

Richard Thaler wins the Nobel prize for economic sciences

An economist who recognises that human behaviour is not always strictly rational

The Economist Print edition | Finance and economics Oct 14th 2017

THE credit-card bill arrives. You have enough money in a savings account to pay it off—the sensible thing to do, arithmetically speaking, since the interest rate on the credit-card balance far exceeds that earned on the savings. Yet you leave the savings untouched, and pay only as much of the bill as your current-account balance allows. What looks a daft choice to most economists makes perfect sense to Richard Thaler, who on October 9th was awarded the Nobel prize for economics for his work in behavioural economics. Mr Thaler helped demonstrate how human reasoning diverges from that of the perfectly rational homo economicus used in most economic modelling. The world, and the field of economics, is better for his contributions.

Economists mostly recognise that normal people fall short of perfect rationality in day-to-day decision-making. Economic modelling requires simplification, however, and economists generally suppose that theories assuming people are well-informed and rational offer the best available account of economic activity. Over time, however, scholars have built up an imposing list of the ways in which humans systematically refuse to behave as the models predict. Economists such as Herb Simon (who won the Nobel in 1978), Daniel Kahneman (2002) and Robert Shiller (2013) are celebrated for their contributions to this effort. But perhaps more than any other scholar, Mr Thaler lifted behavioural economics to prominence, and helped put its lessons into practice.

Mr Thaler, an American born in New Jersey in 1945, spent most of his early career at Cornell University before moving to the University of Chicago in 1995. Unusually for an economist, he is known for the clarity of his ideas and the quality of his writing. “Nudge”, a book co-written with Cass Sunstein, is both an extraordinarily influential work and a bestseller. Its lessons have been adopted by governments across the world; “nudge units” in America and Britain studied how to boost saving and taxpaying, encourage healthy behaviour and reduce energy use.

“Nudge” drew on years of work by Mr Thaler and co-authors identifying oddities in human behaviour. Setting out to explore why people feel losses more keenly than gains, he helped uncover the endowment effect: a tendency to value something more highly just because you own it. To detect it, he distributed coffee mugs at random to half of a group of test subjects, who were then invited to sell the mugs, if they wished, to the other, mugless half. Theory would predict that those with and without mugs should value them the same, on average, and so about half of the mugs should change hands. In fact, those with mugs valued them more than those without. Offers to buy the mugs by the have-nots were usually too low to convince the haves to sell, and relatively few transactions took place. This finding, since replicated many times, suggested that the context of an economic choice matters. That, in turn, means that the way choices are framed, by firms or governments, can influence how people respond.

The importance of context also arose in Mr Thaler's work on "mental accounting". In thinking about money, people tend to compartmentalise, grouping certain types of spending or income together. In some cases this might amount to a strategy for managing imperfect self-control (as in the credit-card debt example). More broadly, it reflects the human tendency to tackle cognitive problems in pieces, rather than as a whole. When petrol prices fall, for example, drivers sometimes switch from regular-grade petrol to premium (rather than use savings out of the "petrol" category somewhere else). Because of this mental pigeonholing, taxi drivers who aim to earn a certain amount each day may stop work early on busy days and later on slow ones, though the opposite approach would maximise earnings per hour.

Mr Thaler, with his colleague Hersh Shefrin, understood choices as battles between two competing cognitive forces: a "doer" part of the brain focused on short-term rewards, and a "planner" focused on the long term. Willpower can help suppress the doer's urges, but exercising restraint is costly. This internal struggle is continuous, so individual preferences are not constant over time (whether you have another beer may depend on the state of the brain at a given moment). It also means that presenting people with a "choice architecture" which favours the planner over the doer can have big effects on behaviour. That insight became the basis for "nudging". Making enrolment in pension plans the default for new employees (ie, they must decide to opt out rather than opt in) dramatically increases the share of employees saving through such programmes, for example.

Mr Thaler, with Mr Kahneman and Jack Knetsch, also worked to understand the role of fairness in judging economic outcomes. They conducted experiments in which a student chosen at random was asked to divide \$20 between himself and another subject. Only rarely would the student keep most of the money, as pure rationality suggests he should. Similarly, the authors used surveys to show that people find practices like price gouging in the wake of disasters unfair. In some multi-round experiments players chose to punish participants who acted selfishly in early rounds, even if that meant accepting a lower payout themselves.

Best laid plans

These insights—that people care about fairness, find self-control hard and hate losing what they already have—may seem trivial outside the strange world of economics. In fact, the greatest contribution of behavioural economics may have been to nudge the field away from attempts to extrapolate grand theories from basic rules of individual behaviour. Today ambitious economists are quite likely to immerse themselves in empirical work focused on specific policy questions. That is a legacy worth treasuring, however you do the mental accounting.

This article appeared in the Finance and economics section of the print edition under the headline "Reasonable doubt"

The 2017 Nobel prizes

The Nobel in economics rewards a pioneer of “nudges”

Richard Thaler becomes one of very few behavioural economists to receive the discipline's highest honour

Oct 9th 2017 by K.K.

NOT long ago, the starting assumption of any economic theory was that humans are rational actors who maximise their utility. Economists summarily dismissed anyone insisting otherwise. But over the past few decades, behavioural economists like Richard Thaler have progressively chipped away at this notion. They combine economics with insights from psychology to show how heavily economic decisions are influenced by cognitive biases. On October 10th Mr Thaler's work was recognised at the highest level when the Nobel Committee awarded him this year's prize in economics. Mr Thaler thus becomes one of very few behavioural economists to win the prize.

Mr Thaler's has been a prolific career, spanning over four decades, the last two of them at the University of Chicago's Booth School of Business. His research has touched on subjects as varied as asset prices, personal savings and property crime. For example, Mr Thaler developed a theory of mental accounting, which explains how people making financial decisions look only at the narrow effect of individual decisions rather than the whole effect. (Indeed, he is one of the founders of the sub-discipline of behavioural finance.) The Nobel committee also highlighted Mr Thaler's research on self-control, that is, the tension between long-term planning and short-term temptations.

The new laureate has also worked to bring his arguments to a wider audience. For the benefit of fellow economists not well versed in (or dismissive of) behavioural theories, he wrote a regular column for the *Journal of Economic Perspectives*, a prestigious journal, recounting instances of economic behaviour that violated classical microeconomic theory. For a general audience, he wrote several books on behavioural economics, starting with “Quasi-Rational Economics” in 1991.

But Mr Thaler is perhaps most famous as a pioneer of “nudging”: the use of behavioural insights as a public-policy tool. Although the idea of nudging is not new, and firms have long employed behavioural science to shape their customers' behaviour, governments of the past used psychology only sporadically.

That started to change when Mr Thaler and Cass Sunstein, a legal scholar at Harvard University, co-authored a book, “Nudge”, in 2008. The book attacked the assumption of rational decision-making in economic models and showed how context could be changed to “nudge” people to make better choices. In 2010 Mr Thaler advised the British government on the creation of the Behavioural Insights Team, a

unit that sought to put their ideas into practice. The wildly successful government unit has since been spun out into a quasi-private company and now advises governments around the world.

From a renegade offshoot within economics departments just a few decades ago, behavioural economics has gained an established place not only within academia, but also within government departments around the world. From Australia to America, as well as within organisations like the World Bank and UN, the “nudging” approach has been copied. The Nobel Committee’s decision to honour Mr Thaler is of course a recognition of his personal achievements. But it is also a testament to the newfound importance of his discipline.

Averse to reality

Economics relies on a standard theory of how people deal with risk. This theory is obviously wrong

Aug 9th 2001

Timekeeper

A GREAT deal of economic theory turns on how people cope with risk—one of the least escapable facts of economic life. The model that most economists rely on when they need to take account of risk in their pure or applied research is expected-utility theory. The trouble is, this theory has implications so absurd that it cannot be true.

People are commonly observed to be “risk averse” in everyday life—that is, they reject better-than-fair gambles. Suppose you were offered a 50-50 bet that paid you \$11 if you won and cost you \$10 if you lost. Given the odds and the pay-offs, the expected return for accepting this bet is 50 cents (50% of \$11 less 50% of \$10); and since this is a positive number, the gamble looks attractive. The fact that many people do turn down such bets does not trouble expected-utility theory. It has an explanation: diminishing marginal utility. As your wealth rises, each extra dollar is worth less to you than the previous one. Because the utility of extra wealth declines, it is not necessarily illogical to attach a lower subjective value to the upside of the gamble (50% of \$11) than to the downside (50% of \$10). All seems well: the facts and the theory sit comfortably together.

Unfortunately, if you think about it, they do not, as Matthew Rabin of the University of California, Berkeley, and Richard Thaler of the University of Chicago point out in a recent article*. Consider the bet described in the previous paragraph, and imagine some unremarkably risk-averse person who turns it down. Now ask yourself this: knowing nothing else about the person, and assuming expected-utility theory to be true, how big a prize would you need to offer in a 50-50 bet to persuade him to risk losing \$100?

Knowing he turned down the \$11 prize, you might guess it would have to be more than \$110. Would \$220 be enough? The expected pay-off of that bet would be \$60 (50% of \$220 less 50% of \$100). Looks good—yet our putative risk-avoider would still turn it down. Things get worse. What about \$2,000? He would turn that down as well. All right, \$20,000. No, still too risky. Very well, \$2m; wait, what the heck, \$2 billion. Still no. Given only what you know about this risk-avoiding person, plus the truth of expected-utility theory, you are forced to conclude that he will reject any 50-50 bet costing \$100, regardless of the prize.

Risk-aversion of this degree is literally insane—yet rational, according to the theory. What is going on? To understand what the theory is doing, as Mr Rabin and Mr Thaler explain, you need to follow along with some arithmetic. Suppose that the person's initial wealth is W . Then rejecting the original lose-\$10 gain-\$11 bet implies that on average he values each of the dollars between W and $(W + 11)$ by at most ten-elevenths of the average value he puts on dollars between W and $(W - 10)$. This implies that the value he puts on the $W + 11$ th dollar is at most ten-elevenths of the value he puts on the $W - 10$ th dollar. In effect, then, our subject's marginal utility of wealth falls as his wealth rises, and rises as his wealth falls, at a rate of around 10% for every change of \$21. This phenomenally powerful multiplier so inflates the value he attaches to a loss of \$100, and so deflates the value he attaches to any gains, that no gain can be big enough to make the bet seem attractive.

The absurdity, as Mr Rabin and Mr Thaler emphasise, is not a trick reflecting particular assumptions, but is wired into the standard theory. “Expected-utility theory says risk attitudes derive solely from changes in marginal utility associated with fluctuations in lifetime wealth. Hence, the theory says that people will not be averse to risks involving monetary gains and losses that do not alter lifetime wealth enough to affect significantly the marginal utility one derives from that lifetime wealth.” The theory, in other words, implies that people should be risk-neutral towards gambles involving small stakes—but they aren't.

Odds and ends

The question is, how to make sense of the fact that people will reject small-stake gambles and yet accept, as they are wont to, moderate-stake gambles provided the terms are good. The authors call for an approach based on two ideas (both mentioned on earlier occasions in this space): loss aversion and mental accounts.

Loss aversion is the idea that people feel the pain of a loss more acutely than the pleasure of a gain of equal size: changes in wealth, and their direction, are what count, regardless of levels. This directly explains why people turn down even very small gambles with positive expected gains. Mental accounting plays a complementary role. It is the idea that people judge financial risks in isolation, rather than alongside overall wealth and other risks. Small, better-than-fair gambles may look irresistible in relation to total wealth, because any losses will be negligible in that context; judged in isolation, especially given loss aversion, such gambles are much easier to turn down.

The authors argue that such decision isolation is pervasive, and explains many otherwise perplexing features of economic life—from the “equity-premium puzzle” to the otherwise contradictory facts that

(a) lotteries are popular and (b) people are willing to pay outlandish prices to insure themselves against easily affordable losses (as with, for instance, optional extended warranties on consumer durables). The evidence against the expected-utility approach seems overwhelming, and the broad shape of an alternative, thanks to the earlier work of Mr Thaler and others, is reasonably clear. The greatest puzzle, perhaps, is that the old theory has not yet been discarded.

*“Anomalies: Risk Aversion” By Matthew Rabin and Richard Thaler. Journal of Economic Perspectives, Volume 15, Number 1.