Book review

The Undoing Project: A Friendship that Changed Our Minds

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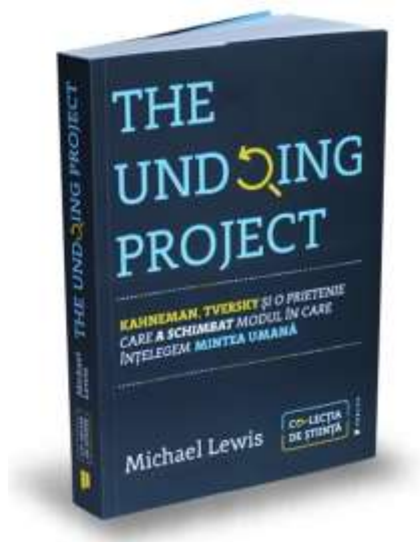
Michael LEWIS's biographical book is a more than a convincing history of the birth of the behavioral economy, but as well as an eloquent testimony of the friendship of two wonderful intellectuals, Daniel KAHNEMAN and Amos TVERSKY, for the benefit of a strong collaboration in scientific research. The two main protagonists of the book and the other scholars and collaborators followed suit that are evoked in the book had to face the uncertainty and limitations of predominant classical science on human judgment and its vital processes of decision-making and public policies design. Together, they introduced to the public opinion the new area of behavioral economics. In a scientific world dominated by the prevalence of hypothesis of rationality and optimization in the decision-making process, Kahneman and Tversky and researchers following them, argue scientifically that the human mind often judges to simplistic. As a result, people are led into erroneous perceptions of actual facts. Worse yet, human decision makers predict and systematically take decisions accordingly non-rational. Human errors, if they are systematic, are also predictable.[1]

MICHAEL LEWIS

Photograph: Suki Dhanda for the Observer



In addition to the multitude of biases of the human mind and comportment, the book highlights the patterns of these perceptions and formulates recommendations for behavioral correction. This new scientific field has reconsidered a number of rational behavioral assumptions on the optimization of economic decision-making. The new field of behavioral economics establishes cognitive rules for the apparent non-rationality of human economic decisions.

Before becoming two recognized academic geniuses, Kahneman and Tversky were under arms and became heroes on the Israeli army. Based also on their military experiences, their research revealed different elements of individual behavior that are different from the classical accepted rational expectations theory. "They have studied rigorously the subconscious biases and illogical choices and have shown that in an economic context, people mainly rational."

[1] Thaler, Cass, Rutenberg, Redelmeier, Allais etc.

The Undoing Project is an extension of a joint study which began in 1980 that was formulated after a Kahneman's idea. People compared reality to their mental models' alternatives about reality. At that moment, the two academics were separated. But Amos continued Kahneman's idea in a first study of 40 pages that was conceived as a completion theory of Kahneman's seminal idea. Initially, he was not in the know about the Amos study. Amos was fascinated by ideas that originated from Kahneman's original work. Further, even so, their collaboration was so consistent that "they could not determine which of them were at the origin of the studied idea. As a result, they decided that each study would alternately change the order of the authors. "[23]

In a first joint study, Tversky and Kahneman revealed the "Law of Small Numbers"[4], respectively, the belief that if a coin fell twice in a row tail, the next throw would be most likely to fall a head". "Even the most correct currency, given the limits of memory and its moral sense, cannot be as correct as the player is expecting," wrote Tversky and Kahneman. "We are studying natural stupidity, not artificial intelligence," Tversky said. "People do not choose between things, they choose between the descriptions of things," observed Kahneman. Individuals mentally retrieve their conclusions from small-scale, statistically insignificant events and take decisions only partially informed on the basis of these conclusions.

Classical economists who are confident in the Law of Large Numbers, considered at that time that the Law of Small Numbers is just a well inspired academic joke. But it is easy to prove that for a smaller sample, it is less likely to be representative of the entire population from which it was extracted. But people usually trust the Law of Small Numbers, applicable to randomly chosen samples, because they are convinced that the Law of Large Numbers applies only to small numbers.

From their previous experience of decisions making during their duty time in the Israeli army but also from their specific research in other areas of human comportment, Tversky and Kahneman have identified a series of known psychological biases and effects of human judgment (the effect of possession - endowment, confirmation bias effect, the effect of framing, the effect of isolation, etc.). They included all these biases in a definition of representativeness heuristics (that is, replacing the objective laws of probabilities with subjective probabilities):

- Representativeness heuristics[5] is the tendency of people to make judgments by comparing a person or thing with a mentally predefined model, regardless of the available statistical data. "The more specific the case is, the more alike the version in your head, the greater will be the probability of believing that this particular case belongs to a larger group" (Kahneman, D. Tversky, A. (1972)). What may appear a question of "what if my swelling is a malignant tumor?" may become a concern of how "does my swelling fit my idea of what a malignant tumor looks like?" And this is a general rule of the line of thinking logic that can often lead us in error.

[2] Idem
[3] The Undoing Project can be translated approximately through the Cancellation Project (Abolition, Destruction, Destruction, etc.) in the intention of the authors to combat the hypothesis of the classical economy of rational economic behavior, with risk aversion and perfectly informed, which would take the most good decisions
[4] Tversky, A., Kahneman, D. (1971). Belief in the law of small numbers. Psychological Bulletin, Cilt 76, 105-110
[5] Tversky, A., & Kahneman, D. (1974) Judgement under Uncertainty: Heuristics and Biases. Science 185, 1124-1131

- The heuristics availability is the psychological tendency of the people when "many of the decisions and assessments they make depend very much on the speed of recovering the information available from the memories and the emotional burden associated with them. If we quickly recover a memory or make a quick connection, then we are more confident on the statement than when we recuperate memories harder or they are not at all available."[6]

- The anchoring and adaptation heuristics, "in the absence of information, we are avid to find an anchor and think, sedated, by reference to it. Imagine that someone is trying to sell you a picture and you cannot tell how to value the tableau true value. Then, the person throws you a sum. You will mentally try to judge the value in relation to this reference point. But that amount offered may have nothing to do with the intrinsic value of the painting. "[7]

- Conversion heuristics occurs when financial analysts, for example, assess and predict the profitability of a company under normal (ordinary) operating conditions, without taking into account the possibility of occurring extraordinary adverse events (natural: floods, fires, etc.), tax, social, etc., unexpected competition, etc.).
- The simulation and cancellation heuristics is the influence of regret and other unpleasant emotions on people's decisions. Under these disagreeable circumstances, the decision-making process can be altered. For example, the one who has delayed traffic, has lost the plane for an apparent important journey. That he finds out later that the plane crushed. Consequently, what decisions would have made the delayed traveler take after a series of possible simulations of events made before the flight?

K and T behavioral economics research is now successfully applied in various professional activities such as economic planning, technological advancement, policy decisions, diagnosis of diseases, and evaluation of legal evidence. These decisions can be "substantially improved by raising awareness of their own errors and prejudices and by developing ways to reduce and counteract the sources of these biases."

We often say in Finance that "a certain dollar is more valuable than an uncertain dollar" but what is the relevant axiom of a lost dollar? Here's Tversky's demonstration: what will be the choice between a certain $100 gain and a 50% probability of winning $200? In behavioral economy laboratories, the majority choice will be the sure gain (people are generally risk adverse). But what will be the choice between a safe $100 loss and a 50% probability of losing $200? The choice will be mainly risk seeking. Beyond this financial example other interesting fields of behavioral economics application opened: doctors and patients face such choices (decisions) in deciding and accepting an option with varying degrees of health risk (surgery or irradiation), for example in the treatment of severe affections. How many doctors do say to their patient that she has a 90% chance of survival, and how many of them give the patient a 10% chance of dying? The operation is in the surgeon's interest and he will always choose the first statement.

The theory of expected utility (maximizing utility and not value) from Bernoulli (1730) to Neuman and Morgenstern (1940) has been so widely accepted that only Tversky, Kahneman and Allais have tried and managed to reverse this theory. Their new conclusion, especially of Tversky's, is that "When making decisions, people do not seek to maximize their value. They seek to minimize regret. "The marginal value of the premium paid for providing the house against the fire is less than the marginal value that could be lost in the event of a fire. And yet, people will buy the insurance policy.

Neither value theory has escaped the scientific attention of the two psychologists of human economic behavior. According to classical finance tenet, the choice of maximizing earnings under aversive risk is the most rational course of action. But what are the people's choices frames in terms of losses? Classical theory explains risky decisions from the perspective of monetary gains and not from the decision maker's mood or emotion: a broker who expects to receive a bonus of one million monetary units but receives only half a million will be felt and will act as if it were at a loss. The reference is what it is expected to receive not to something predetermined. Under different circumstances, the

[6] https://bookhub.ro/how we think of automatic fire biases and heuristics at daniel kahneman /
[7] Idem

reference to personal reward expectations may change if other brokers receive, for example, two million monetary units.

As a result of these contestations of classical theory of value, the two scientists have discovered the effect of isolation (probing as if winnings were isolated from other factors) but also the effect of framing (if you present, frame, earnings as a loss, people completely change attitude towards risk). "People do not choose things. They choose the descriptions made of these things. "Classical economists disagreed with these behavioral framing effects and criticized the research of the two, claiming to exaggerate with the insistent underling of human mind errors, biases and predispositions. They further stated that the apparent non-rational decisions and behaviors they had observed were insignificant.

Kahneman and Tversky have argued and demonstrated that mostly people make emotional, not rational decisions. It is important to recognize this human predisposition and not to confuse the emotional with the rational. They have rigorously scientifically tested all these assertions of non-rational human behavior. Nevertheless, they never claimed that the subconscious prejudices and illogical choices they revealed in their research tilted the financial markets in a consistent and definitive manner and that they themselves would not be exempt from these prejudices we have with all.

The author of these exceptional biographies, Michael Lewis, has the great merit of facilitating and humanizing the presentation of complex and abstract ideas of behavioral research, just as Tversky and Kahneman would have wanted to be presented. Lewis presents in the book the academic, experimental and applicable context of heuristics and behavioral theories, from academic youth to the scientific consecration of the research of the two founding geniuses of the behavioral economy. Kahneman spent much time talking to Lewis about his scientific work that is highly conjugated to Tversky's. Lewis obviously spoke with many other people, except Tversky's regrettable exception. Of all these discussions, Lewis had the science and eloquence to tell a story simply, but with a strong sense of detail.

Tversky was a brilliant idea-maker, not a challenger, but he found in Kahneman's sparking mind an exact amount of raw material he needed to cooperate. With all the extremely creative partnerships between the two, some cracks and jealousy appeared. Having established this man's seductive personal chemistry, Lewis's story details the explosive fragmentation of their relationship with all their painful inevitability of human interactions ups and downs. "People do not choose between things, they choose between the descriptions of things," observed Kahneman. And though we all make mistakes, some are more forgiven than others.

Lewis's story, about Kahneman and Tversky's relationship of intellectual affection and its painful disintegration, is alive, original and unforgettable. Unfortunately, in 1996 Tversky died of cancer at the age of only 59 years. It was, however, on the secret list of Nobel Prize nominations. Kahneman won the Nobel Prize for Economics in 2002 and published in 2011 his own book, "Thinking, Fast and Slow."

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