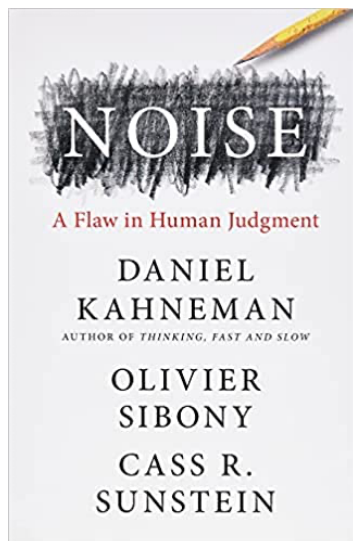


Noise: A Flaw in Human Judgment

By Daniel Kahneman, Olivier Sibony, and Cass R. Sunstein

Little, Brown Spark, 2021, 386 Pages



Summary

This book is a deep, detailed dive into the science behind decision making. It focuses on how decisions and judgment are made, what influences them, and how better decisions can be made. It utilizes math, case studies, and research to prove that noise, the things that make decisions difficult, is a primary influencer in the decision-making process.

Best illustration

There are many illustrations in this book. In chapter 20, the authors describe fingerprinting errors made by forensic experts. By pushing the same fingerprint through the evaluation process twice (unbeknownst to the experts) they found bias. Sometimes, methods were used to influence the forensic expert (for example, suggesting that the suspect had an alibi). Whereas we may see fingerprint matching as a scientific process, this study revealed massive bias and illustrates the need to reduce bias in decision making.

Best Idea

The authors repeatedly and effectively pound home their argument, “wherever there is judgment, there is noise—and more of it than you think” (Kindle location 194). This thesis is carried through every chapter.

Best Take Away

The final chapters of the book describe methods that can be used to reduce noise in decision making processes. Two primary prescriptions are to allow outsiders to view the decision-making process to offer observations about noise they see. The other is to create systems that screen out bias (for example, fingerprint forensic experts should not be exposed to the case files of the people they are making judgments about).

Our Recommendation

This is a serious investigation of noise in making judgments. It is for readers who want mathematical equations, detailed parsing of ideas and categories of decisions, and complex explanations to complex problems. It achieves its goal admirably but if you are looking for an introduction to bias in decision-making, this book is not for you.

Best Quotes

"Our topic is human error. Bias and noise—systematic deviation and random scatter—are different components of error. The targets illustrate the difference." Kindle location 89

"Some judgments are biased; they are systematically off target. Other judgments are noisy, as people who are expected to agree end up at very different points around the target. Many organizations, unfortunately, are afflicted by both bias and noise." Kindle location 92

"A general property of noise is that you can recognize and measure it while knowing nothing about the target or bias." Kindle location 98

"To understand error in judgment, we must understand both bias and noise." Kindle location 106

"But in public conversations about human error and in organizations all over the world, noise is rarely recognized. Bias is the star of the show. Noise is a bit player, usually offstage. The topic of bias has been discussed in thousands of scientific articles and dozens of popular books, few of which even mention the issue of noise." Kindle location 106

"Wherever you look at human judgments, you are likely to find noise. To improve the quality of our judgments, we need to overcome noise as well as bias." Kindle location 137

"Occasion noise is the variability in judgments of the same case by the same person or group on different occasions. A surprising amount of occasion noise arises in group discussion because of seemingly irrelevant factors, such as who speaks first." Kindle location 145

"judgment is difficult because the world is a complicated, uncertain place." Kindle location 317

"System noise, that is, unwanted variability in judgments that should ideally be identical, can create rampant injustice, high economic costs, and errors of many kinds." Kindle location 322

"efforts at noise reduction often raise objections and run into serious difficulties. These issues must be addressed, too, or the fight against noise will fail." Kindle location 326

"A noise audit—like the one conducted on federal judges with respect to sentencing—is a way to reveal noise. In such an audit, the same case is evaluated by many individuals, and the variability of their responses is made visible." Kindle location 374

"One senior executive estimated that the company's annual cost of noise in underwriting—counting both the loss of business from excessive quotes and the losses incurred on underpriced contracts—was in the hundreds of millions of dollars." Kindle location 392

"A defining feature of system noise is that it is unwanted, and we should stress right here that variability in judgments is not always unwanted." Kindle location 400

"Variability in judgments is also expected and welcome in a competitive situation in which the best judgments will be rewarded." Kindle location 406

"A frequent misconception about unwanted variability in judgments is that it doesn't matter, because random errors supposedly cancel one another out." Kindle location 427

"Most organizations prefer consensus and harmony over dissent and conflict. The procedures in place often seem expressly designed to minimize the frequency of exposure to actual disagreements and, when such disagreements happen, to explain them away." Kindle location 469

"Bad judgment is much easier to identify than good judgment." Kindle location 479
"the amount of noise observed when an organization takes a serious look almost always comes as a shock." Kindle location 484

"From the perspective of noise reduction, a singular decision is a recurrent decision that happens only once. Whether you make a decision only once or a hundred times, your goal should be to make it in a way that reduces both bias and noise." Kindle location 554

"Judgment can therefore be described as measurement in which the instrument is a human mind." Kindle location 568

"Many professional judgments are nonverifiable." Kindle location 673

"Verifiable judgments can be scored by an objective observer on a simple measure of error: the difference between the judgment and the outcome." Kindle location 698

"System noise is inconsistency, and inconsistency damages the credibility of the system." Kindle location 758

"bias and noise are interchangeable in the error equation, and the decrease in overall error will be the same, regardless of which of the two is reduced." Kindle location 886

"Level noise is variability in the average level of judgments by different judges. Pattern noise is variability in judges' responses to particular cases." Kindle location 1,093

"Measuring occasion noise is not easy—for much the same reason that its existence, once established, often surprises us." Kindle location 1,137

"There is another, less direct way to confirm the existence of occasion noise: by using big data and econometric methods." Kindle location 1,149

"Vul and Pashler drew inspiration from the well-known phenomenon known as the wisdom-of-crowds effect: averaging the independent judgments of different people generally improves accuracy." Kindle location 1,163

"Averaging two guesses by the same person does not improve judgments as much as does seeking out an independent second opinion." Kindle location 1,177

"The upshot for decision makers, as summarized by Herzog and Hertwig, is a simple choice between procedures: if you can get independent opinions from others, do it—this real wisdom of crowds is highly likely to improve your judgment. If you cannot, make the same judgment yourself a second time to create an 'inner crowd.'" Kindle location 1,194

"Even moral judgments are strongly influenced by mood." Kindle location 1,239

"We have described these studies of mood in some detail because we need to emphasize an important truth: you are not the same person at all times." Kindle location 1,251

"Noise in individual judgment is bad enough. But group decision making adds another layer to the problem." Kindle location 1,322

"Members are often in a position to offer the functional equivalent of an early up vote (or down vote) by indicating agreement, neutrality, or dissent. If a group member has given immediate approval, other members have reason to do so as well. There" Kindle location 1,393

"He reached the strong conclusion that simple mechanical rules were generally superior to human judgment." Kindle location 1,608

"How much accuracy is lost when the model replaces the judge? The answer may surprise you. Predictions did not lose accuracy when the model generated predictions. They improved." Kindle location 1,672

"In predictive judgments, human experts are easily outperformed by simple formulas—models of reality, models of a judge, or even randomly generated models. This finding argues in favor of using noise-free methods: rules and algorithms," Kindle location 1,728

"The loss of accuracy in cross-validation is worst when the original sample is small, because flukes loom larger in small samples." Kindle location 1,778

"What AI does involves no magic and no understanding; it is mere pattern finding." Kindle location 1,836

"Research in managerial decision making has shown that executives, especially the more senior and experienced ones, resort extensively to something variously called

intuition, gut feel, or, simply, judgment (used in a different sense from the one we use in this book)." Kindle location 1,939

"Tetlock's key finding was that in their predictions about major political events, the supposed experts are stunningly unimpressive." Kindle location 1,992

"The average expert was roughly as accurate as a dart-throwing chimpanzee." Kindle location 1,993

"The ability to make a prediction is a measure of whether such a causal chain has indeed been identified. And correlation, the measure of predictive accuracy, is a measure of how much causation we can explain." Kindle location 2,153

"We must, however, remember that while correlation does not imply causation, causation does imply correlation." Kindle location 2,160

"because of confirmation bias and desirability bias, we will tend to collect and interpret evidence selectively to favor a judgment that, respectively, we already believe or wish to be true." Kindle location 2,389

"People may differ in their judgments, not because they disagree on the substance but because they use the scale in different ways." Kindle location 2,675

"Common sense suggests that while behavior may be driven by personality, it is also strongly affected by situations. In some situations no one is aggressive, and in other situations everyone is." Kindle location 2,937

"Training, experience, and confidence enable respect-experts to command trust. But these attributes do not guarantee the quality of their judgments." Kindle location 3,217

"Now imagine a decision observer, someone who watches this group and uses a checklist to diagnose whether any biases may be pushing the group away from the best possible judgment." Kindle location 3,399

"Similarly, following the principles of decision hygiene means that you adopt techniques that reduce noise without ever knowing which underlying errors you are helping to avoid." Kindle location 3,437

"71% agreed that 'cognitive bias is a cause for concern in the forensic sciences as a whole,' but only 26% thought that their 'own judgments are influenced by cognitive bias.'" Kindle location 3,620

"In short, what distinguishes the superforecasters isn't their sheer intelligence; it's how they apply it." Kindle location 3,779

"In medicine in general, guidelines have been highly successful in reducing both bias and noise." Kindle location 4,072

"Some evidence suggests that 360-degree feedback is a useful tool in that it predicts objectively measurable performance. Unfortunately, the use of this feedback system has created its own problems." Kindle location 4,145

"If you are unfamiliar with research on the employment interview, what follows may surprise you. In essence, if your goal is to determine which candidates will succeed in a job and which will fail, standard interviews (also called unstructured interviews to distinguish them from structured interviews, to which we will turn shortly) are not very informative. To put it more starkly, they are often useless." Kindle location 4,284

"There are widespread fears that algorithms will in fact have that discriminatory consequence, which is undoubtedly a serious risk." Kindle location 4,782

"These examples and many others lead to an inescapable conclusion: although a predictive algorithm in an uncertain world is unlikely to be perfect, it can be far less imperfect than noisy and often-biased human judgment." Kindle location 4,815

"In business and in government, the choice between rules and standards is often made intuitively, but it can be made more disciplined. As a first approximation, the choice depends on just two factors: (1) the costs of decisions and (2) the costs of errors." Kindle location 5,094