

# WIRED

## What poker can teach us about navigating risk in a pandemic

*Humans are awful at assessing risk in the real world. But Maria Konnikova's dive into the world of professional poker gave her a new perspective on risk in the rest of her life*

23 November 2020

Rachel Pells

Humans are terrible at navigating risk. Just look at some of the things we choose to do with our time: we fly helicopters and drive motorbikes, despite the fact accidents happen every day. Around 20 per cent of adults smoke, despite being aware of the well-known links to cancer. During this year we've seen people shun masks, defy lockdown rules and pack themselves into bars despite the pandemic ranging around them.

Covid-19 has shown how, if ever there's a time when our attitudes towards risk need reprogramming, it's now. We see the dangerous effects of the virus, and break the rules anyway. But there might be a way to retrain our brains to think differently: by learning how to play poker.

It's a theory tried and tested by the writer and psychologist Maria Konnikova. A self-confessed hater of casinos, four years ago Konnikova had zero personal experience of poker ("I couldn't even tell you how many cards in a pack") but rose to success as a professional after conducting her own real-life experiment in learning how to play. The project was meant to last a year, with the end goal of taking part in the 2018 World Series of Poker championship – the biggest tournament in the world.

Her resulting book, *The Biggest Bluff: How I learned to pay attention, take control, and master the odds*, documents how that year didn't turn out to be a year, the end goal didn't turn out to be the end; Konnikova developed a love and a skill for poker, winning more than \$200,000 in tournaments. But she insists that the psychological benefits gained from the game were a far bigger win.

"Poker forces you to reexamine your preconceptions, to learn to get past them and to only make judgements based on data, not feelings or initial impressions – to go through the rational calculus we should be going through anyway, but don't because we're lazy," she explains. "Maybe those feelings or instincts will turn out to be accurate, maybe they won't – but in poker you can't use them unless you have the data to prove they're useful."

Konnikova first became interested in poker after coming across John von Neumann's *Theory of Games and Economic Behaviour*, considered to be the foundation textbook on game theory.

What Neumann said about poker intrigued her: "that the game is a one of incomplete information, a metaphor for life," she says. "He believed that knowing poker could help to find

that balance between skill and chance and that this was the key to strategic decision making; if you could solve decision making, you could solve life.”

Poker provides a unique crash course in critical thinking because it requires some degree of skill. Unlike other casino games, which rely solely on chance, poker is a magnet for fans of logic and reason for the fact it requires clear-minded strategy based on the information to hand – what the actions of others around the table tell you about the probability of them having good cards. As Konnikova puts it: “In poker you can win with the worst hand; you can lose with the best.”

The fact there is money involved is important – one bad decision could have an instant financial impact, a key incentive for players to make choices rationally. “In my personal life and my professional career, I can make excuses – the consequences are not so immediate,” says Konnikova. “In poker, that won’t fly. So it’s a great mechanism for encouraging assertiveness.”

In normal life, we are led by our emotions, but also by our experiences. “Our brains never evolved for understanding probabilities in any real sense, they evolved for avoiding any sort of risk that would potentially impact survival,” says Konnikova. If an early human saw a lion in a particular spot, they’d remember the fear and avoid going back there – the fact that the chances of them encountering another lion in exactly the same spot were tiny didn’t matter.

The same goes for our perception of terror attacks: those who lived through one will have an exaggerated view of how big a risk terror attacks really are. In fact, you’re much more likely to be killed by an animal: a calculation by Alex Nowrasteh at the Cato Institute estimated that the chance of US citizens being killed by an animal is around 1 in 1.6 million, while the odds of dying in a terrorist attack is closer to 1 in 30.1 million per year.

If we never experience something first-hand, we undervalue the risk. “This is known as the “description experience gap, and it's difficult to bridge,” says Konnikova. We’re living through it now with Covid-19: “You can tell people all these stats, and they think, ‘this doesn’t apply to me, because I don’t know anyone who got sick’. Right now we are seeing the mass casualty of the effect of our inability to understand risk and to understand what exponential growth means or how statistics work. And it's a huge hole in people's ability to think.”

The psychologist Ziva Kunda found this effect in the lab when she showed study participants an article laying out the evidence that caffeine could increase the risk to women of developing breast cysts. Most people said they found the article convincing – but women who drank a lot of coffee doubted its truth. Psychologists call this motivated reasoning: we listen to the evidence that tells us what we want to know already, and discard the rest.

Another human flaw that impacts our decision making is our addiction to positive outcomes – the insistence that luck can in some way be controlled, known as “gambler’s fallacy”. In a study by the Harvard University psychologist Ellen Langer, a group of students were asked to guess the outcome of a coin toss. How correct they were was reported back to them, and they were asked a series of questions: did they feel they were particularly talented at guessing? Could they improve on the task with fewer distractions or more practice? The answers should have been no – whether a coin lands heads up or tails is pure chance. Yet the students who happened to have

had a good run of guessed outcomes responded positively, believing that they had somehow performed well and that they could do even better with time.

It's a similar story for many games players who experience a lucky streak followed by a fall. We know that a coin toss has a 50/50 chance every time, and yet our brains try to spot patterns. This is not helped by our tendency to misperceive statistics. Most people, if told there was a one per cent risk of rain wouldn't bother to take an umbrella out the house with them – it feels impossible that it will rain at all. But skilled poker players read those percentages differently. “If I have a one per cent edge in a game, I'm ecstatic,” Konnikova says, “I want to play all the time, because over time that one per cent translates to lots of money for me. So when I see one per cent risk in something bad, I feel it's way too big. It's not an acceptable risk and poker players understand that in a way that laypeople don't.”

It's one of the reasons why she believes children should be taught to play poker in schools: “If you study and play thousands of hands you start to viscerally understand it. You know what five or one per cent feels like, because you see it playing out.” There are also negotiation skills to be learned: “In poker, position is power. When you act last, you have a huge advantage in terms of strategy because you get to see what everyone else does and you get to close the action. The other element of that is that information is power – nobody knows what cards you are holding.”

“That might seem obvious, but how many times in life do you just assume that people know that you're weak? You take it at face value that what other people are telling you is true. That they're stronger than you. That they deserve more money, the job, whatever it is.”

Women in particular can gain from this, she believes: “Poker has also helped me realise how many social stereotypes of how women should behave that I've internalised, and fight against them to become a more assertive, stronger version of myself than I ever had the guts to be before. More than anything else that I've done, poker has taught me to take less shit from people – and I think more women could learn from that.”