Steven Pinker and the problem with rationality

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In 2016, the story went around Red America that Hillary Clinton was running a paedophile trafficking ring out of the basement of a pizzeria in Washington, DC. A warehouse worker named Edgar Welch decided to rescue the children, and drove 350 miles from North Carolina before bursting into the restaurant with a loaded assault rifle. But Welch was atypical. Millions of Donald Trump supporters who claimed to believe “Pizzagate” – which became part of the larger “QAnon” conspiracy theory – did nothing about it. One believer went no further than giving the offending restaurant a one-star review: “The pizza was incredibly undercooked. Suspicious professionally dressed men by the bar area that looked like regulars kept staring at my son and other kids in the place.”

Pizzagate – along with the antivax movement, climate denial and Brexit – is often cited as an example of the irrationality of modern societies. Steven Pinker, professor of psychology at Harvard and gifted intellectual populariser, wrote Rationality in part to fight this trend. He says he “knew of no book that tried to explain” the tools of reasoning, such as “logic, critical thinking, probability, correlation and causation”. Almost every sentence in Rationality is crisp and intelligible, which is quite a feat, given that explaining logic to humans is like teaching them Sanskrit. Pinker suggests various ways to run our collective affairs more rationally. And yet the book ends almost despondently. It’s not simply that most of us cannot think rationally. Worse than that: as Pizzagate suggests, much of the time, most people don’t want to.

Pinker is best known as the author of The Better Angels of Our Nature (2011), which argues that progress has actually happened. Over the centuries, humans have become more empathetic and less violent, and life today is safer and richer than ever before. He believes we owe these advances largely to the application of rationality. The invention within a year of multiple Covid-19 vaccines is a case in point. And yet we also have antivaxxers.

Much of Rationality reads like a course (the book grew out of one that Pinker teaches at Harvard) on how to be rational. He largely agrees with psychologists such as Daniel Kahneman and Amos Tversky that humans are misled by their cognitive biases. For instance, in our decisions we rely on the “availability heuristic”: how accessible a piece of information is to our mind. We don’t buy life insurance after actuarial analysis of the pros and cons, but because Joe of about our age suddenly keeled over last week. The availability heuristic leaves us vulnerable to persuasion by memorable stories.

Pinker rehearses most of the better-known cognitive biases – a vast field of modern psychology. Confession: I flunked most of his logic tests. However, he goes beyond exposing irrationality and suggests ways to overcome it. For instance, when trying to assess the probability of a given event, we should always keep in mind the base rates: how often such an event typically happens. If someone is diagnosed with breast cancer, what’s the chance she actually has the disease? Let’s suppose, says Pinker, that 1 per cent of women have breast cancer. Let’s say that tests accurately diagnose 90 per cent of cancers, but have a false positive rate of 9 per cent.

If a woman tests positive, the key is to remember the base rate: only 1 per cent of women actually have breast cancer. Pinker runs the numbers and shows that even after a positive test, the chance of someone having the disease is just 9 per cent.

Keeping base rates in mind is essential to gauging almost any probability. If someone reports a miracle, our base rate for proven miracles is zero per cent. Given that, what’s more likely, asks Pinker: “that the laws of the universe as we understand them are false, or that some guy got something wrong?”

The power of base rates also means that surprising new scientific findings will generally be false. After all, they contradict our stock of prior knowledge. Pinker writes: “‘Surprising’ is a synonym for ‘low prior probability’, assuming that our cumulative scientific understanding is not worthless.” Similarly, a political
pundit who predicts that the US is about to become a fascist dictatorship is more likely to be wrong than one who emphasises the base rate and says the US will probably remain much the same sort of state it has been for centuries.

Pinker runs through a helpful list of bogus arguments that we should learn to reject. There's the ad hominem argument ("you're a bad person, so what you say must be wrong"), the guilt by association argument ("you have dealt with bad people, so..."), the straw man ("Pinker says the world always gets better, but in fact..."), the affective fallacy ("your argument is hurtful to me, so it must be wrong"), or the bandwagon fallacy (Trump liked to launch a falsehood by suggesting its popularity, "a lot of people think..."). Pinker also wants us to discard "traditional ways of evaluating policies, like dogma, folklore, charisma, conventional wisdom, and 'Hippo' (the highest-paid person's opinion)". Instead, we should make more use of randomised control trials.

There are individual habits that can help us become more rational: seek to disprove your own arguments, and when the facts change, change your mind. But Pinker argues that rationality is best pursued by groups. "Most people know almost nothing," he notes, especially about science, so we need to outsource our truth-seeking to institutions such as academia, journalism or the law. Those autodidacts who take it upon themselves to discover the truth about climate change, ignoring everything the institutions say, usually end up missing something.

To encourage truth discovery, our institutions have inbuilt systems of disagreement: fact-checking and editing in journalism, the adversarial system in the courtroom, free enquiry in universities, peer review in science. These institutions also accumulate knowledge over time, and gradually tend to eliminate errors. Pinker, an old-fashioned liberal in the culture wars, gets worried when truth-seeking institutions malfunction. One of his big themes in recent years has been the decline of free speech in American academia. In Rationality, he complains about "the universities' suffocating left-wing monoculture, with its punishment of students and professors who question dogmas on gender, race, culture, genetics, colonialism, and sexual identity and orientation".

He also repeats his long-standing accusation against journalism: its focus on the exceptional, on the plane that crashes rather than the millions that don’t, or the vaccinated person who dies of Covid-19 rather than the millions who don’t. Journalism, he says, is "an availability machine". It "serves up anecdotes" that draw our attention to spectacular but unlikely risks. Uncomfortably for many of us liberals, one such risk is the chance that a black American will be killed by police. In the average year, writes Pinker, that happens to about 23 unarmed African Americans, "which is around three-tenths of 1 per cent of the 7,500 African-American homicide victims".

He urges journalists to privilege data over stories. In fact, that has started happening during the pandemic, which has doubled as the largest ever mass education programme in data literacy.

Pinker praises American journalism and social media platforms for their belated fightback against the Trumpian assault on reason. After Trump began lying about the "stolen" election, Twitter banned him and newspapers refused to repeat his false claims. It may be that the past two outlandish years will end up giving a long-term boost to rational norms.

Near the end of the book, Pinker abruptly stops explaining how to be rational and asks: "What's wrong with people?" This chapter, he says correctly, is the one "most of you have been waiting for". In it, he essentially asks: why are we so irrational? The latest case study: antivaxxers, who have pushed the death rate from Covid-19 in a state such as Florida higher than it was at any time before vaccines were invented. As so often when reading American non-fiction, in which the world is assumed to be the US writ large, one comes away slapping oneself on the back about how much less bad things are over here.

Pinker’s answer to the irrationality puzzle is that most people don’t particularly want to be rational. Far from seeking the truth, we usually just want to win the argument. Indeed, most leading Anglo-American politicians were selected chiefly for their argument-winning abilities. That’s why lawyers predominate among them in the US, and newspaper columnists in the UK. Our "my-side bias" means that we seize on every argument that favours our tribe and pooh-pooh any that seems to serve our opponents. Pinker paraphrases the psychologist Keith Stanovich: rather than living in a "post-truth" society, we live in a my side society.

We also use rationality much more when dealing with practical matters in our own lives than when thinking about the wider world. When people have to make decisions about their medical treatment, they tend to listen to their doctor. When choosing a mortgage, they run the numbers. In their personal realm, they know that rationality helps. But when evaluating whether Hillary Clinton might be running a paedophile ring out of a pizzeria, or whether God exists, rationality is a less useful tool. That's because outside your immediate environment, your world-view barely affects anything. Rather, its main purpose is to ingratiate you with fellow members of your tribe. And so, if you live in a community of Trumpians, the rational way to further your own purposes is to believe crazy shit.
Still, the distinction Pinker draws between our rationality about our own environment and our "mythological mindset" about more distant matters breaks down with the antivaxxers, who are now risking their lives for their beliefs. Some of them may be willing to die to avenge their lifelong humiliation at the hands of rational eggheads. "The brazen lies and conspiracies of Trumpian post-truth can be seen as an attempt to claim political discourse for the land of mythology rather than the land of reality," writes Pinker.

In any case, many people don't believe the anti-rational theories they spout. After all, notes Pinker, given the popularity of the Pizzagate story, why was Edgar Welch the only person who took it upon himself to save the children? The answer is that the others understood that Pizzagate was just a made-up, highly entertaining story that flattered their own side. The far-right QAnon conspiracy was a multiplayer game that gave participants a ready-made community and was too enjoyable to fact-check. Myths like these are a lot more appealing than rationality.

Rationality: What It Is, Why It Seems Scarce, Why It Matters

Steven Pinker

Allen Lane, 432pp, £25

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