# The legacy Daniel Kahneman

Image source: Andreas Mueller/VISUM/Redux

One of the spiritual fathers of behavioral finance passed away in March this year. Below, we pay tribute to Daniel Kahneman by highlighting 10 of his main empirical studies in the field.

**Charles-Henry Monchau**
*Chief Investment Officer*

Syz PRIVATE BANKING

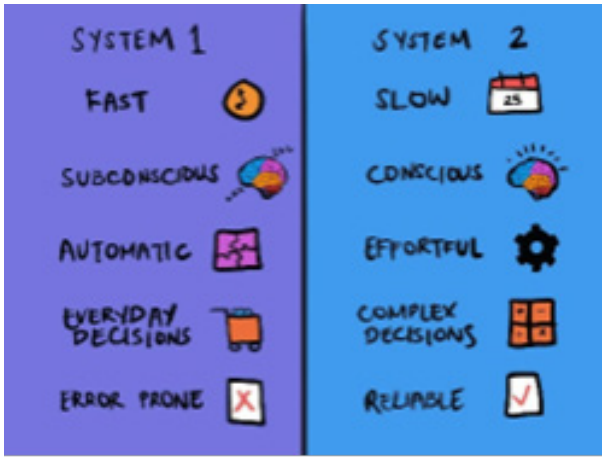
Cognitive scientist Daniel Kahneman's contributions to the fields of the psychology of judgement, decision-making and behavioral economics are outstanding. His groundbreaking work has undeniably changed our understanding of human decision-making and judgement, earning him the Nobel Prize in Economics. He is often referred to as the "grandfather of behavioral economics", a title he earned through the development of empirical studies that challenged economic theories assuming rational human behavior, in collaboration with the famous mathematical psychologist Amos Tversky.

## Who is Daniel Kahneman?

Born in Tel Aviv in 1934, Kahneman obtained his bachelor's degree in science from the Hebrew University of Jerusalem, where he specialized in psychology. He then moved to the United States to obtain a doctorate in psychology from Berkley University in California. Initially, his work focused mainly on visual perception and the mechanism of attention. However, it was his collaboration with Tversky that led to revolutionary discoveries in cognitive and behavioral psychology. Kahneman's bestseller, “Thinking Fast and Slow”, is widely regarded as his masterwork, with over 10 million copies sold. In it, he distils decades of research into the dual-system theory of the mind, illustrating the interactions between automatic, intuitive thinking and slower, more deliberate reasoning. Here are some of the most important lessons from his books.

## 1. Dual system theory: system 1 and system 2

Dual system theory is the concept that individuals have two distinct sets of decision-making processes. The first, System 1, is fast, automatic, and intuitive. System 1 functions essentially with little or no effort, allowing rapid decision-making and judgement based on models and previous experience. This system's reliance on assumptions, memories and pattern recognition means that it is more prone to biases and errors, such as overconfidence, when trying to create a coherent and plausible story about what is happening. This is the system we use for everyday tasks such as facial recognition, reading simple words or reacting quickly to immediate danger, and can be seen as a mental shortcut. System 2, on the other hand, is slow, conscious, and deliberate, and requires intentional effort. It is used for complex problem solving and analytical tasks, which require deeper thought and examination. System 2 often comes into play when System 1 cannot handle the situation, for example when solving complex mathematical problems, planning or making other important decisions.



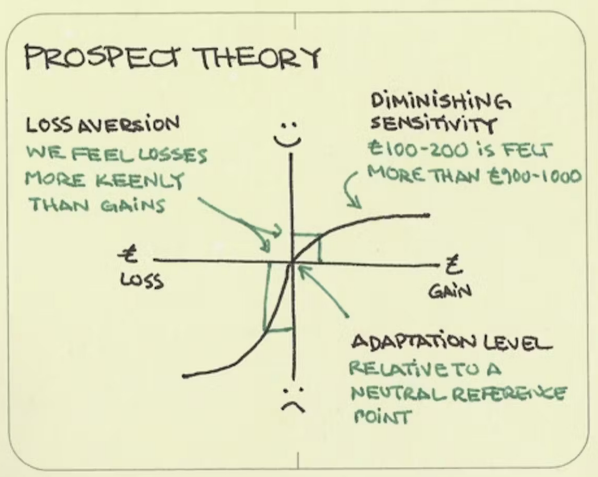

Source: The Decision Lab

## 2. Investor irrationality

Kahneman's conclusions imply that human beings are intrinsically irrational and often make decisions that defy logical norms. A common mistake is our tendency to underestimate the abilities of others and overestimate our own. For example, a Swedish road safety study published in 1981 surveyed people in the United States and found that 88% of Americans thought they could drive better than the average person. Similarly, another study published in 2018 on the National Library of Medicine website asked participants to answer the simple question, "Am I smarter than the average person?" As you can already anticipate, around 65% of participants answered "yes", which is clearly a statistical contradiction underlining Kahneman's conclusions about human irrationality.

## 3. Prospect theory

Prospect theory, which Kahneman developed in collaboration with Tversky, has become a cornerstone of behavioral economics. This fundamental theory describes how people make decisions between alternatives that involve risk, revealing that humans experience losses more intensely than gains. Prospect theory suggests that humans prefer certainties to probabilities, a phenomenon known as the 'certainty effect'. For example, most people would rather have a 100% chance of receiving $50 than flip a coin for a chance of winning $100, even if the expected value of the two options is the same. This loss aversion trait helps economists to predict consumer behavior, particularly in times of uncertainty.




Source: Sketchplanations

## 4. The “Halo effect”

This effect is a type of cognitive bias which states that general impressions of brands, people, and products in one area positively influence our feelings and outlook in another area. For example, if we meet someone who is physically attractive, we may also assume that they are generous, intelligent, or trustworthy. Similarly, if we have a positive impression of a company or brand, we are more likely to perceive its products as being of high quality, even if evidence suggests otherwise. Kahneman presents this effect in the context of reliance on intuitive and impression-based thinking, as illustrated in System 1.

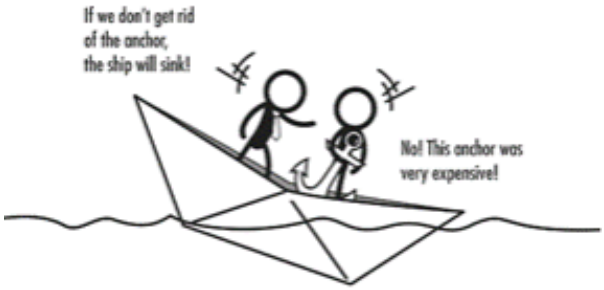
## 5. Availability heuristic

The availability heuristic is a cognitive shortcut by which people judge the probability of an event according to the ease with which they can recall similar cases. As a result, individuals often rely on the most readily available information to form an opinion about less familiar or more remote concepts. For example, although road accidents have tragically claimed the lives of more than 400,000 people in the United States since September 2001, far outnumbering the 3,000 or so victims of the September 11 attacks, there has been no proportional increase in the fear associated with driving compared with the fear of flying caused by the events of September 11.


Source: verywell mind

## 6. The fallacy of sunk costs

The sunk cost fallacy is a psychological barrier that binds people to unsuccessful ventures simply because they have devoted resources to them, whether in terms of money, time, or effort, even when abandoning them is clearly the best solution. Examples of this fallacy can be found in our daily lives. A common example among students is continuing to study something that does not interest them because they have already paid a large sum in tuition fees. An even more common example in our everyday lives is staying in front of a bad film because we've already watched it for an hour. This fallacy illustrates how emotions and past investments can override rational decision-making.




Source: Economic in a Nutshell

## 7. The confirmation bias

This bias, which affects us all too often, describes our underlying tendency to notice and focus on evidence that reaffirms our existing beliefs and positions, while ignoring information that opposes them. Confirmation bias predisposes investors to selectively seek out and interpret information that aligns with their pre-existing beliefs about the potential of an investment. This can often lead to overconfidence in their decision-making and cause them to ignore alternative perspectives and the risks that may be associated with their investment.

## 8. Hindsight bias

This is another bias that frequently haunts investors and is often referred to as the 'I knew it all along' effect. This is the tendency to assert that current events were bound to happen, when they were totally unpredictable in the past. This bias leads individual to believe that they had predicted or foreseen the outcome of a situation all along, even if their initial assessment was uncertain or ambiguous. For example, someone may confidently state, after the outcome of a stock market investment, "I knew this stock was going to go up!", or when someone insists that they knew their favorite sports team was going to win. In reality, this belief is shaped by hindsight, which can distort our understanding of past events by making outcomes more predictable and decisions more logical in retrospect than they were at the time.

## 9. The framing effect

This effect shows the extent to which our decision-making and perceptions can be influenced by the way in which information is presented to us. This cognitive bias shows that people can react differently to the same information depending on how it is formulated or presented. For example, presenting medical procedures as having a 90% survival rate versus a 10% mortality rate may lead individuals to choose the former, even though the statistical information is identical. This bias highlights the importance of communication and how subtle changes in wording or context can influence opinions and decisions.


## 10. The anchoring effect

The anchoring effect reveals the tendency to rely heavily on the first piece of information presented when deciding, even when this information may be irrelevant or arbitrary. This cognitive bias influences the way we perceive the information that follows, creating what is known as the "anchoring" of our judgements and evaluations around the initial data. For example, during negotiations, the starting price set by one of the parties may disproportionately influence the final agreement, even if the starting price is arbitrary. Similarly, when making purchases, consumers may consider a product to be a good deal if its initial price is high, regardless of its real value compared to other options.


Kahneman's legacy continues to influence fields as diverse as behavioral finance and public policy, underlining the essential role of understanding the cognitive process behind human behavior.

## For further information

**Banque Syz SA**
Quai des Bergues 1
CH-1201 Geneva
Tel +41 58 799 10 00
syzgroup.com

**Charles-Henry Monchau,** Chief Investment Officer
charles-henry.monchau@syzgroup.com