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YOUR INNER SADIST: THE NEUROSCIENCE OF EVIL

On Hitler's brain, aggression and psychopathy

WHEN WE TALK about evil we tend to turn our attention to Hitler. This is perhaps unsurprising, as Hitler perpetrated many of the acts that we associate with evil, including mass murder, destruction, war, torture, hate speech, propaganda and unethical science. History, and the world, will forever be stained with his memory.

A nod to the pervasiveness of our automatic connection between general badness and Hitler is even reflected in everyday human interactions. In disparaging discussions, people who say or write things that others disagree with are often described as 'Nazis' or 'like Hitler'. Godwin's Law suggests that every online comment thread will eventually lead to a Hitler comparison. These in-passing comparisons

trivialise the atrocities committed, escalate discussion to a point of no return, and often effectively shut down conversation. But, I digress.

Because of the variety and depth of the devastation Hitler was both directly and indirectly responsible for, entire books have been written about his motivations, his personality and his actions. People have long wanted to know why, and how, he became the man we know from the dark pages of our history books. In this chapter, instead of dissecting the particulars of his actions, I want us to focus our attention on just one question: if you could go back in time, would you kill baby Hitler?

The answer to this one question tells me a lot about you. If you answer 'yes', then you probably believe that we are born with the predispositions to do terrible things. That evil can be in our DNA. If you answer 'no', then you probably have a less deterministic view of human behaviour, perhaps believing that environment and upbringing play a critical role in how we end up as adults. Or, perhaps, you said 'no' because killing babies is generally frowned upon.

Either way, I think that the answer is fascinating. I also think that it is almost certainly based on incomplete evidence. Because do you really know whether terrible little babies become terrible adults? And is your brain actually that different from Hitler's?

Let's do a thought experiment. If Hitler was alive today, and we put him into a neuroimaging scanner, what would we find? Would there be damaged structures, overactive sections, swastika-shaped ventricles?

Before we can reconstruct his brain, we need to first consider whether Hitler was mad, bad or both. One of the

first psychological profiles of Hitler was written during World War II. It is considered to be one of the first offender profiles ever, and was written by psychoanalyst Walter Langer in 1944 for the Office of Strategic Services,[1] a US intelligence agency and early version of what would later become the Central Intelligence Agency.

The report described Hitler as 'neurotic', that he was 'bordering on schizophrenia', and made the correct predictions that he was striving for ideological immortality and would commit suicide in the face of defeat. However, the report also makes a number of pseudo-scientific assertions that are unverifiable, including that he enjoyed masochistic sex (being hurt or humiliated) and had 'coprophagic tendencies' (the desire to eat faeces).

Another attempt at a psychological profile was published in 1998, this time by psychiatrist Fritz Redlich.[2] Redlich conducts what he refers to as a pathography – a study of the life and personality of a person as influenced by disease. In studying Hitler's medical history and the medical history of his family, along with speeches and other documents, he argues that Hitler showed many psychiatric symptoms, including paranoia, narcissism, anxiety, depression and hypochondria. However, although he finds evidence for so many psychiatric symptoms that he 'could fill a psychiatry textbook', he argues that 'most of the personality functioned more than adequately' and that Hitler 'knew what he was doing and he chose to do it with pride and enthusiasm'.

Would he have wanted to kill baby Hitler? Or would he have placed more importance on Hitler's upbringing? Redlich argues that there was little to suggest during childhood that

Hitler would become a notorious, genocidal politician. He argues that, medically speaking, Hitler was a fairly normal child, who was sexually shy and did not like torturing animals or humans.

Redlich also argues against the idea that little Hitler had a particularly troublesome upbringing, and criticises psycho-historians for assuming that he did. It seems that we cannot assume this to be the cause of his later behaviour, and the unsatisfying answer to whether Hitler was mad seems to be 'no'. It turns out that this is often the case. Just because someone has committed heinous crimes does not mean that they are mentally ill. To assume that everyone who commits such crimes is mentally ill removes personal responsibility from the perpetrators of such acts, and stigmatises mental illness. So, how are people like Hitler capable of such horrors?

Working towards a 'neuroscience of human evil', psychological scientists Martin Reimann and Philip Zimbardo came up with a different idea as to why we are capable of horrible acts. In their 2011 paper, 'The Dark Side of Social Encounters',[3] the authors try to establish what parts of the brain are responsible for evil. They state that two processes are most important – deindividuation and dehumanisation. Deindividuation happens when we perceive ourselves as anonymous. Dehumanisation is when we stop seeing others as human beings, and see them as less than human. The authors also explain dehumanisation as a 'cortical cataract', a blurring of our perception. We stop being able to really see people.

This is apparent when we talk about 'the bad guys'. The statement dehumanises. It assumes that there is some

homogenous group of individuals who are 'bad', and who are different from us. In this dichotomy, we, of course, are 'the good guys' – a diverse group of human beings who make ethically sound decisions. This dividing of the world into good guys and bad guys was one of Hitler's preferred approaches. Even more distressing was the development of the argument that those targeted were not even made up of 'bad people', that they were not even human. A dramatic example of dehumanising was seen in Hitler's genocidal propaganda, where he described Jewish people as *untermenschen* – subhumans. The Nazis also compared other groups they targeted to animals, insects and diseases.

More recently, the United Kingdom and United States have seen a string of vitriolic public statements about immigrants. In 2015, British media personality Katie Hopkins described migrants arriving in boats as 'cockroaches', a term that was publicly criticised by the UN's human-rights chief, Zeid Ra'ad Al Hussein. He retorted, saying, 'The Nazi media described people their masters wanted to eliminate as rats and cockroaches.'[4] He added that such language was typical of 'decades of sustained and unrestrained anti-foreigner abuse, misinformation and distortion'. Similarly, on 1 May 2017, the 100th day of his presidency, Donald Trump read aloud as part of a speech the lyrics of a song about a snake originally written in 1963 by Oscar Brown Jr.[5]

On her way to work one morning
Down the path alongside the lake
A tender-hearted woman saw a poor half-frozen
snake.

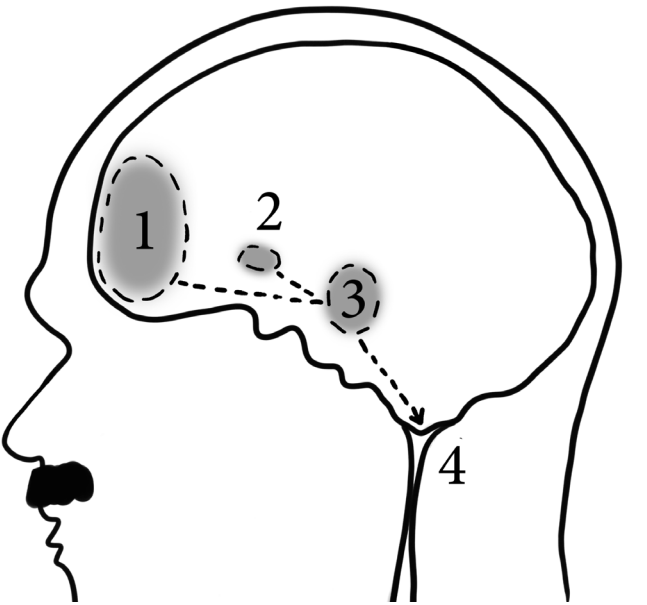
His pretty colored skin had been all frosted with the dew.
'Oh well,' she cried, 'I'll take you in and I'll take care of you.'
. . .
Now she clutched him to her bosom, 'You're so beautiful,' she cried,
'But if I hadn't brought you in by now you might have died.'
Now she stroked his pretty skin and then she kissed and held him tight
But instead of saying thanks, that snake gave her a vicious bite.

Trump uses the story as an allegory about the dangers of refugees. He is comparing refugees to snakes.

This kind of oversimplified grouping of an imagined enemy is echoed over and over in politics, partly because it is so catchy. With a bit of help from a leader and some inspiring rhetoric, harmful ideologies readily flourish. And, while we all sometimes fall into this trap, some of us are particularly prone to being influenced by such poisonous imagery.

This is where we really begin our imagined reconstruction of Hitler's brain. Given his particular propensity for dehumanising, the parts of the brain responsible for this may have been particularly affected. According to Reimann and Zimbardo, deindividuating and dehumanising 'could potentially involve a network of brain areas, including the ventromedial prefrontal cortex, the amygdala, and brainstem structures (i.e., hypothalamus and periaqueductal gray)'.

Helpfully, they provide an image of their model, which I have reconstructed for you.



Hitler's brain: the proposed pathway to evil, which involves the ventromedial prefrontal cortex (1), the amygdala (2), the brainstem (3) and central nervous system (4).

Their model suggests that what starts as a feeling of anonymity, of not being to blame for what we do because we feel like we are simply part of a larger group, ends with an increased ability to do harm to others. Here's how they propose evil works in the brain.

Deindividuation. The person stops thinking of themselves as an individual, and identifies as an anonymous part of a group. This leads them to feeling like they are not personally accountable for their behaviour. This is

related to a decrease in the activity of the ventromedial prefrontal cortex – vmPFC (1). Reducing the activity in the vmPFC is known to be linked with aggression and poor decision-making, and can lead to disinhibited and antisocial behaviour.

Dehumanisation. This decreased activity is accompanied by an increase in activity in the amygdala (2), the emotion part of the brain. This is linked to feelings such as anger and fear.

Antisocial behaviour. Then, these experienced emotions go via the brainstem (3) to trigger other sensations (4), like increased heart rate, blood pressure and gut feelings. These changes are essentially the body getting into fight-or-flight mode – anticipating bodily harm and getting ready to survive.

It is argued that this pathway is enhanced in those who have an underactive vmPFC, and has been seen repeatedly in studies of offenders. Research has shown that murderers and psychopaths in particular have decreased activity in the vmPFC. Just as an underactive thyroid means that your metabolism is defective and you are more likely to become overweight, it is thought by researchers, including Reimann and Zimbardo, that an underactive vmPFC means that your moral judgement is defective and you are more likely to commit crime and do other antisocial acts. As Reimann and Zimbardo summarise, 'Research on aggression suggests that decreased activation of frontal lobe structures, particularly the prefrontal cortex, or

lesioning of this brain area can be a central cause for aggression.'

If we were to peek into Hitler's brain, it would probably look normal at first, but when asking him to make moral decisions we might see an underactive vmPFC, combined with indicators of his general paranoia and anxiety. However, given that he did not have any major abnormalities or brain damage that we know of, it seems very unlikely that I could tell the difference between a scan of an average healthy brain and a scan of Hitler's. Knowing nothing about you, I probably would not be able to tell apart a scan of your brain and of Hitler's brain.

Instead of thinking of some people as particularly bad, and others as good, let's rethink this and flip the question: rather than asking if a few specific people are predisposed to being sadistic, we should ask: do we all have a sadistic predisposition?

EVERYDAY SADISM

According to a 1999 paper by psychological scientists Roy Baumeister and Keith Campbell, 'Sadism, defined as the direct achievement of pleasure from harming others, is the most obviously intrinsic appeal of evil acts.'[6] They argue that the existence of sadism makes other theories or explanations of evil obsolete – 'People do it because it feels good; enough said.'

Inspired partly by Baumeister's work, and further arguing that sadism is actually pretty normal, are Erin Buckels and colleagues.[7] In a paper published in 2013, they argue that 'current conceptions of sadism rarely

extend beyond those of sexual fetishes or criminal behavior . . . Yet enjoyment of cruelty occurs in apparently normal, everyday people . . . These commonplace manifestations of cruelty implicate a subclinical form of sadism, or, simply, *everyday sadism*.'

As part of her research Buckels and her team conducted two ingenious experiments. As they describe in their paper, 'Needless to say, it is not possible to study human murder in the laboratory. We therefore turned to a proxy behavior more amenable to ethical research, namely, killing bugs.' Needless to say, indeed. So, instead of asking participants to murder people, they asked them to murder bugs. Of course we all know that bugs aren't really a proxy for people – we have probably all killed bugs – but this task might still be able to tell us something about who is willing to be sadistic and who isn't.

How did it work? The researchers recruited participants for a study on 'personality and tolerance for challenging jobs'. Once they arrived at the lab, the participants got to choose to do one of four tasks that mirrored real jobs. They could either be an exterminator (kill bugs), an exterminator's assistant (help the experimenter kill bugs), a sanitation worker (clean toilets), or a worker in a cold environment (endure pain from icy water). The group they were most interested in were the participants who chose to be exterminators. This group was given a bug-crunching coffee grinder and three cups, each with a live bug.

What was particularly creative about this study was its design. According to the team, 'To maximise gruesomeness, we designed a killing machine that produced a distinct crunching sound. To anthropomorphise the victims, we gave

them endearing names.' The names were written on the side of the cups – Muffin, Ike and Tootsie.

Do you think you would choose to kill the bugs? To hear them get crushed alive, just because you had been asked to do so? In this particular study, just over a quarter (26.8 per cent) of participants chose to kill the bugs. The next question is whether you would enjoy killing them. According to the study results, the higher participants ranked on sadistic impulses, the more they enjoyed killing the bugs and the more likely they were to kill all three bugs rather than stop before their task was complete. These were normal people, many of whom took pleasure in killing the living critters.

A quick test: as I described the methodology, did you worry about the wellbeing of the bugs at any point? Maybe you were even chuckling away to yourself, thinking how much fun killing bugs is. Hmmm . . . you would probably score in the researchers' higher range of subclinical sadism. Luckily for Muffin, Ike and Tootsie, 'unbeknownst to participants, a barrier prevented the bugs from reaching the grinding blades'. The researchers assure us that no bugs were harmed in the making of this science.

The team also conducted a second, completely different, experiment. This one was all about hurting innocent victims. Here, participants played a computer game against an opponent who they believed to be another participant in a different room. They had to press a button faster than their opponent, and the winner got to 'blast' their opponents with a noise, the loudness of which the winner got to control. Half of the participants got to blast right away after winning, while others had to do a short but boring task before they were allowed

to administer the noise. The boring task involved counting the number of times a particular letter appeared in nonsense text. It was easy but tedious. Their imaginary opponent always chose the lowest blast level, so that there would be no need for retaliation.

Would you blast your opponent? How loud would you go? Finally, would you be willing to work for the opportunity to hurt them? The study results show that while many of us would be willing to hurt an innocent victim, only those who scored higher on sadism increased the sound once they realised that the other person did not fight back. Those were also the only people willing to do the boring task in order to hurt their opponents.

It appears that many 'normal' people are willing to be sadistic. The results led the researchers to argue that we need to get to know ourselves better if we want to really get an understanding of sadism. 'For the phenomenon of sadism to be fully addressed, its everyday nature and surprising commonness need to be acknowledged.'

What are the common characteristics of these kinds of sadistic behaviours? One common theme that appears is aggression. When you hurt something else, for example when you kill a bug, you are acting aggressively. Similarly, in order to get sadistic pleasure, it seems that most of the time one must first do something aggressive. So let's back it up a bit. What other kinds of aggression are there? Let's start with a type of aggression that you have probably felt but never understood: a weird feeling that you want to hurt tiny, fluffy animals.

CUTE AGGRESSION

One unexpected situation in which our sadistic tendencies seem to show themselves is in the presence of cute animals. Have you ever seen a puppy that was so adorable that you just couldn't handle it? Where you felt like you wanted to take your hands and squeeze its floppy little face *really* hard? Some animals are just so cute that we feel a bit like we want to hurt them. Kittens, puppies, baby quail, we want to squeeze them hard, pinch their cheeks, bite them, growl at them.

But why does this happen? Aren't psychopaths and serial killers known for hurting animals? Researchers assure us that most of us don't actually want to harm animals, so although it sounds sadistic, these emotions are not indicative of some deep, dark secret lurking inside you. You probably love Fluffy, and don't actually want to hurt him. However, this does not resolve the issue of why our brains tempt and torture us with a quasi-aggressive reaction. This feeling of wanting to hurt things that we find cute is so common that there is a term for it – 'cute aggression'.

Oriana Aragón and colleagues from Yale University were the first to study this bizarre phenomenon, publishing a paper about it in 2015.[8] They conducted a number of studies on the idea. Participants in one of their studies were shown pictures of cute animals and handed a large sheet of bubble wrap. 'We hypothesised that if people have the impulse to squeeze while viewing cute stimuli, and we provide them with both cute stimuli and something to squeeze, that indeed

they will squeeze.' Participants who viewed pictures of baby animals popped significantly more bubbles than those who saw pictures of adult animals.

The authors then wondered whether perhaps the aggression people felt would go away if the participants had something akin to an animal on their laps – something which would be an outlet for their feelings. For this, the researchers created a pillow 'made of extremely soft, silky fur material', and had half of their participants hold it while looking at cute pictures of animals. They reasoned that if provided with something to squeeze and caress, people might not have the aggressive emotions.

They found the opposite of what they were expecting. Participants showed more cute aggression because the researchers had 'added a tactile stimulus of cuteness'. They concluded that this may be indicative of what could happen if their participants had actually handled baby animals: 'When considering people handling actual small, soft, fluffy animals, [the added stimulus] may lead to an increase in these aggressive expressions.' In other words, seeing pictures of kitties online is squeeze-worthy, but handling them in person feels like it is *just too much*.

According to the research team, this also extends to babies. See how you respond to the following statements, which are from a longer list that Aragón and colleagues gave to their participants.

1. If I am holding an extremely cute baby, I have the urge to squeeze his or her little fat legs.
2. If I look at an extremely cute baby, I want to pinch those cheeks.

3. When I see something I think is so cute, I clench my hands into fists.
4. I am the type of person that will tell a cute child, 'I could just eat you up!' through gritted teeth.

If you agree with any of these statements, then you suffer from cute aggression not just towards kitties and puppies, but also to baby humans. This too can make for weird emotions, where parents might worry about their own feelings towards their children. (Why do I feel like I want to hurt my baby when I would never actually do her any harm?) It's one of many dark thoughts parents can have and don't want to share with anyone else, for fear of being labelled a bad parent, a bad person. But when this happens, don't be alarmed. This feeling seems to be quite normal, and isn't entirely surprising. Cute aggression is likely a by-product of an adaptive human characteristic. If we think something is cute, we generally want to keep it alive, we want to take care of it. This is probably also what has encouraged us to keep cute animals as pets in the first place.

This is particularly likely to happen when we see something that fits the 'baby schema' – large, wide-set eyes, round cheeks and small chins.[9] It doesn't matter if it's not actually a human baby, or even a real animal. We think cartoons are cute if they fit this schema, we can feel this about stuffed animals, and Google designed its first self-driving car to fit this format so that we would be less scared of the new technology.

In the cute-aggression research, the authors propose that because this cuteness creates in us such strong, positive feelings, our brains are overwhelmed by an expression of

care, which the brain tries to counteract with an expression of aggression. This happens because humans sometimes have 'dimorphous displays': we don't always respond to things with a single emotion, but with two emotions simultaneously. And these can consist of both positive and negative emotions that are all muddled up.

Dimorphous emotions happen when we feel so overwhelmed by emotion. Probably to avoid emotional overload that could cause harm to it, the brain throws in a counteracting emotion – like crying when we are really happy, or smiling at a funeral, or wanting to squeeze something we really care about. That means next time you want to squeeze a cute animal, it probably doesn't mean you are sadistic towards cute things, it is more likely to mean that your brain is overloaded and trying not to short-circuit.

Let's tie this back in with evil. Having a tendency to actually hurt fluffy animals or little babies is probably well within many people's conceptualisation of evil. But, loving them *so much* that your brain has to protect itself from exploding with joy? That probably isn't.

Speaking of aggression towards things we love, a target of mine is my significant other. I like to playfully slap him, squeeze him and annoy him. But at what point does this stop being cute and start being aggressive? Should I be worried? Should he?

It turns out that the term cute aggression might be a misnomer, not fitting with commonly accepted definitions of aggression at all. Cute aggression probably really isn't aggression at all, it just *looks* like aggression. This is even something the researchers who coined the term accepted. So if that isn't real aggression, what actually *is* aggression?

US-based psychological scientist Deborah Richardson has been studying aggression for decades. Together with Robert Baron, in 1994 she defined aggression as 'any behaviour directed toward the goal of harming another living being'. Aggression, they argue, has four necessary characteristics.[10] First, aggression is a behaviour. It's not a thought, idea or attitude. Second, aggression is intentional. Accidents don't count. Third, aggression involves wanting to harm. You need to want to hurt someone. Fourth, aggression is directed towards a living being. Not robots or inanimate objects.

As Richardson explains, 'Breaking a plate or throwing a chair to express general annoyance would not be aggression. Trying to hurt your mother by breaking her prized antique plate or throwing a chair *at* your friend in hopes of hurting him *would* be considered aggression.'

When we look past the playful, pseudo-aggressive behaviours we sometimes have in relationships to more serious aggression, the question becomes: why do we hurt the ones we love? Well, anger appears to be a key motivation. In a 2006 study on aggression towards loved ones by psychologists Deborah Richardson and Laura Green,[11] participants were asked to discuss their aggression towards a person with whom they had been angry in the last month. Thirty-five per cent stated they had been angry with a friend, 35 per cent with a romantic partner, 16 per cent with siblings and 14 per cent with a parent. The report also found that most of these people acted aggressively towards the people they were angry with. Our loved ones are easily accessible, often stir up strong emotions in us, and we are often dependent on them in some way.

This seems to be a potent mix for becoming the targets of our aggression.

For romantic partners specifically, motives for aggression and violence also include retaliation for emotional hurt, to get a partner's attention, jealousy and stress.[12] We hurt those we love for so many reasons. Some of those reasons are difficult, deeply rooted and hard to control. But there are a few things that we can control to reduce our likelihood of acting aggressively.

One may involve simply grabbing a snack.

According to a 2014 study by Roy Bushman and colleagues,[13] self-control requires brain food in the form of glucose (sugar). Because aggression can result from poor emotional and physical self-control, they wanted to explore the link between glucose and aggression. They asked 107 married couples to measure their sugar levels every morning before breakfast and every evening before bed for three weeks. The researchers also measured their aggression levels towards their partner by giving each participant a voodoo doll along with 51 pins, and telling them, 'This doll represents your spouse. At the end of each day, for 21 consecutive days, insert between 0 and 51 pins in the doll, depending how angry you are with your spouse. You will do this alone, without your spouse being present.'

The researchers also measured aggression at the end of the study by giving participants the ability to blast their spouse with a noise through headphones. The noise was specifically selected to be a mixture of sounds that most of us hate, including fingernails scratching on a chalkboard, dentist drills and ambulance sirens. According to the researchers, 'Basically, within the ethical limits of the laboratory, participants

controlled a weapon that could be used to blast their spouse with unpleasant noise.' Luckily for the spouses, and unbeknownst to the participants, the noise did not actually reach the spouses' ears, but was recorded by a computer instead.

Participants who had lower glucose levels stuck more pins into the voodoo doll and blasted their spouse with louder and longer noises. The researchers concluded that eating regularly and keeping up your glucose levels should help to reduce aggression and conflict in relationships. So, next time you feel like fighting with a partner, eat something first. Have a chocolate bar. Make sure you are actually angry and not just *hangry*.

Putting food aside, our style of aggression seems to also depend on our victim. In their study on aggression towards loved ones, Richardson and Green also found that 'when people are angry with a romantic partner or sibling, they are likely to confront them face-to-face. However, when people are angry with a friend, they are likely to avoid direct confrontation by delivering harm circuitously – for instance, by spreading rumors or talking behind his or her back.'[14] Clearly, aggression can take many forms.

Let's now pick apart the definition of aggression a bit further. What are the different kinds of aggression? In 2014 Richardson summarised over two decades of her own research on aggression.[15] She argued that there are three main types of aggression. The first, direct aggression, involves striking out with hurtful words or actions, for example by yelling at someone or hitting them. This can be picking a verbal fight with an intimate partner, mocking a friend to hurt them, or being hurtfully sarcastic. In more extreme forms, this can lead to intimate partner violence and assault.

The second, indirect aggression, is less obvious. Indirectly aggressive behaviours involve attempting to hurt someone by going through an object or another person. This can include actions like damaging someone's possessions or spreading rumours. Indirect aggression also includes the concept of social aggression, which is harming someone by damaging or disrupting their relationships.[16]

Finally, there is a third form of aggression. The third type is by far the most common, and it involves hurting someone by being non-responsive – passive aggression. For your own enjoyment I have the entire set of passive-aggression items from the revised Richardson Conflict Response Questionnaire.[17] I encourage you to use this as a moment of introspection. Think about someone you love. A parent, a sibling, a lover, a friend. Now think about your history with that person, and whether you have done any of the following in an attempt to hurt them, punish them or make them otherwise unhappy:

- Did not do what the person wanted me to do
- Made mistakes that appeared to be accidental
- Seemed uninterested in things that were important to the person
- Gave the person the 'silent treatment'
- Ignored the person's contributions
- Excluded the person from important activities
- Avoided interacting with the person
- Failed to deny false rumours about the person
- Failed to return calls or respond to messages
- Showed up late for planned activities
- Slowed down on tasks

If you said yes to any of these, then you have been passive aggressive to someone you love. With friends we may intentionally ignore an apologetic text message, with parents we may show up late to frustrate them, and with lovers we may withhold sex to punish them for perceived wrongdoing. Why do we do these things? One reason might be that this kind of behaviour is easy to deny. If you are found out and accused of being passive aggressive in an argument, it's the kind of behaviour where you might say 'What? I didn't *do* anything.' We can tell ourselves that, because this is aggression through inaction rather than action, we are blameless. In reality though, passive aggression can be just as harmful to relationships and the psychological wellbeing of others as the other types of aggression.

It seems that both sadism and aggression can be everyday emotions. But surely there must be a difference between someone who passively aggressively doesn't put the dishes away, and a person who spreads vicious lies, or someone who assaults people on street corners?

According to psychologist Delroy Paulhus and colleagues, 'In common parlance, aggression is a trait, that is, a stable and enduring style of thinking, acting, and feeling.'[18] A trait is when you say that someone *is* something: 'Sam is aggressive.' This means that in everyday conversations we often speak of aggression as something that is a fundamental part of a person.

But Paulhus and colleagues claim that aggression is not itself the underlying personality flaw. We may focus on aggression as a trait that makes us evil. But perhaps aggression isn't even a trait. It's simply a manifestation of various other traits, a collection of emotions and actions that result

from being human, and that everyone is capable of. Although we may not like to think of it this way, aggression is normal, not evil.

But some of us do have a cluster of personality traits that make us more likely to be aggressive. These traits are collectively known as the 'dark tetrad'.

THE DARK TETRAD

In a paper published in 2014,[19] Paulhus uses the phrase 'dark personalities' to refer to a set of socially aversive traits in the subclinical range. The traits are subclinical because the person does not meet enough of the criteria to be diagnosed with any of the disorders in a clinical setting (by a psychologist or psychiatrist). People with dark personalities are able to 'get along (even flourish) in everyday work settings, scholastic settings, and the broader community'. The 'dark tetrad' is a collection of such 'dark personality' traits, including psychopathy, sadism, narcissism and Machiavellianism.

When it comes to diagnosing people with personality disorders, researchers and clinical psychologists often talk about thresholds. For example, to be classified as being a psychopath you need to score at least 30 (or 25, depending on who you talk to) out of a possible score of 40 on the psychopathy checklist.[20] With this cut-off, anyone who scores 29 or lower is considered not to be a psychopath. However, as you can imagine, the difference between a score of 29 and one of 30 is mostly arbitrary, and the matter of much dispute among scientists. To deal with this, scientists have increasingly treated psychopathy as a continuum. Today,

scientists mostly want to know what happens as people score higher on psychopathy, not just whether they meet a cut-off. The same is true for sadism, narcissism and Machiavellianism. Within this research, one of the key questions has become: as people score higher on these measures, do they become more likely to hurt people?

Before I continue, I want to issue a warning. Research on each of these traits is compelling, but also fraught with problems. By using terms like 'dark' or even 'psychopathic' to describe human beings, we run the risk of dehumanising them. We also run the risk of accepting the idea that a certain person *is* bad. That wrongdoers cannot change because evil is in their DNA. It feels like medical monsterisation. So, approach the next section with caution, and resist the urge to think that those who have dark-tetrad traits are 'bad'.

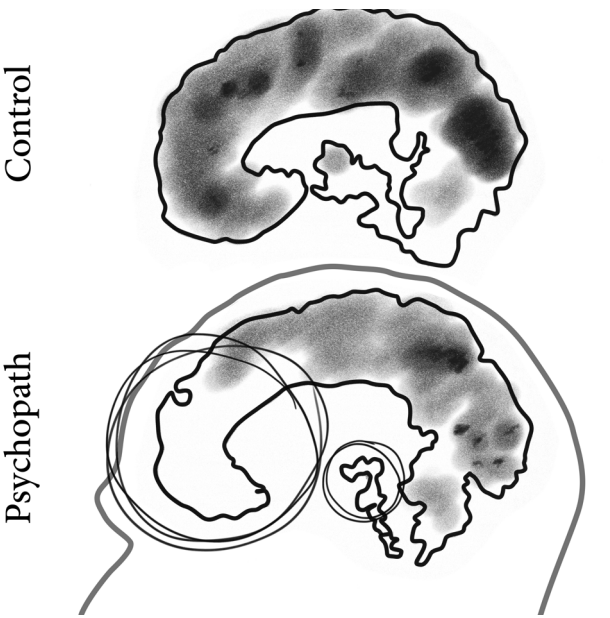
First up, we have psychopathy. In 1833 Dr James Prichard formulated an early version of what we now call psychopathy. He called it 'moral insanity'.[21] People diagnosed with moral insanity were thought to make bad moral judgements, but had no defects in their intelligence or mental health. Psychopaths, too, are often clever and sane, and are more likely to do things that are widely considered to be immoral. Today, the most commonly used definition of psychopathy comes in the form of the Psychopathy Checklist Revised (PCL-R).[22] The first psychopathy checklist was created in the 1970s by Canadian psychologist Robert Hare, as a more structured way for psychologists and researchers to diagnose someone as a psychopath. Based on the checklist, some of the defining features of psychopathy are: superficial charm, lying, lack of remorse, antisocial behavior, egocentricity and – most importantly – a lack of empathy.

Most would argue that the defining feature of psychopathy is the lack of empathy. A lack of empathy is strongly linked with crime. Such a diagnosis means that when the person commits crimes or breaks rules they aren't weighed down by things like remorse or sadness. Empathy really gets in the way of hurting people. Psychopaths can be particularly ruthless, and I have more than once heard them referred to by academics matter-of-factly as monsters. There seems to be the consensus that there are offenders and then there are psychopathic offenders. They seem to live in a separate, scary, category.

Is this empathy deficit rooted in the brain? According to a 2017 synthesis (a meta-analysis) of neuroimaging research on psychopaths, 'Recent brain-imaging studies suggest abnormal brain activity underlying psychopathic behaviour.'[23] It seems the brains of psychopaths are different from the brains of non-psychopaths. The article concludes that 'psychopathy is characterised by abnormal brain activity of bilateral prefrontal cortices [the front part of the brain] and the right amygdala [near the middle of the brain], which mediate psychological functions known to be impaired in psychopaths'. In other words, neither the decision-making part of the brain nor the emotional part of the brain are working quite right. Because of findings like these, some have argued that you could, at least partially, blame the brain when a psychopath makes the decision to commit a crime.

But, just like we could probably not look into Hitler's brain and spot a monster, we also could not look at the brain of a psychopath and say they are going to be aggressive. This is illustrated by the case of James Fallon. Fallon

studies the brains of psychopathic killers. After scanning the brains of many of his participants, he held in his hands the image of a clearly pathological brain. As it turned out, this brain was his own. 'I've never killed anybody, or raped anyone,' said Fallon in an interview in 2013. 'The first thing I thought was that maybe my hypothesis was wrong, and that these brain areas are not reflective of psychopathy or murderous behaviour.'[24]



The brain of a psychopath. Fallon's brain (bottom), viewed from the side, shows a lack of activity in the parts of the brain involved with empathy and making good decisions. It is a classic example of a psychopathic brain.

He then asked his mum about it, and found that hidden in his family tree were at least eight people who had probably

killed someone. Based on this, and after further research on himself, he accepted that he might actually be a psychopath. He labelled himself a 'pro-social psychopath', someone who has difficulty feeling empathy but behaves in socially acceptable ways. In 2015 he even published a book about it called *The Psychopath Inside*.[25] Not all psychopaths are created equal, it turns out, and certainly not all psychopaths are criminals. Even someone born with the brain of a killer might never kill anyone, although they are more likely to do so.

Second on our dark tetrad, we have narcissism. According to American psychological scientist Sara Konrath and her colleagues, 'Some individuals think they are great and special people who should be admired and respected by others. Such people are often called narcissists . . . The narcissistic personality is characterised by inflated views of the self, grandiosity, self-focus, vanity, and self-importance.'[26] So, how can we spot a narcissist? Konrath and her colleagues conducted eleven separate studies, and found that there is one very useful questionnaire that can help us identify a narcissist. Here it is:

The Single-Item Narcissism Scale (SINS)

To what extent do you agree with this statement: 'I am a narcissist'?

(Note: The word 'narcissist' means egotistical, self-focused, and vain.)

1	2	3	4	5	6	7
not very true of me						very true of me

That's the whole thing. If there were an award for shortest personality measure, this would win it. Why does it work? According to Brad Bushman, one of the co-creators of the scale, 'People who are narcissists are almost proud of the fact . . . You can ask them directly because they don't see narcissism as a negative quality – they believe they are superior to other people and are fine with saying that publicly.'[27]

While narcissists may believe themselves to be great, others do not always agree. Those of us who are high on narcissism are often seen to be arrogant, argumentative and opportunistic.

But it seems that not all narcissists are as fundamentally convinced about their own superiority as Bushman implies. Narcissism has been classified into two types, grandiose and vulnerable. While grandiose narcissists are seen as being show-offs, egotistical and assertive, vulnerable narcissists are seen as complaining, bitter and defensive. The vulnerability and particularly dislikable characteristics of the second group seem to come from not fully buying in to their own superiority.

Grandiose narcissists can be frustrating, but vulnerable narcissists can be dangerous. In 2014, Zlatan Krizan and Omesh Johar wrote about narcissistic rage – an explosive mix of anger and hostility.[28] Only vulnerable narcissism appears to be linked with this particular type of anger. The authors explain that over the course of their research they have found that 'narcissistic vulnerability (but not grandiosity) [is] a powerful driver of rage, hostility, and aggressive behaviour', and that this is 'fuelled by suspiciousness, dejection, and angry rumination'. This shows that those of us

who mask our insecurities with a façade of superiority are particularly at risk of doing harm to others.

Next on the dark tetrad we have Machiavellianism, which is the least well known of the tetrad traits. The name is based on the Italian Renaissance diplomat and writer Machiavelli, who, in his book *The Prince*, advocated that, to obtain their goals, some people are willing to use all means necessary. The ends justify the means, and it's fine if it involves manipulation, flattery and lying.[29] In their 2017 paper, Peter Muris and colleagues defined Machiavellianism as 'a duplicitous interpersonal style, a cynical disregard for morality, and a focus on self-interest and personal gain'.[30] Rather than lacking empathy like the psychopath, or feeling superior like the narcissist, this is a more functional social strategy. It's about power and personal gain.

Machiavellianism is typically diagnosed with a tool called the MACH-IV.[31] Muris and colleagues go on to explain that there are three parts of Machiavellianism: 'manipulative tactics (e.g., "It is wise to flatter important people"), a cynical view of human nature (e.g., "Anyone who completely trusts anyone is asking for trouble"), and disregard for conventional morality (e.g., "Sometimes one should take action even when one knows that it is not morally right")'. Ultimately, the idea is that someone who scores high on this trait is willing to do whatever it takes to achieve their goals.

Finally on the dark tetrad, we arrive back at the topic we've already discussed at length – sadism. This was a recent addition in 2013, and was actually a by-product of the bug-crushing study we discussed earlier (surely you remember Muffin, Ike and Tootsie?). It was after this series of everyday sadism experiments that Erin Buckels and her colleagues

proposed to change what was known as the 'dark triad' to the 'dark tetrad' (psychopathy, sadism, narcissism and Machiavellianism).[32] Darkness gained another dimension.

Those of us who score high on any one of these dark traits, but particularly those who are high on all of them, are far more likely to break society's rules. Dark tetrad does as dark tetrad wants. But is this always a bad thing?

THE GOOD SIDE OF YOUR BAD SIDE

Many of the traits that look exceptionally negative on the surface might have some value once we lift them up and actually inspect them. Research on the dark tetrad shows that these characteristics actually help some of us succeed. Our researcher with the brain of a psychopath, Fallon, claims that his psychopathy makes him more ambitious. Similarly, aspects of Machiavellianism, particularly the willingness to do whatever it takes to get to the top, may help someone to thrive in a corporate setting.

Along the same vein, in 2001 a paper was written entitled 'Is narcissism really so bad?' (which sounds *exactly* like a title a narcissist would choose).[33] In it, researcher Keith Campbell concludes that 'narcissism may be a functional and healthy strategy for dealing with the modern world. The notion that narcissists are fragile, depleted or depressed simply does not square with current research on normal samples.'

What about sadism? That's a bit more tricky. It seems to me that in the constant battle between our senses of morality, empathy and desire to survive, a bit of sadism may well have also been good for us. Getting some pleasure from cruelty

may have made it easier for us to kill animals, kill humans, or do other unpalatable things on which our survival depended. When empathy gets in the way of hurting others, sadism might help us do what we need to do.

Perhaps there is a good side to your bad side. Intuitively, however, it still feels as though there must be people, and acts, that are *unequivocally* evil. So far, we have not found them. From this chapter it seems that there is no such thing as an evil brain, an evil personality or an evil trait. We can hunt for them all we want, applying psychological tests and societal labels, but ultimately we find ourselves knee-deep in complicated and nuanced aspects of humanity. Even one of history's archetypes of evil, Hitler, was a human being with a neurological profile probably not as different from ours as we may wish to believe.

Throughout this book we will explore many aspects of human behaviour that have negative consequences, are at odds with our values, or are labelled evil. We will not shy away from that which makes us uncomfortable, and we will repeatedly ask ourselves one main question: 'Is it evil?'

As a kid I used to love the *Scooby-Doo* cartoons. Arriving in their 'Mystery Machine' van, the team of four kids and their talking dog would be summoned to find a monster who was terrorising a local neighbourhood. They would then run around looking for clues as to who the monster was, and at the end they would capture and unmask him. It was always some normal person in a costume. There were no monsters.

Like the Scooby crew, we may find ourselves inadvertently hunting for an easy fix, an easy excuse, an easy word – evil. But instead we will find that there are no simple explanations

for why humans do bad things, that there are many, and they are marvellously nuanced.

Although there may be differences between the brains of those who do 'bad' things and those who don't, acknowledging the similarities between us can be far more striking than aggressively highlighting the differences. It seems that for all of us, our brains make us capable of great harm. So, if it cannot be easily identified in the brain, what is it that stops many of us from acting out sadistic impulses? For example, what's the difference between you and a murderer? Well, to this issue we turn next.