see it, up to your face, keep it there as it emits offensive odours, even lightly smear it from cheek to cheek, and force you to really, really think about yourself, and about what the environment brings out in you. You may not be able to do much about your triggers, or about those of others, but it is the environment that does the triggering.

[i] Damasio, 2010 p.41

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