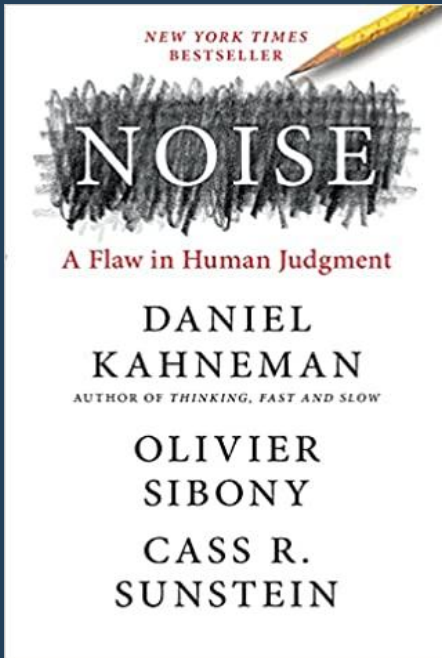# Noise: A Flaw in Human Judgment

Year of publication: 2021
Authors: Daniel Kahneman, Olivier Sibony, Cass R. Sunstein
464 pages

Have you ever wondered how much noise is affecting your company's decisions?

You may not be familiar with this concept yet, but you should know that noise can cause a great loss to your business.

Daniel Kahneman, Olivier Sibony, and Cass R. Sunstein address in this book two types of errors in judgment that can negatively interfere with our decisions, bias and noise.

Both types of errors in the decision-making process can impact your company not only financially, but also in the way that it is perceived by others in the market.

Main ideas of the book

To overcome flaws in human judgment, the authors Kahneman, Sibony, and Sunstein present:

* The difference between noise and bias;
* The main cause of noise;
* How to recognize noise to overcome it;
* How to improve our judgments;
* How to prevent errors that can be caused by judgments.

To whom is this book indicated?

The book "Noise: A Flaw in Human Judgment" is indicated for leaders and managers who want to eliminate the noise and bias that affect human judgment, consequently optimizing decision making fairly and effectively.

Overview of the book

How to find noise?

The sentence that could best describe the first part of the book "Noise: A Flaw in Human Judgment" is:

"Wherever there is judgment, there is noise—and more of it than you think."

Perhaps you are still wondering what noise is and how it can affect your business. Well, the authors define noise as an unwanted variability in judgment that can cause great economic loss and injustice.
In the book, judgment is a conclusion that can be summarized in a word or phrase. Judgment is the result of our deliberations.
That way, it is important to know that any decision you make in your company, even the exceptional ones, is just one resolution among many other possibilities.
Therefore, Kahneman, Sibony and Sunstein claim that in a company whose guidelines have a good foundation there should be no noise and no bias. Bias, in this book, is defined as the average of the errors found in a judgment.
The authors also emphasize that, even though they mention noise in opposition to bias, their focus is on noise.

Understanding Noise

Imagine that a person was convicted of a federal bank robbery and the sentence can range from 0 to 25 years in prison. What do you think would be the starting point for sentencing this person?
In 1970, Marvin Frankel noticed a great deal of noise in the judicial system and realized that the sentences given depended more on the judge's predilections than on the crime itself. Considering this, one bank robber could receive 5 years in prison while another could be sentenced to 25 years.
The example of the judicial system used by the authors is real and is a good example to point out that making a judgment is never an easy task.
This complexity of judgment that is found in the judiciary system can also be seen in all types of situations that require professional judgment.
A doctor, for example, can diagnose a patient with a disease and another doctor can give a completely different diagnosis. Someone will certainly be wrong. Thus, the authors point out that disagreements are inevitable when it comes to judgments.
Business and organizational systems should present homogeneous judgments. These noises that are found in the system can result in injustice, high costs, and errors of all kinds.

But how exactly can we identify noise?

Daniel Kahneman, Olivier Sibony, and Cass R. Sunstein did a research on a particular company whose executives did not believe that noise in their organization could be a big issue. Therefore, the authors suggested that an audit should be carried out.
To the executives' surprise, the noise in the company's system was causing high costs, and for the benefit of the researchers, the audit served as a great example of the problem caused by the noise.
And this is one of the ways the authors suggest to identify noise in an organization. The authors' suggestion is to carry out a noise audit.
One of the possible ways to carry out a noise audit is to ask interchangeable professionals to analyze a given situation and judge what decision should be made.
The unwanted variability will be the needed measuring to identify how much noise is present in decisions made within the company.

Mind as a measuring instrument

In the second part of the book "Noises: A Flaw in Human Judgment", it is described that judgment is a measure whose instrument is the human mind. And whenever we make a judgment, we aim to achieve accuracy and avoid mistakes.
But how can we achieve accuracy in our judgments if our minds are so complex?
Well, according to the authors, even in scientific measurements, accuracy is difficult to be achieved, therefore, in judgments, the error will always be present and sometimes it will show in the form of noise and others in the form of bias.

So, how can we estimate noise by having the mind as a measuring instrument?

Kahneman, Sibony and Sunstein rely on statistics to measure the presence of noise in judgments. They say that the most common measure of variability is standard deviation and this is one of the ways to estimate noise.
Another way is to analyze whether the process corresponds to the principles of logic or probability theory. In this case, it is necessary to question whether the process applied to reach a particular judgment would be accepted by other professionals in the field.
According to the authors, when we focus on the judgment process instead of focusing on its results, we can evaluate the quality of verifiable and nonverifiable judgments, such as fictitious problems or long-term predictions.
It is highlighted that, although the focus is on noise, when we seek to achieve accuracy in our professional judgments, noise and bias have the same weight. Therefore, reducing biases has the same impact as reducing noise.
The authors reinforce that good decision are objective and accurate judgments that shouldn't, in no way, be affected by expectations, fears, preferences, and values.

Do more measuring instruments produce a more accurate result?

The researches presented in the book "Noise: A Flaw in Human Judgment" showed that another type of noise that can affect decisions made in a company is one that arises in group decisions.
It is expected that when we have a group of people gathered to make a decision, the judging process will be more thorough since different people have different points of view. However, unfortunately, this is not what happens.
The authors presented that when a group is gathered to make a decision, whoever speaks first can influence and change everyone's choice in the room.
Although the group's first speaker's arguments to defend a judgment are well-founded, there is still social pressure. Perhaps, other group members can silence their judgments for fear of sounding stupid in front of others.
Therefore it is stressed that independence in judgment is a prerequisite for the wisdom of crowds.
In other words, in group decisions, there may be noise. Therefore, the addition of more minds as measurement instruments may not be effective in reducing noise if not used correctly.

Noise in Predictive Judgments

In the third part of the book, Kahneman, Sibony, and Sunstein focus on a specific type of judgment that encompasses almost all others, predictive judgment.
The authors seek to analyze at this moment the noises that can be found in the forecasts that are made within the professional environment to identify if algorithms, rules, and formulas can make better forecasts than human beings.

They also look forward to answering the following question this time:

"If noise is so ubiquitous, then why had you not noticed it before?"

What is Predictive Judgment?

At different periods during a company's growth journey, predictions need to be made. We try to predict the performance of an employee, whether a product will sell or not, whether a certain employee will be able to fill a specific position, etc.

To make these predictions, we often analyze data and consult our intuition in order to come to a judgment. We human beings make predictive judgments that the authors call clinical predictions. Formulas, algorithms, and rules, on the other hand, produce mechanical predictions.

Models x Humans: Who makes the best predictive judgments?

The authors focus mainly on the prediction ability of two models that they define as: Meehl - "The Optimal Model Beats You", and Goldberg - "The Model of You Beats You".

In both models, noise is found in predictive judgment, but it was detected that noise reduction made by mechanical prediction increased the accuracy of predictive judgment.

It is further stated that it has not been settled that all models perform better than humans, but the mechanical adherence to a simple rule can substantially improve judgment of difficult problems.

But what about human intuition in judgments? Isn't it important?

Indeed, human beings have something that formulas, algorithms, and software cannot reproduce: intuition. What makes us feel that intuition is so important while making a judgment is that it doesn't feel like a feeling but it feels as a belief. However, the confidence we have in something does not guarantee that what we think is accurate, the predictions we make based on our intuition end up often being wrong.

The authors also add that the further into the future we try to predict, or try to get models to make predictive judgments, the more likely we are to make mistakes since the world is uncertain and a small event can substantially change the final result.

What is the origin of noise?

In the fourth part of the book "Noise: A Flaw in Human Judgment", the authors try to answer what is the origin of noise and which mental mechanisms result in the variability of judgments.

How can mental mechanisms cause noise?

In the book "Thinking, Fast and Slow", the author Daniel Kahneman reviews a program that assesses the psychological mechanisms that explain the pros and cons of using intuitive thinking.

The main idea of the program was to prove that when we ask people difficult questions, they tend to use a simplifying operation called heuristics.

The authors mentioned this book to present that Kahneman's analysis of this program showed that, in general, the heuristics are produced by fast, intuitive thinking that is known as System 1.

The heuristics program theory proposes that individuals sometimes use a simple question to answer a difficult one. Instead of answering "How likely is it that Mark will be a good CEO?" we often switch to the question "Does Mark have good leadership features?".

The heuristics for answering a difficult question would be finding an answer to a simpler question. However, this natural substitution can cause predictable errors, called Psychological Bias.

When we take this route to answer a question, we let System 1 suggest a conclusion. The problem is that most of the time, we just accept that conclusion and we don't worry about the process of gathering information to support our judgments.

When we are concerned with integrating and analyzing information, we start to use System 2 of thinking to formulate arguments that support our prejudgment.

The problem is that, by using System 2, the evidence we present as an argument can be selective and distorted because we tend to collect information that favors what we believe to be true.

In other words, when our first judgment is wrong we tend to stick to it even though there is conflicting evidence.

Can scales reduce noise?

One of the possible ways to reduce noise in professional communication is to use scales to define rates. For example, an individual arrested for theft under the penal code could face a penalty of 1 to 4 years in prison and a fine.

Even though there is a scale in the judiciary system, one judge can sentence one defendant the minimum penalty and the other judge a maximum penalty, because even if they do not disagree on the case, the way they see the scale is different, their values may differ while analyzing the circumstances of the crime.

In an ideal world, everyone responsible for making professional judgments would use a scale that would make them agree on all decisions, and any deviation from the usual judgment stipulated by the scale would count as an error.

Bias x Noise

When Daniel Kahneman, Olivier Sibony, and Cass R. Sunstein started their research, they were focusing on the relative weight of bias and noise in overall error. They concluded that noise is a larger error component than bias and therefore decided to explore it more thoroughly.

Although there is evidence of noise, it is rarely mentioned as a key factor in judgment. Even though the average of errors (bias) and the variability of errors (noise) have the same weight, we usually see them in different ways.

The problem is, noise is inherently statistical, we can only find it when we think statistically about a set of judgments that should be similar. However, the authors emphasize that, unfortunately, the statistical analyses we need to make to find noise is not an easy task.

How can we improve judgments inside an organization?

As we have seen so far, variability in judgments within companies is the cause of noise. But how can an organization improve the judgments made by its professionals? In other words, how can an organization reduce noise in judgment?

For Daniel Kahneman, Olivier Sibony, Cass R. Sunstein, the first step is to acknowledge noise in the company by doing a noise audit.

If during the audit a significant amount of noise is detected, the next step is to improve the judgments made within the company. But how?

Better Judges for better judgments

The authors define as "judges" all people who need to make judgments professionally. But how to identify who are the best judges in order to reduce noise?

Good judges tend to be experienced, intelligent, but they also tend to be open-minded in order to learn from new information.

Another important skill to highlight is that good judges are able to explain their judgments confidently. But how can we recognize if a person has all these features?

Well, general mental ability tests (GMA) can be a facilitator while choosing people with good judgment skills. If you want to recruit people to make judgments, always choose the ones with high mental abilities.

The authors emphasize that people who are more open-minded are the best judges because they have the humility to recognize that judgment is a process that can be constantly reviewed and improved.

Even though people trust more in leaders who show confidence and consistency about their decisions, evidence shows that if the goal is to reduce errors, it is better for leaders, and other employees, to remain receptive to rebuttals in order to reflect if the process they are engaging in is correct.

Reducing noise through a decision hygiene process

Good judges make better decisions. However, you may not be able to change your personnel. But if you still want to make your company's judgments fairer and less noisy, the authors have a suggestion for you.

The authors call this approach "decision hygiene". Decision hygiene can reduce errors even if you haven't identified which errors are happening in your company's judgments.

As we've seen, noise is harmful, so reducing it is worth it. We will present below some of the suggestions found in the book "Noise: A Flaw in Human Judgment" that can help you to hygiene the decisions made in your company

Sequencing Information

Judges should always document each step of their judgments. Each phase of the process, each considered alternative, everything must be documented so that there is an argument foundation to defend a judgment. This process, according to the authors, leads to a second moment. Decisions must undergo a second review made by another responsible person, but that second individual must not be aware of the judgment made by the first person.

That way, it is possible to estimate the average between both judgments to reach a final decision. It has been proven that the arithmetic mean between judgments guarantees noise reduction.

Using the "Mediating Assessments Protocol"

The authors Kahneman and Sibony together with Dan Lovallo described a method of decision making within organizations that is effective in reducing noise, they called it the "Mediating Assessment Protocol" (MAP). This method incorporates most of the strategies presented so far to carry out a decision hygiene and it can be applied in any company.

MAP consists of 6 steps that can reduce errors, whether they are bias or noise, in any decision that needs to be taken within a company, it doesn't matter if it is the acquisition of a new company or the hiring of people.

The first step is to organize the decision into a series of evaluations that must be considered.

The second step would be to ensure that whenever possible the processes would be compared to other similar cases. For example, judges should compare the current judgment with the effectiveness percentage of previous transactions of the same type.

The third step is to keep the judges' analysis as independent as possible. While they are analyzing the evaluations for making a decision, they cannot discuss the matter with each other so that there is no influence of external opinions.

The fourth step is to gather all those responsible for the decision to discuss all the evaluators (pros and cons) individually. Right after the individual assessment of each aspect, a meeting should be held in which all the evaluators should be discussed, considering the judgment of all the individuals.

Finally, in the sixth step, intuition is finally allowed. When used at the end, intuition is based on the facts and verifiability of each argument. Therefore, to defend their intuition, the individuals would need to use verifiable arguments to justify their judgment.

Is there any situation where noise must be kept?

To finish this book, Kahneman, Sibony and Sunstein present possible arguments that can be used by professionals and organizations to not adopt noise reduction strategies.

We may all have faced a situation where we've received the answer "We'd love to help, but there's nothing we can do. The rules do not allow it". Well, although it's not fair, the rules are clear and are generally implemented to reduce noise and perhaps even bias.

Besides that, it is emphasized that even if the laws implemented by a company are rigid, they are worth it because they reduce noise.

It was presented several strategies that can reduce noise in this book: the use of algorithms, rules, laws, ways to improve judgments, etc. Therefore, it is not possible to argue that reducing noise is costly.

Even though in many fields, human judgment is essential, there are several ways to appreciate human judgment, but in a wise way in order to reduce noise and to lower the costs for the company.

Once it is proven that noise causes unfairness and costs, it must be eliminated.

The authors finish by saying that the use of rules and strategies that can reduce or even eliminate noise must be implemented. In private organizations, the presence of noise means that the implementation of internal rules has failed.

What do other authors say about it?

As we've seen so far, judgments are nothing more than choices. So if you want to learn a little bit more about how to prepare your mind to make well-considered and right decisions, how about reading the book "**Nudge**"?

Remember that the authors also mentioned that the judgment we make is just one among several possibilities? With the summary of "**Everything is Obvious**", you will start to think about other points of view on things that once seemed obvious and simple.

Finally, we saw that the implementation of laws can be fundamental to eliminate noise in the company. But how to implement these laws without displeasing others? In the summary "**It's Okay to Be the Boss**" you will learn how to manage your team so they don't question if your choices are beneficial to everyone.

Okay, but how can I apply this in my life?

- Don't tolerate errors in your company. Whether they are bias or noise, errors are harmful to the end result.
- Carry a noise audit to identify variability in judgment that should not be happening in your company.
- Make group decisions, but remember to use strategies to guarantee that all judgments are being analyzed independently.
- Hire good judges and use strategies that can improve the judgment of the workers you already have.
- Carry out a decision hygiene process in your company.
- And remember, the presence of noise is always more costly than applying the necessary means to reduce it.

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