Daniel Kahneman, the psychologist who won the Nobel Prize in Economics, has died. This BrainCandy pays tribute to Kahneman, with a short review of his last book: Noise. A Flaw in Human Judgment

Reading time 15 minutes

The book Noise is not as successful as his epochal work "Thinking Fast and Slow". The main reason for this is that the image of the two decision-making systems in the brain, i.e. System 1 and System 2, is so catchy for us marketers. Pure storytelling. Noise is a more difficult concept. And the findings are far less favourable to our self-image. But it is still worthwhile, partly because AI will make human decision-making biases even more obvious. The following key insights from Noise are based on a review of the book by Rob Henderson.

The wisdom of the crowds

Are crowds smart or stupid? You've probably heard of the "wisdom of crowds". It says that the collective opinion of a group of people is often more accurate than that of a single person, and that the aggregation of contributions from many individuals cancels out the mistakes of individuals and produces a more accurate answer.

The authors of Noise, Daniel Kahneman, Olivier Sibony and Cass R. Sunstein, present research findings that indicate that "independence is a prerequisite for the wisdom of crowds". This means that if we want to use crowdsourcing, we need to ensure that people make their judgements without being influenced. When people give their answers in an environment where they can see everyone else's answers, then the crowd can turn wisdom into nonsense.
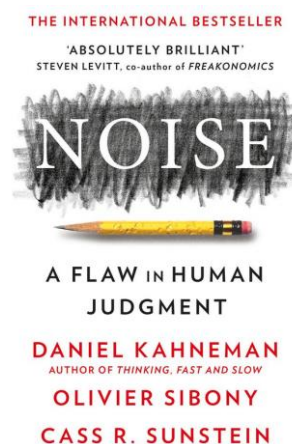
Bias vs. noise

The book distinguishes between two basic types of errors in human decision-making. The first - bias - is well known, not least thanks to Kahneman. The second - noise - is less well known. Bias refers to judgements that deviate from rationality in a consistent, predictable way. If you ask people to estimate the likelihood of dying in a plane crash, their answers are generally biased upwards because plane crashes are so vividly reported in the media and are easily memorised (the availability bias) In contrast, noise means that judgements are unpredictable or scattered. If you ask a group of people to estimate the weight of a bull, the answers are not biased. They will be noisy, i.e. they will all deviate from the true weight of the bull in unpredictable ways.

Noise hits us everywhere

Noise is easy to recognise in court decisions. Judges have a great deal of discretion when determining a sentence. Many consider this to be both fair and humane, believing that sentences should be tailored to the characteristics and circumstances of the defendant. However, Kahneman and his colleagues report research showing that sentencing depends less on the specific case or the individual defendant and more on the individual judge. This means that the same defendant in the same case will receive very different sentences depending on which judge is dealing with the case.

In a study of underwriters, the authors asked CEOs and senior insurance executives to estimate how much variance they would expect in setting insurance premiums. They estimated 10 per cent or less. However, the median difference in insurers' judgements was 55%. The book states that when it comes to insurance premiums, "the price a customer has to pay depends to an uncomfortable degree on the lottery that selects the employee who will deal with that transaction."

Noise also has good sides

Of course, a certain amount of noise in some judgements is desirable, for example in matters of preference or taste. If 10 film critics see the same film or 10 people read the same novel, a diversity of opinions is to be expected and welcomed. Unpredictable noise will also help us in creative processes. But when it comes to medical diagnoses, criminal convictions, insurance claims or employee selection, fuzziness is both undesirable and unfair.

Striving for harmony promotes noise

What are the sources of this noise? One, perhaps the most dangerous, is simply discomfort with disagreement. Indeed, the book points out that existing management processes often seem explicitly designed to minimise the incidence of actual disagreement.

In the book, a professor explains the procedure for selecting applicants at his university. First, one person read an application portfolio, scored it, and then passed it along with the scores to a second reader who also scored it. As you can imagine, the first rater has much more influence than the second, who may be reluctant to challenge the first rating. The professor suggested hiding the first reader's ratings so as not to influence the second reader.

In other words, he suggested using the "wisdom of crowds" method instead of the "madness of crowds". The university's response: "We used to do that, but it led to so many inconsistencies that we switched to the current system."

Preferences and values are drivers of noise

In Noise, Kahneman and his co-authors point out that good decision making should not mix facts and values. Good decision-making must be based on fact-based predictions that are not influenced by preferences or values.
This realisation is increasingly being circumvented. In Germany, posture journalism dominates, and since the coronavirus pandemic at the latest, the public media houses have behaved more as mouthpieces for government measures than as critical companions of government action.

Background noise vs. occasional noise

The book provides many examples of the "background noise", i.e. the variability of the judgements made by different people.
More interesting, however, is what the book calls "occasion noise" i.e. the variability of judgements made by the same person. In other words, situational noise includes our own individual judgements, which can be influenced

by mood, weather, time, etc. For example, you may judge the quality of an essay differently in the morning after drinking coffee than late at night after a stressful day at work.

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It is also common for doctors to make significantly different diagnoses when confronted with the same case twice. A study of almost 700,000 GP visits found that doctors were significantly more likely to prescribe opioids and antibiotics at the end of a long day. In Germany when doctors are tired and under time pressure, they seem to be more inclined to choose a quick solution.

Our cognitive machine is itself an important source of noise

The authors come to a clear conclusion: "We do not always make the same judgements when we are confronted with the same facts on two occasions. We are not always the same person." In other words, just as our mood and external circumstances vary, so do some of the functions of our cognitive machinery.

Researchers found that various external factors such as time of day, sleep etc. only accounted for 11 per cent of the variance in a particular person's performance. The momentary variability in brain function is not only due to external influences, but rather characterises the way the brain works.

The noise can be amplified by groups.

Initial position can also influence political views. The book reports findings suggesting that a group of Democrats who saw a particular view gaining popularity among Democrats initially also supported that view, which eventually led to most Democrats in the group supporting that view. However, when they saw a particular view gaining popularity among Republicans, they rejected it. The Republicans behaved similarly. In short, the acceptance of a viewpoint may depend on its initial popularity and the specific group that accepts it.

This relates to another theme of the book: group polarisation. This is a special case of the phenomenon of the "madness of crowds".

Social psychologists have discovered that people who hold certain beliefs are more extreme when they are with others who hold similar views. You can see this every day on X. The group drifts towards extremism, even if the individual members are not extreme.
The battle of attitudes in Germany is currently dominating key issues such as low-carbon energy, migration, basic child security and citizens' income, making positions increasingly irreconcilable.

So how can we make better decisions?

The book distinguishes between clinical judgements and models. In clinical judgement, we look at the information available, perhaps do a quick mental calculation, consult our intuition and come to a judgement. Let's assume you are evaluating two candidates. You consciously think, compare the CVs, references and interview performance. This process and your gut feeling lead to your clinical judgement.

In contrast, the book describes simple models. This goes back to the work of the American psychologist Paul Meehl.

He compared clinical judgement with mechanical predictions for outcomes such as academic success and mental health predictions. Meehl was surprised to discover that simple mechanical rules were generally superior to human judgement.

In other words, straightforward models with simple inputs are better suited to predicting real-world outcomes than "holistic" judgements.
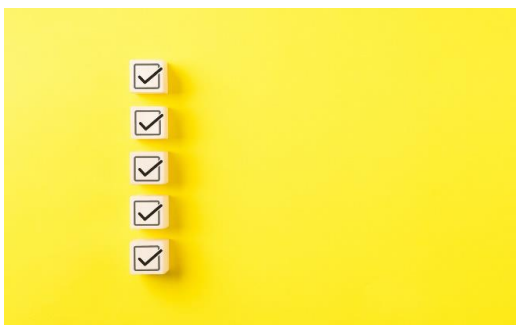
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But why is this the case? It seems that the very things we value most in people can mislead our judgement. If I replace you with a model of you, your subtleties and noise disappear. If I present the same candidate to you at two different times, you may make very different judgements. But if I present the same candidate to a model of you, it will make identical judgements both times. As Kahneman and his colleagues put it: "You may believe that you are more subtle, insightful and nuanced than a linear caricature of your thinking.

But in reality, they are usually noisier ... It proved almost impossible in this study to create a simple model that performed worse than the experts."

Why do we often prefer subjective human judgements to unambiguous rules?

Many experts ignore the debate about clinical versus mechanical procedures, preferring instead to trust their own judgement.

The use of algorithms in medical diagnoses is not yet routine. Only a few companies or universities use algorithms when selecting applicants.

When experts listen to their gut, they experience emotionally satisfying rewards, especially when they end up being "right" (overlooking or rejecting all the times they were wrong). Forgoing such rewards in favour of more accurate but less intuitively satisfying models is not easy. As Kahneman and his co-authors note, "many decision makers will reject decision approaches that deprive them of the opportunity to exercise their intuition".

Interestingly, when given the choice, normal people prefer the advice of an algorithm to that of a human. They give the algorithm a chance, but they no longer trust it as soon as they see that it makes a mistake.
The book states: "As humans, we are well aware that we make mistakes, but this is a privilege we are not prepared to share. We expect machines to be perfect".

This explains why so many people have no confidence in self-driving cars. When a human driver causes a road accident, we are often forgiving. But when an autonomous vehicle causes an accident, people react with great suspicion. To quote a well-known phrase by Charlotte Whitton: A robot has to be twice as good as a human to be half as good.

The book offers some solutions to the problem of situational noise. For example, when evaluating job applicants, it is better to rank the best to worst applicants than to evaluate each applicant individually to predict future performance. The book states: "If it is possible to replace absolute judgements with relative ones, the noise is likely to be reduced." We are simply better at recognising differences than making absolute judgements.
And that, I suspect, is a central reason why some people don't like the book. They want to keep
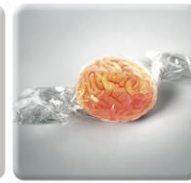
the noise (the ability to rely on intuition and individual judgement), and so they won't like Noise (which argues that relying on intuition is harmful and unfair).

If you tell people that they have to follow a checklist or follow an algorithm, they will react with resistance because such guidelines prevent them from pursuing their own hidden goals. Others may argue that policies aimed at eliminating noise are rigid, dehumanising and unfair.

When people believe that an objective system favours them, they want to reduce distortion and noise.

And when people believe that an objective system might penalise them, they want to maintain bias and noise.

However, Kahneman and his colleagues convincingly argue that the elimination of noise is crucial to the legitimacy of a system. At the end of the book, they conclude that it is unfair for people in similar situations to be treated differently, and that a system in which professional judgements are seen as inconsistent loses credibility.
That reminds me of the housing shortage in Germany. Some people looking for housing in Germany experience the partially prioritised provision of housing for refugees by the overburdened authorities as very unfair.

Unfortunately, the people who prefer to keep the noise are often the loudest. I'm excited to see how AI will help us to reduce the noise, especially in administration.

Book recommendation

By Ralph Ohnemus, Uwe H. Lebok, Florian Klaus:

Context marketing

The key to consumer behaviour to order.

Feedback, suggestions or criticism about this article:
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The author
Ralph Ohnemus, CEO. Board member and main shareholder of K&A BrandResearch since 2001.
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