



Maria Konnikova won the 2018 PokerStars Caribbean Adventure National Championship.

What the world needs now: lessons from a poker player

One scientist's zero-to-hero journey into risk, uncertainty and delusional models. **By Liv Boeree**

If the mess of public confusion and poor leadership surrounding the coronavirus pandemic has taught us anything, it is how poorly equipped we are to navigate risk and uncertainty. No crisis in recent memory has better showcased our systemic educational failings. In my nation – the United Kingdom – the population is mostly unable to think probabilistically, and the media establishment thrives on certainty and punishes humility around knowledge. It's a familiar picture elsewhere in the world, too.

There has never been a more pressing need for digestible and coherent literature on rational decision-making. Enter *The Biggest Bluff*, psychologist Maria Konnikova's depiction of her journey into professional poker. What at first seems a light-hearted story about a curious academic dipping her toe into shark-infested waters delivers a crucial lesson in how to thrive in an increasingly misleading world.

Konnikova finds poker when a run of horrible luck in her family sends her on a mission to understand the nature of chance. That introduces her to the work of John von Neumann

– the founder of game theory. He loved poker for its practical, real-life applications, despite being a lousy player by all accounts. The game sits in a Goldilocks zone between the crisp, perfect information of chess (no hidden knowledge; best player almost always wins) and the mindless gamble of a roulette wheel. It involves just enough luck and just enough skill to resemble the messiness of reality.

As an astrophysics graduate who spent a decade playing poker professionally, I echo this sentiment. The game is a delicious mix of science and art. As Konnikova details, it demands quantified analysis and qualitative judgements, stress-testing players' reasoning



The Biggest Bluff:
How I Learned to Pay Attention, Master Myself, and Win
Maria Konnikova
The Penguin Press (2020)

in complex, high-pressure situations. It is a game of self-control and self-awareness, with a heap of Bayesian model-building thrown in.

And as *Nature* readers appreciate now more than ever, building models that extract meaningful signals from noisy data is tricky. Too specific and you might miss something key; too sensitive and your findings fail to replicate. The same is true in poker – you build mental models about each opponent and situation, with the added twist that the data are actively trying to deceive. “Why did his nostrils flare when that King hit?” “Why did he bet 80% of the pot instead of the usual 50%?” “Is he smiling because he’s happy, or just pretending to be? Or is it just because I’m the only woman in the room?” Each hand provides a barrage of information in which you must sort fact from fiction.

As in life, the most perfectly crafted models and strategies can fall apart when the going gets tough. Mindset is key, and Konnikova wisely dedicates much of her book to this. Drawing on her expertise as a psychologist and the wisdom of her poker mentor Erik Seidel (one of the game’s legends), she details what separates the best from the rest in a way reminiscent of Josh Waitzkin’s 2007 chess-for-life book *The Art of Learning*. For example, she advises that we evaluate success by the quality of our mental process during a situation, not just by the outcome.

Where chess lacks the randomness of real life, poker shows how easily randomness can delude. Winning a tournament requires plenty of skill, but an awful lot of luck, too – an inconvenient truth that it is tempting to downplay. I learnt this the hard way after my European Poker Tour victory, a success that bred a dangerous complacency in me. Why would a freshly crowned champion need to keep working hard on her game? Whether you’re a poker player or a scientist (or both), remember: the ego tends to ignore the luck factor in success.

A run of bad luck can be just as dangerous, demolishing self-confidence and making us change tactics when we don’t need to. Despite her clear aptitude, some crushing early losses almost see Konnikova abandon the game entirely. She helps the reader avoid the same pitfalls by sharing her mistakes and moments of self-doubt with stark honesty.

As someone who has read almost every piece of literature on poker, I can say that *The Biggest Bluff* is the best depiction yet of the game I love, and the invaluable thinking skills it teaches. This is not a book that will teach you how to play your Ace–Queen out of position against a laggy villain (although it will teach you what that means). But it will show you how to play the game of life more effectively. Konnikova’s is an uplifting zero-to-hero journey that will raise a smile in these trying times.

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