Book review

Thinking, fast and slow

Daniel Kahneman

Book review by
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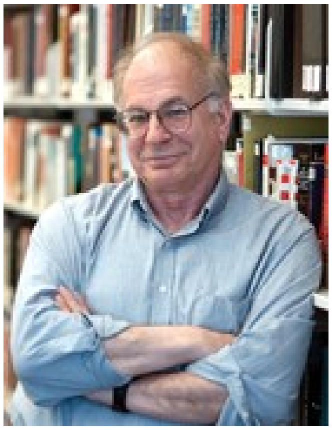
The origins of the central ideas of this masterpiece book of human thinking and action process came from the unique friendship, in science and humanism, of Daniel Kahneman with Amos Tversky. It started from an academic conference that would try to answer the question: *are people good statisticians intuitively*? Amos's response was initially "*with some reservations, yes*." From the subsequent scientific debates, it turned out that the intuitive answer closer to reality is "*rather, not*". Over confidence in the statistical results observed from too small samples can lead to a simplistic, biased, or incomplete conclusion.

A key finding discussed in the book is that even expert specialists greatly exaggerate the probability that their original scientific results can be independently repeated successfully. Not even professional statisticians prove to be very good intuitive statisticians".

Such biases (tendencies and cognitive errors) of our intuitive thinking ecosystem are found in many decision-making situations. Human biased logic tends to attribute higher probabilities to less likely events by: predicting the future based on rational models, evaluating simplifying hypotheses of the model, estimating frequencies of occurrence of the events, usually by heuristics. We simplistically assume that random, unpredictable events behave according to the normal distribution. We are most often tempted to evaluate the importance of a problem based on the information available in our immediate memory. We readily ingest fake data and information that is manipulatively suggested by the media. The recent ultra-publicly promoted case of the tragic event of the missing girls in city of Caracal concerns the social thinking much more than the topic about the deficit of education funding in Romania or the one about the provision of public funds of hospitals (because we have insufficient information in memory for the latter).



Choosing to invest in financial securities is a difficult one. If the investor is more seasoned in the stock market investment practice, she will most often have the intuition to make the right choice (she may be a little lucky). The less familiar investor will tend to simplify the investment choice based on the information available in the memory regarding, for example, the appearance of the products that the issuer delivers or the satisfaction of the services provided by the issuer (and not on the basis of financial analysis). According to Kahneman, the first investor calls in logic for System 2, which is slow thinking, more cumbersome and requires effort of thought. Her choice is based on the heuristic affective, emotional, and is guided, rather, by feelings and emotions than by the conclusions of a rational, data analysis. The second investor appeals to System 1, fast thinking, heuristic, associative, that is automatically provided by our memory and cognitive mental activities. Rapid thinking also includes the intuitive, expert thinking of specialists familiar with the phenomenon on which they make a more informed decision. System 1 is more influential in our decision making than we tend to assume and is the principal basis of most our decision making processes and evaluations.

The book is structured in five parts:

- Part One - Two systems - presents the basic elements of evaluative judgment and decision; the distinction between the automatic, associative, metaphorical, volitional operations of System 1 (the fast thinking system) and the controlled, deliberate, rational operations of System 2 (the slow thinking system);
- The second part of the book - Heuristics and Biases - answers the questions: (1) why is it difficult to think statistically, many things at once? and (2) why is it easier to think associative, metaphorically, causally? Statistics require effort and reason while System 1 decides intuitively, automatically;
- Part Three - Excessive Self-Confidence describes over-confidence in what we think we know and our apparent inability to admit our own ignorance and events uncertainty to the world we live in. We overestimate the degree to which the world understands the course of events and underestimate the role of chance in the development of these events;
- The fourth part - Choices - casts doubt on the rationality hypothesis of the classical economic theory, with its simplifying hypotheses and the tendency to treat problems in isolation. Part analyzes human predisposition to the effects of framing events in a narrow, subjective format. Amos and Daniel estimate the key concepts of the theory of estimating the role of chances in the outcome in the decision making and of the effects of decision framing in isolation;
- Part Five - Two Selves - explains for the first time the distinction between the pain felt by the experiential (higher) ego and the pleasure felt by the evoking ego (smaller, for the same duration or the same intensity). It is the illustration from the famous Kahneman-Tversky curve of the utility (Prospect Theory) in which the experiential loss of 100 monetary units is about 2.25 times more painful (and more surprisingly for memory) than the evocative joy of winning the same amount of 100 units (and desirable for any individual).

The book also contains a chapter of conclusions that explores the implications of the three major distinctions identified by the author's research:

• the experiential self versus the evocative self
• classical economics versus behavioral economics
• automatic system 1 versus mental and cognitive system 2

The book annexes reproductions of two articles that were written together with Amos Tversky on the analysis of evaluative judgment under uncertain conditions and, respectively, the theory of chance estimation and the effects of decision making.

The book explains, therefore, the two systems of thought and personal and collective decision making;

• System 1 fast and automatically, intuitive and emotional;

• System 2 slow, rational and mentally demanding.

Fast thinking is intuitively expert thinking but also simplifying logic as a result of biases, preconceptions (predilections) all with significant influences on our thoughts, behaviors and decisions. The knowledge of the interaction between the two systems leads us to a better evaluation of the aversion towards loss, the instances of over confidence in our abilities, the quality of economic forecasts in the process of making corporate, stock, family and personal decisions.

Kahneman makes in this book a statement that, at first sight, is surprising but thought provoking: "*The CEOs of a company influence performance, but the effects of this causality are much smaller than the reading of the economic press suggests. The most successful companies are run by the weakest director in 50% of cases. ... The damages caused by the over-confident executives' increase when the economic press prizes them with awards, conferring them celebrity status; the evidence shows that the prestigious press awards to the CEOs eventually cost the shareholders.* "

"*This book is a tour de force of an intellectual giant; it is legible, clever and profound. ...",* Richard Thaler, University of Chicago

"... His work has reshaped social psychology, cognitive science, the study of reason and happiness and behavioral economics, a field in which he collaborated with his collaborator Amos Tversky. The appearance of this work is a major event"- Steven Pinker, Harvard University

"*This is a reference book in social thinking, of the same caliber as Adam Smith's The Wealth of Nations and the Interpretation of Dreams by Sigmund Freud.* "- Nassim Taleb, author of the book Black Swan

"... is a masterpiece - a brilliant and entertaining saga, written by one of the greatest psychologists and most profound thinkers of our time ...", Daniel Gilbert, Harvard University.

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