Kahneman thinking fast and slow chapter summary

Daniel Kahneman is a Nobel Prize winner for economics who is a training psychologist. He won the award mainly for his work in decision-making, namely Prospect Theory. This book distills a lifetime of work on the engine of human thinking, highlighting our cognitive biases and demonstrating both the brilliance and limitations of the human mind. This summary attempts to capture some of the more interesting findings. (Excerpts and quotes are from: Daniel Kahneman. Thinking, fast and slow. Apple books. Kahneman writes the book as an introduction to experimental psychology and summarises some of the main results of the last 40 years. In doing so, it gives a high level of description of the scientific method used in social sciences, the art of creating hypotheses, smart experiments for testing, and a little bit about how the data is analyzed. It shows how slowly but surely, in collaboration with many researchers around the world, our understanding of human thinking has progressed. It also recounts the impressive history of the field, returning to the great rational thinkers, Bernoulli (the glorious Bernoulli equation) and David Hume, the Scottish philosopher. In the end, Kahneman shows that our brains are highly developed to perform many tasks with great efficiency, but are often rude to precisely perform other mental tasks; In fact, our thinking is riddled with behavioral facts. Therefore, we are at risk of manipulation not usually of overt species, but nudge and small increments. We have indeed learned that by exploiting these weaknesses in the way our brains process information, social media platforms, governments, the media in general and populist leaders, they can exercise a form of collective mind control. It is also clear that errors in our personal thinking systems are exploited faster than patches can be applied! Two SystemsKahneman introduces two characters that annimize the mind: System 1 works automatically and quickly, with little or no effort and no sense of voluntary control. System 2 pays attention to the strenuous mental activities that require it, including complex calculations. System 2 operations are often associated with the agency's subjective experience, choice and concentration. These two systems somehow coexist in the human brain and together help us get around in life; are not literal or physical, but conceptual. System 1 is an intuitive system that cannot be turned off; helps us perform most of the cognitive tasks that require daily life, such as identifying threats, navigating our way home to familiar roads, knowing that 2 + 2 = 4, recognize friends and so on. System 2 can help us analyze complex problems, do mathematical exercises, solve crossword puzzles and so on. Although system 2 is useful, effort and to hire him. Thus, it tends to take shortcuts by behest system 1. For example, syllogism,All roses are flowers. Some flowers quickly fade. Therefore, some roses quickly.is that the vast majority of students consider accurate. Of course not. They fool us because we intuitively know that roses are fading. But this syllology is not a statement about the world; It's about logical relationships. The energy required by system 2 to fully analyze statements is relatively high; System 1 jumps to the conclusion that the conclusion is true and convinces System 2. It turns out that when people first believe a false statement, it's very likely that they'll believe the arguments that support it; this is the basis for bias in validation. According to Kahneman, these are system characteristics 1: generating impressions, feelings and preferences; when confirmed by System 2, they become beliefs, attitudes and intentions automatically and quickly, with little or no effort, and without a sense of voluntary control that system 2 is programmed to mobilize attention when a particular pattern (search) is detected executes skilled responses and generates skilled intuitions, after adequate training generates a coherent pattern of activated ideas in affable memories, a sense of cognitive lightness to the illusion of truth. , pleasant feelings, and reduced vigilance (halo effect)focuses on existing evidence and invents causes and intentions of ambiguity and suppresses suspicions biased to believe and confirmeespecte emotional consistency (halo effect)focuses on existing evidence and ignores absent evidence (WYSIATI)generates a limited set of basic assessments of sets by standards and prototypes, does not integrate intensities in different scales (e.g. size to loudness)calculates more than predicted (mental shotgun)sometimes replaces an easier question for difficult (heuristics)more sensitive to changes than to conditions (appearance theory)*overweight small probability*shows a decrease in sensitivity to quantity (psychophysics)*reacts more strongly to losses than to gains (loss aversion)*framing problems with decisions closely, in isolation from the other What now follows are a summary of the major outbursts that Kahneman identifies. PrimingOur minds are wonderful ausional machines, allowing us to easily connect words like lime to green. That is why we are subject to a priming, which calls for a joint association to move us in a certain direction or action. This is the basis for nudge and advertising using positive images. Cognitive EaseWhatever is easier for system 2 is more likely to believe. Simplicity stems from repetition of the idea, clear representation, prepared ideas and even your own good mood. It turns out that even a repetition of untruth can lead people to accept it, despite this is untrue, since the concept becomes known and is cognitively easy to process. Jumping to Conclusion Our System 1 is a jumping machine to conclusions based on its conclusion on What You See Is All There Is All There Is (WYSIATI). WYSIATI is the tendency of System 1 to draw conclusions based on readily available, sometimes misleading information, and then, once adopted, to strongly believe these conclusions. The measured impact of halo effects, confirmation bias, framing effects and neglect of the baseline rate are aspects of jumping to conclusions in practice. One example is confirmation bias, where we are more open and we seek evidence that supports our beliefs, not whatsoeu ply. Rationally, we should look for evidence that contradicts beliefs because it will subject our belief system to greater scrutiny. But beyond the rigors of pure science, such an approach is unusual. (In science, one of the methodologies is the construction of the so-called no-harm hypothesis, the rejection of which proves the original claim.) By answering the easier question Often when dealing with a complex or difficult question, we turn the question into an easier one to answer. In other words, we use heuristics; for example, when asked how happy you are with life, we answer the question: What is my mood now. Although these heurists (who enjoy the same root as the word eureka) can be useful, they often lead to inaccurate conclusions. The law of small numbers we have excessive faith in small samples, but our propensity to search for samples and explanations leads us to causally explain random events that are erroneous or insubtified. Even researchers like Kahneman himself fall as prey to the inadequacy of the sample size in their research. AnchorsAnchoring is a form of priming mind with expectation. An example is the question: Is the height of the highest sequoia more or less than x feet? What's your best guess about the height of the highest sequoia? When x was 1200, the answers to the second question were 844; When x was 180, the answer was 282.Availability availability occurs when we take into account an important event, recent experience or something that is particularly vivid to us, to judge. Persons running system 1 are more susceptible to availability bias than others; Especially:when they are involved in another gruelling task at the same time that they are in a good mood because they have just thought of a happy episode in their life in which they achieve low scores on the scale of depression, they are educated beginners on the subject of the task, as opposed to real experts when they achieve high scores on the scale of faith in intuition or whether they are (or are made to feel) powerfulRepressiverepression is the place where we use stereotypes that help us judge probabilities. For example, you see a person reading New York in the subway. Which of the next better bets on reading to a stranger? 1) She has a PhD 2) She does not have a college degree. The sin of representativeness is where we might choose a different answer, although the likelihood of a PhD on the subway is far lower than people without degrees. While a simple example, one way to resist the temptation of representativeness is to consider the basic rate (in this case, the rate of doctorate versus nedikdukes) and from that judgment. Less is MoreGiven's description: Linda is thirty-one years old, alone, open and very bright. Direction philosophy. As a student, she was deeply concerned about issues of discrimination and social justice, and participated in anti-nuclear demonstrations. Which alternative is more likely? Linda's a bank account. Linda is a bank star and active in the feminist movement. In this case, the additional detail that Linda is active in the feminist movement in Response 2 only serves to make the likelihood less likely, as it imposes more restrictions. But because of the accompanying narrative, we like the second option, although it is less likely. That's why less is more. Causing Trump's statisticsOt the finding of many researchers is that people are poor statistical arguments and have a limited ability to think in the bayesian framework, even when supplied with apparently relevant background data. Bayesian conclusion is a widely used method for predicting probability given the previously known condition. For example, he uses an example: A taxi was involved in a car accident at night. Two taxi companies, Green and Blue, operate in the city.85% of the taxis in the city are Green, and 15% are Blue.And the witness identified the taxi as Blue. The court examined the reliability of witnesses under the circumstances that existed on the night of the accident and concluded that the witness correctly identified each of the two colours 80% of the time and failed 20% of the time. What's the likelihood that the cab involved in the crash was blue, not Green? A lot of people seem to ignore the first fact, which defines the basic rate of green and blue taxis. Kahneman doesn't go into details on how to make calculations, but that's the application of bayes' rule. For humor,A = Cabin is blue, B = Cabin is identified as blue; therefore, =A = The cabin is green, ...B = The cabin has been identified as green. So we have:P(A) = 0.15, P(A) = 0.85, P(B| A) = 0.8, P(&[B||A) = 0.8, P(B||A)= 0.2, P(&P). A) = 0.2To, we want to know, P(A| B) = P(B| A)P(A)/P(B),i.e. And, we know from the theorem of the overall probability that P(B) = P(B| A)P(A) + P(B|A)*P(A).A). Therefore, by replacement, we get:0.8*0.15/[0.8*0.15 + 0.2 *0.85] = 0.41, or 41%. This bayesia thinking is coming in many practical situations, such as the calculation of the medical diagnosis of the individual, where there is a basic rate of disease in the population and a test that is, for example, 95% effective in recognizing the disease. Kahneman quotes two well-known social scientists (Nisbett and Borgida): The unwillingness of the subjects to conclude about a special general was aligned only with their willingness to imagine a general from a certain. The regression to The Middle Order is a statistical fact that each test sequence will eventually merge with the expected value (i.e. mean). Unfortunately, we often look for causal reasons to explain happy stripes and other sequences of seemingly meaningful numbers. When we are further decorated with other details such as hot hands, we tend to find causal explanations. Kahneman further describes even more mental flaws, such as: The Illusion of Understanding: We construct narratives to help understand and sense the world. We're looking for causality where it doesn't exist. Illusion of validity: pundits, stock pickers and other experts develop an outsized sense of expertise. Expert intuition: algorithms, even seemingly primitive, are applied to discipline often outdo experts. Autumn planning: these menus affect many occupations and stem from plans and forecasts that are unrealistically close to the best case; and do not take into account the actual results of similar projects. Optimism and entrepreneurial misconception: most people are too confident, prone to neglecting competitors and believe they will surpass the average. Bernoulli, The Expected Theory of Usefulness and PerspectiveKahneman criticizes Bernoulli, who nearly 250 years ago supported the Utility Theory, which essentially explains people's choices and motivations with the usefulness of outcomes. But the election was not only a mathematically determined value, but also a psychological value, a usefulness. Here people operate in disinclined ways of risk, preferring safe bets on risks, even bets that are mathematically equivalent (e.g. winning $500 directly; or a 50% chance at $1000). Furthermore, the usefulness is in relation to the wealth or poverty of the individual. And, explains why all other things are equal, the poorer the person will buy insurance to shift the risk of loss to the richer. so far so good. However, Kahneman points out that Bernoulli's theory is falling apart because it does not take into account the initial reference state. For example, Anthony's current fortune is a million. Betty's current fortune is $4 million. Both are offered a choice between gambling and safe stuff. Gambling: equal chance of you eventually owning a million or 4 million; or, sure thing: own 2 million safely. At Bernoulli's account, Anthony and Betty face the same choice: their expected wealth will be 2.5 million if they take the cube and 2 million if they prefer Option. Bernoulli would therefore expect Anthony and Betty to make the same choice, but this prediction is incorrect. Here again, the theory fails because it does not allow for the different reference points from which Anthony and Betty consider their options. Betty's going to lose a lot of her fortune and she's going to be unhappy no matter what. Anthony is elated because he wins, too, regardless. In Bernoulli's theory, you only need to know the state of wealth to determine its usefulness, but in perspective theory you also need to know the reference state, that is, the initial conditions. They also describe an aversion to the loss of most people and when faced with the possibility of loss, people will take greater risks in an effort to avoid loss, even if mathematically, they would not be any better or even worse. This explains why people caught up in desperate situations seem to engage in riskier behavior: people who face very bad options are desperate to gamble, accepting the high likelihood of making things worse in exchange for little hope of avoiding a big loss. The effect of the grantMajor people are familiar with one aspect of the effect of the underdesting, the sung cost. With experience and training, people like retailers can overcome the sunk cost or the impact of borrowing. The key difference appears to be whether the goods are held for trading or for use. In the latter case, the sunk costs or effects of the grant are higher. Loss of AversionAnother measured occurrence is an aversion to loss. It permeates much of life, including regulations and reforms that remove the benefits of one group in favour of another, although this can result in an overall increase in utility. People are not rational The standard treatment of actors in economics is to take on rationality. But it turns out that people aren't entirely rational. They generally prefer safe things; have a tendency to appreciate the removal of risks in relation to rational reduction to an acceptable level. People attach value to gains and losses (i.e. change) rather than wealth itself. Fourfold PatternProspect Theory is summarised in the following table: Kahneman says it's best: The top left is the one Bernoulli was talking about: people take a look at the odds with a significant chance of making a big gain. They are willing to accept less than expected gambling values in order to lock in a safe gain. The effect of the options in the lower left cell explains why lotteries are popular. When the main prize is very large, ticket buyers look indifferent to the fact that their chance of winning is insignificant. ... The lower right cell is where insurance is purchased. People are willing to pay much more for insurance than expected - which is how insurance companies cover their costs and make money. ... eliminate care and buy peace of mind. ... Many unhappy people in the upper right cell. This is where people who face very bad options are desperately gambling, accepting the high likelihood that they will make things worse in exchange for little hope of avoiding a big loss. Risk-taking of this kind often turns manageable failures into disasters. The thought of accepting a great safe loss is too painful, and the hope for complete relief is too tempting to make a sensible decision that it is time to reduce losses. This is where companies that lose ground under their feet because of cutting-edge technology are spending their remaining assets in futile attempts to catch up. Since defeat is so hard to accept, the losing side in wars often struggles long after the point where the other side's victory is safe, and it is only a matter of time. Frames ReferenceSHow the problem is framed makes a big difference in perceptions and solutions. It illustrates the famous MPG Illusion. Think of two car owners who seek to reduce their costs:Adam switches from a 12mpg gas-guzzler to a slightly less voracious guzzler that runs at 14 mpg. Environmentally virtuous Beth switches from a 30 mpg car to one that runs at 40 mpg. Suppose both drivers travel the same distances over a year. Who will save more gas by switching? You almost certainly share the widespread intuition that Beth's action is more significant than Adam's: she reduced mpg by 10 miles, not by 2, and by a third (from 30 to 40), rather than a sixth (from 12 to 14). Now engage your system 2 and turn it down. If both car owners drive 10,000 miles, Adam will reduce his spending from a scandalous 833 gallons to a still shocking 714 gallons, for savings of 119 gallons. Beth's fuel use will drop from 333 gallons to 250, saving just 83 gallons. The mpg box is wrong, and should be replaced by a box of gallons per mile (or liters per-100 kilometers, which is used in most other countries). As Larrick and Soll point out, the misleading intuitions that fuel the MPG framework are

likely to mislead policymakers as well as car buyers. Overweight RecentPeople tend to be overweight by recent experiences, and the positive or negative perception of one is disproportionately determined by the last episodes of the overall experience. Therefore, a holiday that starts badly, but has a pleasant ending, will probably be remembered favorably; the opposite sequence may jeopardise the overall experience, even if objectively bad parts were not of a larger duration in both cases. Kahneman's book is an important summary for the general reader of advances in behavioral psychology over the last 40 years. The main criticism could be that he has torn his hairs apart and applied a precise interpretation to issues such as linda's problem that normal people in everyday life wouldn't. In fact, people use their contextual and cultural knowledge to form insights that go beyond the obvious Case. That would be the simplest sympathetic explanation of Linda's problem or less is more. Indeed, too precisely parsing statements are often seen as a failure or a suggestion of a lack of social skills. For example, taking a task to someone to use a word literally for figuratively today seems meticulous. Yet this is the nature of science: to ask precise questions in order to successively narrow what remains ambiguous. Kahneman shows a rational animal favored by Plato, Aristotle and the Enlightenment, in a different light: a product of our evolutionary environment and in many ways ill-equipped to deal with a rational, scientifically based, logical world. Worse, we are at constant risk of repeating the same cognitive errors and bias, easily manipulated and intertwined with irrational beliefs and fears. In a reality dominated by science and statistics, most of humanity lacks basic knowledge and experience to progress. In fact, a small minority with these abilities can manipulate others and command great wealth. Wealth.