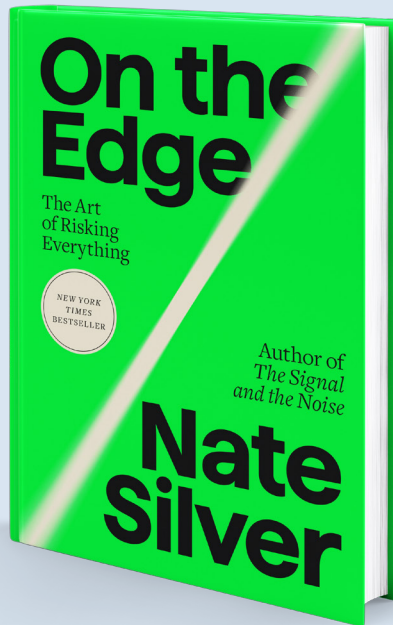


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On the Edge

The Art of Risking Everything

By Nate Silver

Nate Silver is the founder of FiveThirtyEight and the New York Times bestselling author of *The Signal and the Noise* and *On the Edge*. He writes the Substack “Silver Bulletin.”

A Book Review by Soundview

Mastering Risk to Shape Modern Life

In his book, *On the Edge: The Art of Risking Everything*, Nate Silver takes his considerable experience with predicting odds and gambling to help readers understand industries that rely on gambling. He then goes further to discuss how probability, risk-taking, and quantitative analysis affect people the world over when these are applied to practical issues like artificial intelligence and nuclear arms.

Possibly the most obvious industry Silver examines is that of casino gambling where he discusses probability and poker and other table games along with discussing the pitfalls and promises of slot machine gambling. He also goes into quite a bit of detail on sports gambling before heading into a detailed discussion on venture capital and Wall Street. Silver is not just interested in the tactics professionals in these fields employ. Rather he spends a considerable amount of time discussing the personality and character traits that draw people to these fields and help them be successful to greater or lesser degrees. As someone who has spent considerable time gambling with funds larger than many Americans will ever gamble with, Silver has an interesting perspective and ample insight into the world of probability and wagers.

Game Theory

Central to a discussion on gambling is an exploration of game theory. In one way game theory can be used to describe the mutually assured destruction that results when two major powers get nuclear weapons, such as the United States and Russia. Each country has the power to destroy the other completely, but both must refrain from doing so because should they launch an attack, they, in turn, will be destroyed by the enemy.

Game Theory is due, in large part, to John von Neumann. Game theory got its name because it was “inspired by the study of games” like poker that involve bluffing. A poker player must bluff at times because otherwise the “opponent has no incentive to pay you off when you have a good hand.” Game theory involves the behavior of “two or more agents... in situations where their actions dynamically impact one another. It seeks to predict the outcome of those interactions, and to model what

strategy each player should employ, to maximize their expected value while accounting for the actions of other players.” Game theory pertains to “the equilibrium that emerges when everyone pursues their best strategy.”

Important to game theory is the idea of a focal point. With a focal point, players can benefit from cooperation. In situations like this, multiple players benefit as opposed to a zero-sum game where only one can win. The aforementioned nuclear situation is an example of such compromise that benefits all parties.

The Importance of Physiological Cues

While understanding game theory is important, it is also important for a gambler to understand their own and others’ physiological cues, psychological states, and tells. Silver Talks about a time when he was playing in a particularly high stakes game. He believed that because he was experienced and skilled that he would be able to calm his physiological response. He was distraught to find that this was not the case. During his next game, he feared that this heightened response would again return, but it did not. This is because the stakes in the next game were not as high. It appeared that no matter what his mind focused on, his body understood the stakes involved.

Eventually Silver learned that this was not unique to him or to gambling. In many high stress fields, practitioners’ physiological responses are high even when they don’t want it to be. This is not a weakness, he learned. It is just a sign of the wisdom of the human body. Because of the body’s wisdom, it is important for gamblers to tap into those physiological responses that may be alerting them to information their psychology and empathy can not pick up on. These physiological responses can be correct even when an individual does not understand them. This does mean that psychological analysis and reading tells are not important for poker players. Silver just wants his reader to ensure that any analysis of such involves an exceptionally large sample size to mitigate the chance of error.

The Psychology of Gamblers and Gambling Institutions

Silver then turns his attention to the history of Las Vegas and the gambling industry which can give insight into those who wager sums there of all sizes. Many decades ago people arrived in the region with the hopes of gaining riches during the Gold Rush. These people were looking to make money and were willing to travel large distances in order to do so. In addition, many of these people were men who were either single or who were great distances from their families. This made them ready participants for the gaming industry as they attempted to prove themselves out West. As such, the gambling industry became associated with the region because it had ample players.

Laws and regulations ebbed and flowed throughout the years. These days, casinos could very easily cheat without getting caught, but Silver explains how it is not in their best interest to do so. He refers back to gaming theory to explain why. If a casino could make more money cheating its customers, then

competing casinos could do the same as well, eliminating any advantage they gained while alienating customers. Because of this, it is in all casinos’ best interest to play fairly to keep those around them doing the same. In addition, millions and sometimes billions of dollars went into building these gambling establishments, and organizations do not want to risk losing that money if regulations should tighten because of suspected malfeasance or should sentiment turn away from the institutions. Today’s institutions cater to all walks of life from high rollers to working and middle class people, the latter two of whom gravitate more towards slot machines than to poker tables.

Sports Gambling

Silver then turns his attention to sports betting in his chapter on competition. Despite the possibility of earning money in this type of gambling, there are multiple drawbacks to gambling on sports. One of the drawbacks is that with many of the online gaming sites, when a person proves they can win a significant sum of money, they may be limited to the amount of money they’re allowed to bet. Alternatively, the online platform may stop them from betting altogether. The platforms do not want to needlessly lose money, and they have the wherewithal to make sure that this does not happen.

To get around platform restrictions, some gamblers hire whales to place bets for them. This goes against the rules of most online gaming platforms, and as such, precautions have to be taken so that the whales themselves do not get limits placed upon them on the platforms. Silver further notes that it is not unheard of for a gambler to be prosecuted harshly for breaking gambling laws.

Silver writes about the difficulty he had when he was involved in sports betting because of its all consuming nature. He would check on his sports first thing in the morning and before going to bed every night as well as throughout the day. In short, he was consumed with the world of sports. He does not know if he crossed over into gaming gambling addiction at this point, but he doesn’t rule out the possibility. Gambling of all sorts can be addictive, and sports gambling is definitely not immune to this.

Risk Takers

Between the first part of his analysis, and the second author, Silver, takes a break in what he labels, his halftime chapter. In this chapter, he looks to physical risk takers such as astronauts and explorers to see what they have in common with gamblers. From these physical risk takers, Silver is able to glean lessons that risk takers of all stripes live by. One of these is that risk takers have to be willing to actually take a risk. He talks about mRNA researcher who joined a small startup company that was performing this type of research so that she could pursue the field that she wanted to. She knew her career would run its course if she were to develop the technology herself, so she teamed up with others who were already in the process. She took the risk. Another trait of takers is that they are willing to put in the time to practice. To illustrate this, he points to Michael Jordan who spent countless hours practicing shots. Silver also writes about the importance of being conscientiously contrarian. By this, he means that risk



Silver also writes about the importance of being conscientiously contrarian. By this, he means that risk takers must not be afraid to stand apart from the crowd and be different.

takers must not be afraid to stand apart from the crowd and be different. He explains that when he argues on the Internet, his purpose is to be accurate and to eventually be proven right. He believes this is different from many other peoples objectives and because of this he's often able to achieve what he wants to, to win the argument. His goal is to be the best.

Silicon Valley and Wall Street

In Chapter 5, Silver takes a closer look at both Wall Street and Silicon Valley and what makes these two institutions successful and also what occasionally puts them at odds with each other. Silver believes that Silicon Valley has a better “capacity for abstract, analytical reasoning” while “Wall Street is more explicitly quantitative than Silicon Valley.” Still, when it comes to personality cluster traits such as “competitiveness, risk tolerance, [and] independent-mindedness,” Silicon Valley leads Wall Street by a large margin.

Silver sees Silicon Valley as having “two essential traits.” The first is “a very long time horizon.” This goes against the capitalist tendencies of many Americans who most desire quick returns. It also provides challenges since it is easier to determine short term odds rather than long term. It is people who are in it for the long game that can win the most when it comes to Silicon Valley. The second trait particular to Silicon Valley is that “it offers asymmetric odds that reward taking chances on upside risks.” This can be problematic when much of the money on the line does not come from those taking the risks. This also creates a “winner-take-all-economy” where the venture capital community is extraordinarily small.

Many people have difficulty making bets that are likely to fail, but many in Silicon Valley are able to “pull the trigger on investments” even though they may be likely to fail. Silver talks about people he describes as foxes. These people hold a cluster of traits including a tolerance for risk, adaptability, and being empirically minded while also being willing to act on incomplete information. These same people are often good at forecasting. Silver believes Silicon Valley is successful because “it marries risk-tolerant VCs like Moritz with risk-ignorant founders like [Elon] Musk.” Despite Silver’s sympathy for Silicon Valley, Silver also believes many of the Valley’s critiques such as its overstatement of its contrarian nature and possible discrimination against women, Black people, and Hispanic people.

Quantifying Decisions

Silver ends his chapter on quantifying decisions and effective altruism by stating that when “near infinite amounts of value”

are on the table, then what could possibly be off the table. He describes effective altruism as a “way of thinking about the world - quantifying hard-to-quantify things, engaging in cost-benefit analysis in situations where people might not think to apply it.” He claims that this is relevant to a book on risk because utilitarianism, the pursuit of “the greatest amount of good for the greatest number” is itself an issue prone to mathematical representation, and as such, is a topic of interest to people prone to quantitative thinking.

Oftentimes the questions at stake are of particularly high risk. An example of this is the allocation Congress made of \$2 billion in 2022-23 to prevent pandemics. They made this calculation despite the enormous price in human life and in money (approximately \$14 trillion) that Covid cost. This is described as a failure of the establishment in light of the risks and, because of the common nature of such failings, is the reason people of means are at times interested in risk and reward when it comes to such issues.

Issues of altruism can be looked at on grand scales such as Congressional budget allocations and nuclear proliferation, but it can also be used to discuss moral dilemmas faced on a more personal level. A theoretical example of this is the trolley problem. If numerous people are going to die in a trolley accident unless you pull a lever that would divert the trolley and kill a trolley worker down the track, should you pull the lever? Many people believe they should because more lives will be saved in this manner. The issue becomes cloudier for many people, however, when it is not a trolley worker on the track who will lose his life but rather is a mother and a child. Such decisions require the calculation of risk and reward just as questions around a poker table do, and as such, people interested in one are often interested in the other.

These questions are not just theoretical. The Covid pandemic demonstrated how everyday people have to make decisions involving risk and reward. During the pandemic, people had to weigh the benefits of social interaction with the risks of Covid exposure. The author gives an example of a single mother who is also an essential worker. She could choose to send her child to daycare, greatly increasing her child’s risk of exposure to Covid. The mother could instead have an elderly relative watch the child. This would decrease the child’s exposure to Covid, but it would increase the elderly relative’s exposure to the virus, and this relative would be much more prone to severe illness should she acquire it. In addition, the mother could choose to quit her job, isolate herself and her child, and risk losing her home should she not be able to find a job where she could work from home. These questions of quantification are not only relevant to gamblers. As this example shows, such issues of moral philosophy are relevant to the lives of everyday people in pedestrian

situations. Still, the money and influence that the elites have can make their decisions have far reaching impacts.

Implications for the Rest of Us

Estimations of value, risk, and altruism by those with means and power are of concern to all people, and this is seen, in particular, in a discussion of artificial intelligence. Silver notes the different opinions people have of AI, including those who believe that it is highly likely that AI will bring about the ruin of humankind. While people argue about the risk, most people assume that there is at least some risk posed by artificial intelligence. The level of risk acceptance and aversion of those with the power to direct AI is of import to all of humanity especially because there are some who believe that if there is a possibility of great improvement in the lives of humanity, then great risk in the attainment of those improvements is acceptable, even if that risk is total annihilation of humanity. The question arises as to who gets to make that decision for all of humanity, and if anyone, indeed, should have that power.

Silver goes on to discuss some of the dangers AI presents. He explains that the scientific community does not understand exactly how AI knows much of what it does. People cannot understand if AI is getting close to thinking like actual humans because there is only so much the scientific community knows about how the human brain works. Could artificial intelligence start acting on its own in ways that go against the desires of humanity? The odds of such an occurrence cannot be known nor could the potential outcomes be inferred. Still, nobody knows whether the outcomes of AI could be catastrophic, extraordinarily positive, or somewhere in the middle. Silver, himself, does not believe the pursuit of AI should be altogether stopped.

Nuclear deterrence is another area where probability and risk are involved. Silver brings up a scenario whereby Russia bombs the United States with nuclear weapons. Very few people stand a chance at survival. The question then for the president hiding in a bunker is whether or not to retaliate and kill Russians in turn. There is not much benefit for anybody living in the United States as their death is all but assured. Therefore, to send the nuclear bomb would be purely an act of revenge. Silver believes that upwards of 90% of people would choose to bomb Russia in this situation, and he claims that this is a good thing. Without this willingness, nuclear weapons would not act as a deterrent. The weapons only stave off nuclear war because of the threat of retaliation.

In Conclusion

Silver starts out his book with a discussion of the River and the Village. The River consists of the risk-takers in the world, people like himself and Elon Musk. These are people who want to push the envelope forward and who want to win big. On the other hand is the Village. Members of the Village are members of society's entrenched institutions such as the government. The Village is much more conservative and finds itself at odds with the River at times. Throughout his book, Silver attempts to explain the thought processes of the River to help the un-

initiated understand risk and probability but also to advocate for the strengths of those in the River while explaining some of their weaknesses. Silver uses examples from the real world and delves into such complex issues as artificial intelligence and nuclear war. The beginning of his book explains gambling and risk taking and the theories that underlie these domains while his later chapters explain how these gambling principles affect people throughout the world, effectively bringing the thought and philosophy of the River to readers and the world at large.