

## Easy money or a golden pension? Integrating economics and psychology

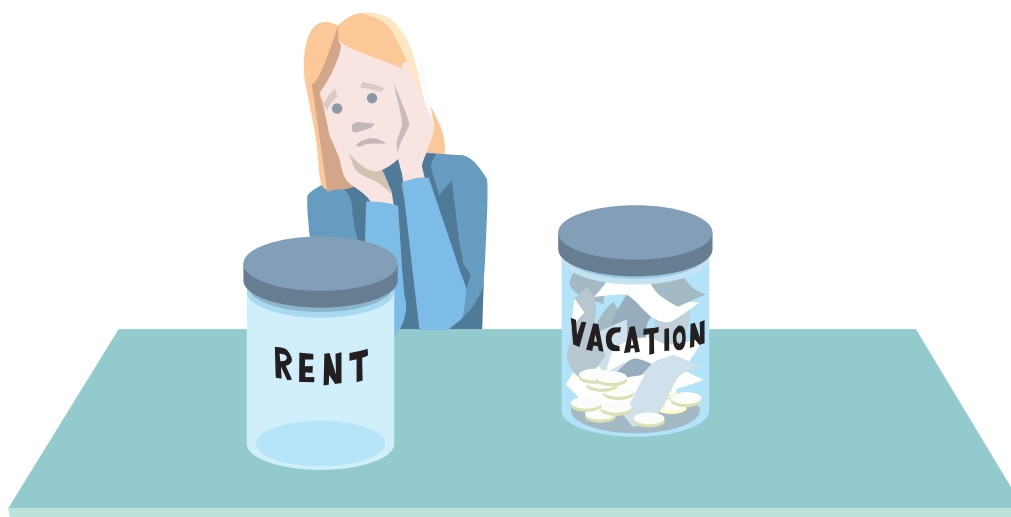
*The American economist Richard H. Thaler is a pioneer in behavioural economics, a research field in which insights from psychological research are applied to economic decision-making. A behavioural perspective incorporates more realistic analysis of how people think and behave when making economic decisions, providing new opportunities for designing measures and institutions that increase societal benefit.*

Economics involves understanding human behaviour in economic decision-making situations and in markets. People are complicated beings, and we must make simplifying assumptions if we are to build useful models. Traditional economic theory assumes that people have good access to information and can process it perfectly. It also assumes that we can always execute our plans and that we only care about personal gain. This simplified model of human behaviour has helped economists to formulate theories that have provided solutions to important and complicated economic problems. However, the discrepancies between theory and reality are sometimes both systematic and significant. Richard Thaler has contributed to expanding and refining economic analysis by considering three psychological traits that systematically influence economic decisions – limited rationality, perceptions about fairness, and lack of self-control.

### Limited rationality

It is not realistic to assume that people, before each economic decision, consider every feasible alternative and all its long-term consequences. This is quite simply an insurmountable task, so decisions are often taken using a narrow focus. Economics Laureate Herbert Simon developed the concept of *bounded rationality* – limited rationality – as a collective term for organisations' and people's cognitive limitations and simplified decision-making rules. One example of such limitations is found in Richard Thaler's theory of *mental accounting*, which describes how people organise, formulate, and evaluate financial decisions. We tend to simplify such decisions by creating separate accounts in our minds, making individual decisions on the basis of their effect on each of these accounts rather than on our total assets. One example is how many people divide their household budget into one account for household bills, another for holidays, etc., with rules that prevent using money from one account to pay for something in another. This behaviour sometimes leads to extra costs, such as not using money from long-term savings accounts for short-term needs, instead taking out expensive consumer loans. At the same time, this can help us to plan our finances and protect long-term savings.

Another element of mental accounting is that we use reference points to help us make decisions. These differ from situation to situation, i.e. between different mental accounts. One reference point could be the price for which we bought an item, or the lowest price we find when searching on the internet, and we use this reference point to assess whether we have made a "good deal". In his research, Thaler has provided numerous examples of how mental accounting using differing reference points may lead to decisions that appear strange when evaluated from a traditional economic perspective.



To manage the many financial decisions in our lives, we often organise them in separate accounts in our minds. The theory of mental accounting demonstrates the unintended problems that may result.

One example is a consumer who finds out that the watch she is about to buy is 100 Swedish krona cheaper in another shop. She chooses to go to the other shop if the watch costs 1,000 krona but won't do so if it costs 10,000 krona even though the saving in krona is the same. The explanation is that she focuses on the percentage, rather than on the actual saving relative to the reference point. Another example, taken from a well-known study by Thaler and a number of co-authors, is a taxi driver who must weigh his working hours against his free time and family. The driver solves this by setting targets for his daily income, and finishing for the day once he has reached this target. However, such a rule entails that the driver finishes early when there are many customers and the hourly income is high, and has to work longer days when demand is low. With a different rule, he could earn more while working less and the city would have more taxis on days when many people need them.

Other factors that govern our decision-making are previous experience and our perceptions of ownership itself. We normally want more money for selling something we own than we are prepared to pay in order to buy exactly the same item – a phenomenon that Thaler calls the *endowment effect*. One of many documented examples is a famous experiment from 1990, conducted by Thaler with Laureate Daniel Kahneman and Jack Knetsch. In the experiment, a number of decorative mugs were handed out to a group of randomly chosen test subjects, who were then allowed to choose whether they wanted to sell the mug to someone in a second group who had not received a mug. Because the two groups were randomly selected, on average they should value the mugs equally highly, and around half the mugs should be sold. However, it turned out that, on average, those who happened to get a mug valued it more highly than the people in the control group who had not received one, and far fewer than half the mugs changed hands.

The endowment effect can have long-term consequences, such as reducing trade in goods and services and making legal disputes more difficult to resolve. Thaler's explanation for the endowment effect is based upon how people tend to experience the negative feeling of a loss more strongly than the positive sense of an equally large gain, known as loss aversion. Giving up something we already own is experienced as a loss, while acquiring the same thing is experienced as a gain.

More generally, what we define as a gain or a loss depends on where we place the reference point, which is therefore important for our decision. For example, discount sales make consumers place the reference price higher than they otherwise would, and they thus perceive a purchase as a better deal than if the item was sold at the same price but not in a sale. Another example is that an investor in the stock market does not define a deal as a profit or loss until the shares are actually sold. This leads to investors generally holding on to losing shares for a long time in the hope that “it’ll get better”, and selling winning shares too soon in order “to bring home the profit”, despite it often being more advantageous to do things the opposite way (for tax reasons, for example).

Our own experiences also influence the risks we are willing to take. Someone who has recently gained money on the stock market or at a casino tends to take greater risks than someone who has recently lost money. It is less painful to lose if we are still “in the black” in our mental account, even if circumstances are otherwise the same (something Thaler calls the *house money effect*).

### Social preferences: what is fair?

When making decisions, people not only take what is beneficial to themselves into account. They also have ideas about what is fair, and they can consider other’s welfare in both a positive way – through cooperation or solidarity – and a negative way – such as through jealousy or malice. Large-scale experiments conducted by Richard Thaler and other behavioural economists, have shown that notions about fairness play a major role in decision-making. People are prepared to refrain from material benefits to maintain what they perceive as just distributions. They are also prepared to bear a personal cost for punishing others who violate basic fairness rules, not only when they themselves are affected but also when they see someone else affected by injustice.

One frequent objection is that results from laboratory experiments cannot be transferred to real life, but it is easy to find examples where fairness considerations have an impact outside the laboratory. Unexpected rain can create an unexpectedly high demand for umbrellas, but if a shopkeeper then raises their price to match the high demand, many consumers react negatively and feel that the shopkeeper has behaved greedily. Companies that contravene fairness norms may be punished by



Unexpected rain increases demand for umbrellas, but a salesperson who exploits the situation will not be popular.

consumer boycotts, which may get them to maintain their prices in cases where they would otherwise have raised them. Additionally, there are strong feelings about what is fair when it comes to pay, which affects wage setting on the labour market through comparisons between different employee groups. It is difficult to gain acceptance for nominal pay cuts – their current salary level is the given reference point below which people do not want to drop – while it is easier to accept a nominal wage increase that is lower than inflation, even though this entails a pay cut in real terms.

## Odysseus and the Sirens

In the twelfth song of the *Odyssey*, Circe warns Odysseus about the Sirens, who lure sailors with their enchanting singing. Odysseus who, like his crew, wanted to return home to Ithaca, solves the problem by plugging the crew's ears with beeswax and then tying himself to the mast, with strict orders to the crew to ignore whatever he says until they are out of harm's way. Odysseus' problem is the epitome of this dilemma at all levels of our life, when we are tested by short-term temptations that threaten long-term wellbeing. This could be food and drink, smoking, consumption, saving for distant goals, or post-retirement planning. A person who chooses a longer education has a lower income during their studies, but can in return look forward to benefits in the future.

Experiences that are close in time take up more of our awareness than those that are further off; a thousand krona next year is perceived as worth less than a thousand krona today, regardless of whether it is an income or an expense. In traditional economic theory this is described using discounting – the assumption is that both income and expenses reduce by a constant factor with every passing month or year. Using such an assumption, the ranking of two future alternatives will always remain the same.



The myth of Odysseus and the Sirens is about the tension between the long-term, planning self and the short-term, pleasure-focused self.

However, as Odysseus' dilemma demonstrates, it is possible to change your mind when choosing between two options. The explanation is that experiences that are close in time take up more of our awareness – we discount more rapidly early on.

Richard Thaler has, together with Hersh Shefrin, created an alternative model for describing the dilemma caused by the internal tension between a planning self and a doing self (*planner-doer*). The planning self thinks and makes decisions with the aim of long-term happiness, while the doing self is governed by more short-term goals. This division has been adopted in modern psychology and is also supported by recent research in neuroscience. As in the example of Odysseus, the solution to the dilemma is often about helping the planning self in some way, by removing short-term courses of action. This deviates from traditional economic theory, in which more potential courses of action are always better than fewer. In some cases, people manage to exercise restraint without help – mental accounting can, for example, be a way of avoiding short-term extravagances. In other cases, society may need to help the planning self by designing regulations and institutions that encourage behaviour that has a longer-term perspective.

## Behavioural economics in practice

Behavioural economics has also questioned rational behaviour as it applies to areas such as financial markets. Richard Thaler, along with Laureate Robert Shiller, established the research area of *behavioural finance*, in which researchers have documented apparently unjustified market volatility that seems incompatible with the theory of effective markets. Thaler has also documented what amounts to negative market values for shares – which is unreasonable, because you can always discard a share that has no value. Experiments with test subjects who can choose between different investments show that people are sensitive to the choice of time horizon. Investors tend to prefer low-risk securities over short time horizons, but when they are presented with the potential results of various investments over a longer time horizon, they are more likely to choose higher risk securities, such as shares.

Common marketing practices can be understood as taking advantage of consumer irrationality. Discounts or exhortations of the type “buy three, pay for two” give consumers a sense of having gained and so move the reference point for evaluating the price. Lotteries and betting are marketed through overexposing the rare winners and covering up the multitude of losers. Many consumers are lured into taking loans with disadvantageous terms so they can buy an item they cannot actually afford. Thaler's research is frequently cited in marketing literature and his insights, and those of other behavioural economists, can help us recognise marketing tricks and avoid unfavourable economic decisions.

In many situations, the planning self needs help to withstand temptation. Such considerations are behind many countries' restrictions on alcohol and drugs, but in other contexts such restrictions are regarded as too far-reaching. Research in behavioural economics can be used by politicians and other decision-makers to design alternatives that provide benefits to society. Richard Thaler and Cass Sunstein have argued that, in more areas, both public and private institutions should actively (but with maintained freedom of choice) try to *nudge* individuals in the right direction. Among other things, this has led to the introduction of *nudge units* in several countries, including the UK and the USA, agencies that aim to reform public administration through the use of behavioural economic insights. Improvements often involve simple things, such as how the default option is defined – the one that is the result unless you actively choose something else. There are applications in fields such as pension savings, organ donation and environmental policy. People may feel it is difficult to save more than they currently do, because it directly reduces how much they can consume today. It is often easier to promise to save more in the future, particularly if they expect their salary to increase. This insight has been used in the “Save More Tomorrow” programme, designed

by Thaler and Shlomo Benartzi as a means of increasing individual occupational pension savings. The programme, in which an individual commits to allocating a share of future salary increases to savings, has been successfully used at a number of companies in the USA. In some quarters, this type of programme has been criticised for being paternalistic, but it is essential that joining the programme is completely voluntary and that participants are free to opt out from it at any time.

In total, Richard Thaler's contributions have built a bridge between the economic and psychological analyses of individual decision-making. His empirical findings and theoretical insights have been instrumental in creating the new and rapidly expanding field of *behavioural economics*, which has had a profound impact on many areas of economic research and policy.

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## LINKS AND FURTHER READING

Additional information on this year's prizes, including a scientific background in English, is available on the website of the Royal Swedish Academy of Sciences, [www.kva.se](http://www.kva.se), and at <http://nobelprize.org>. There you can watch video footage of the press conferences, the Nobel Lectures and more. Information on exhibitions and activities related to the Nobel Prizes and the Prize in Economic Sciences is available at [www.nobelmuseum.se](http://www.nobelmuseum.se).

### Books

**Thaler, R. H.** (2015), *Misbehaving. The making of behavioral economics*. New York: W.W. Norton & Company.

**Thaler, R. H., Sunstein, C.R.** (2008), *Nudge: improving decisions about health, wealth, and happiness*. New Haven: Yale University Press.

### Popular science articles

**Thaler, R. H.** (2015) Unless You Are Spock, Irrelevant Things Matter in Economic Behavior, *The New York Times* [www.nytimes.com/2015/05/10/upshot/unless-you-are-spock-irrelevant-things-matter-in-economic-behavior.html](http://www.nytimes.com/2015/05/10/upshot/unless-you-are-spock-irrelevant-things-matter-in-economic-behavior.html)

### Video

**Lecture by Thaler, R. H.** (2016) Richard Thaler on Behavioral Economics: *Past, Present and Future*, Dietrich College of Humanities and Social Sciences [www.youtube.com/watch?v=TJrpN5INvcs](http://www.youtube.com/watch?v=TJrpN5INvcs)

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## The Royal Swedish Academy of Sciences has decided to award the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2017 to

### **RICHARD H. THALER**

Born 1945 in East Orange, NJ, USA.

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*“for his contributions to behavioural economics”*

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