

## Putting economics back into behavioural

Behavioural economics has grown in influence and respectability over the past decade. Teams tasked with implementing the lessons from behavioural economics have grown rapidly in the public sector. University courses in behavioural economics at Masters' level are now widely available. Private sector organisations, such as banks and insurance companies, increasingly hire people with specific training in behavioural economics. Consultancies with a particular focus on behavioural issues are now common.

This behavioural boom was sparked in the years after the publication in 2008 of the book "Nudge: Improving Decisions About Health Wealth and Happiness" by Richard Thaler and Cass Sunstein. The book was influential. Not only was it required reading for many in government, but some of the approaches suggested in the book were tried and then adopted by a number of governments. The UK coalition government under Prime Minister David Cameron was one of the first to do this with the establishment of the Behavioural Insights Team in 2010. The influence of the book is implicitly recognised by the team's colloquial name of the "nudge unit". More formal links can be recognised given Thaler was at its inception and remains an academic affiliate to the unit.

This rapid growth of behavioural approaches is to be applauded. But rapid growth and sudden popularity often carries a risk that the benefits of the new approach are over-sold. In the worst cases, the methods can be misused.

This essay argues that the limits and potential misuse of behavioural approaches need to be recognised. One way to avoid these pitfalls is to incorporate more of the basic lessons from economics into behavioural approaches. To some, that may seem a step backwards. A key reason for the popularity of behavioural approaches is that they challenged traditional approaches to economics. But if the pendulum has swung too far away from economics in the behavioural field, moving back to a less extreme position would be beneficial both for economics and behavioural approaches.

This paper is divided into five sections.

First, common definitions of behavioural economics and economics are compared, highlighting similarities between the two.

The second section places the current fervour for behavioural economics in perspective by highlighting how behavioural approaches have been part of economics for decades.

Section three focuses on the current favoured behavioural approach of nudging, arguing that the concept is more complicated than some may realise.

The fourth section questions the effectiveness of behavioural techniques, citing studies that follow the behaviour of individuals over longer time periods.

The paper concludes by arguing that behavioural approaches have made a great contribution to business and society but are not necessarily a substitute for standard economic interventions such as taxes on socially damaging behaviour.

## 1. Defining behavioural economics

There is not one accepted definition of behavioural economics. In his 2011 book on the topic, [Edward Cartwright](#) provides three within the first two pages. But the name itself implies that behavioural economics is a subset of economics in general. However, there is no single definition of economics.

A useful and wide-ranging definition of economics commonly cited is that used by Alfred Marshall. Marshall's 1890 book, *Principles of Economics*, stated "Political economy or economics is a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of material requisites of well-being."

An advantage of this definition when it comes to considering behavioural issues is that outlines the concerns about individual and social actions and their effect upon well-being. It demonstrates that economics has been concerned about behaviour for over a century.

Addressing the Allied Social Science Association (ASSA) in San Diego in January 2020, Colin Camerer recalled the [definition of behavioural economics](#) by Sendil Mullainathan and Richard Thaler in the 2001 *International Encyclopedia of the Social and Behavioral Sciences*. "Behavioral economics is the combination of psychology and economics that investigates what happens in markets in which some agents display human limitations and complications".

This has similarities with Marshall's 1890 definition. It talks about markets ("the ordinary business of life") and psychology and human limitations ("individual and social interactions").

Camerer goes on to be more specific, providing his own definition. "Behavioral economics analyses the effect of *natural* limits of computation, willpower, and self-interest on outcomes in decisions, games and markets." This is a more work-related definition outlining the topics behavioural economics focuses on. This is useful as it provides a way of thinking about how behavioural economics fits under the general definition of economics.

## 2. The origins of behavioural economics

Although considered by many to be a new field of study, the definitions above suggest behavioural issues have always been an important part of understanding economics. Much of the opinion that behavioural economics is new stems from criticism of approaches to economics that rely heavily on mathematical models. Mathematical approaches set conditions that assume people make decisions in ways that can be calculated and that individuals and institutions behave in similar ways to similar

stimuli at different times. This has been termed 'rational behaviour'. When it comes to group or economy-wide issues, the mathematical approach had the advantage of allowing ways to consider reactions to multiple factors. Feedback loops could be modelled. Internally consistent behaviour could be enforced.

A common criticism of this mathematical approach is that it reduced people and institutions – or as modellers may call them, agents – to “homo economicus” or economic man. And homo economicus was not a suitable model of how people and institutions actually behaved.

Describing homo economicus, Thaler and Sunstein wrote in *Nudge*: “If you look at economics textbooks, you will learn that homo economicus can think like Albert Einstein, store as much memory as IBM’s Big Blue, and exercise the willpower of Mahatma Gandhi. Really. But the folks that we know are not like that. Real people have trouble with long division if they don’t have a calculator, sometimes forget their spouse’s birthday, and have a hangover on New Year’s Day. They are not homo economicus; they are homo sapiens.” (p.7)

Criticism of rationality in economic modelling is nothing new. Herbert Simon was awarded the Nobel prize in economics in 1978 for his contribution to challenging theories about profit maximization in firms and his work on bounded rationality. His Nobel [acceptance lecture](#) uses the term behaviour several times and makes explicit reference to how individuals make decisions, foreshadowing what was to come into fashion some 30 years later. Simon wrote:

“Today, we have a large mass of descriptive data, from both laboratory and field, that show how human problem solving and decision making actually take place in a wide variety of situations. A number of theories have been constructed to account for these data, and while these theories certainly do not yet constitute a single coherent whole, there is much in common among them. In one way or another, they incorporate the notions of bounded rationality: the need to search for decision alternatives, the replacement of optimization by targets and satisficing goals, and mechanisms of learning and adaptation. If our interest lies in descriptive decision theory (or even normative decision theory), it is now entirely clear that the classical and neoclassical theories have been replaced by a superior alternative that provides us with a much closer approximation to what is actually going on.”

Long before being awarded the Nobel prize in 2017 for his work on behavioural economics, Richard Thaler was pointing to problems in economic theory. Beginning in 1987, Thaler wrote a quarterly column titled “Anomalies” for four years in the *Journal of Economic Perspectives*. As Thaler notes in his 2015 book [Misbehaving](#), these columns “could be documentation that supposedly irrelevant factors actually matter, or any other set of facts that were inconsistent with the standard way of doing economic theory”. (p.170). These columns were highly popular, gaining around 5,000 readers for each column when “the average article in a specialized academic journal [was] probably lucky to find 100 readers”. (p.173).

Simon and Thaler did not stand alone. It is probably no accident that Daniel Kahneman, an early pioneer of behavioural economics but a psychologist by training, was awarded the economics Nobel jointly in 2002 with Vernon Smith. Smith was cited for his work on experimental economics.

Yet later, in 2013 Robert Shiller was jointly awarded the economic Nobel for his work challenging the concept of rationality in financial markets.

Thaler and Kahneman (and Amos Tversky) are often presented as the fathers of behavioural economics. Each was highly influential but they were not on their own. The behavioural revival has many contributors and a history much longer than the past decade.

### 3. The special place of the nudge and the sludge

A distinct feature of the current revival in behavioural approaches is the development of the nudge. It is a concept that is easy to understand, comes with little cost but promises substantial benefits.

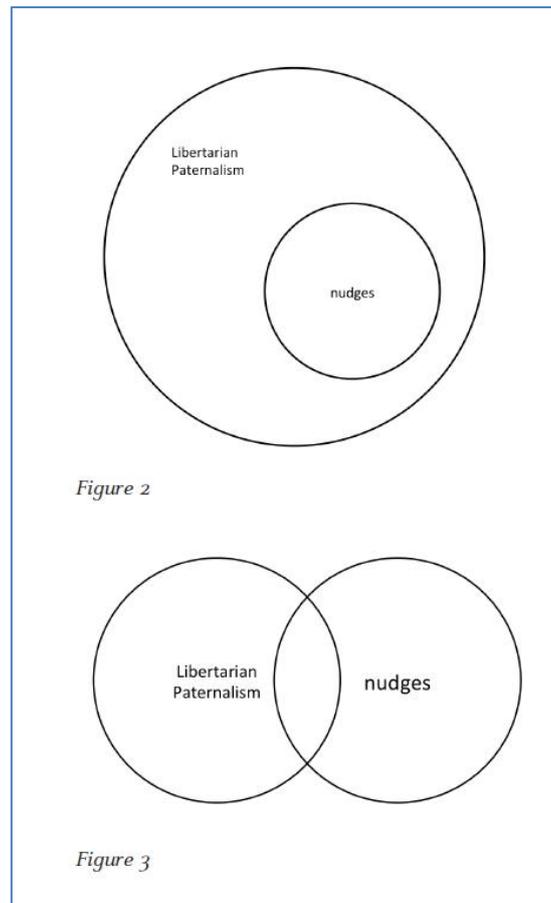
Thaler and Sunstein define a nudge as “any aspect of the choice architecture that alters people’s behaviour in a predictable manner without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting the fruit at eye level counts as a nudge. Banning junk food does not.” (Nudge p.6)

Nudging has been justified by its relationship with libertarian paternalism. Thaler and Sunstein discuss and defend this concept in a [2003 American Economic Review article](#). The article concludes by providing the following definition: “...libertarian paternalism, an approach that preserves freedom of choice but that authorizes both private and public institutions to steer people in directions that will promote their welfare. Some kind of paternalism is likely whenever such institutions set out arrangements that will prevail unless people affirmatively choose otherwise. In these circumstances, the goal should be to avoid random, arbitrary, or harmful effects and to produce a situation that is likely to promote people’s welfare, suitably defined.”

Over time, and as nudges were used more widely by groups such as the UK Behavioural Insights Team, these definitions became strained and the boundaries of nudging more blurred. How much information could be provided or certain options prioritised while avoiding forcing people to make a particular choice. Put colloquially, when does a nudge become a shove?

Pelle Guldborg Hansen tackled these issues in his 2016 article “[The definition of nudge and libertarian paternalism: Does the hand fit the glove?](#)” He noted the concepts of nudging and libertarian paternalism were related. He argued that the extent of paternalism considered acceptable affects “how nudges relate to incentives and information, and may even be consistent with the removal of certain types of choices”. Figures two and three from Hansen’s paper, which are copied below, give a sense of how the two concepts interact, depending on how one defines a nudge.

Figure 1: Illustration of potential relationships between libertarian paternalism and nudges



Source: Pelle Guldborg Hanson, *The Definition of Nudge and Libertarian Paternalism: Does the Hand Fit the Glove?*

Just as a nudge may turn to a shove in real life, practitioners in behavioural approaches recognised that nudging could be misused, leading to harmful outcomes. That is one of the reasons that Richard Thaler reputedly signs many of his books “nudge for good.” When nudges turn bad, they turn to sludge. Sunstein [argued in 2019](#) that “excessive or unjustified frictions” that cost time and make life difficult can constitute sludge and called for sludge audits. There is an implication that sludging is a matter of poor design. But there is evidence some sludges are deliberately designed to promote decisions that likely reduce the welfare of people. In fact, sludging is common.

For example, there is evidence that people on lower incomes in the US were targeted [for purchasing sub-prime mortgages](#).

In 2014, the UK Financial Conduct Authority <https://www.fca.org.uk/news/press-releases/price-comparison-websites-failing-meet-fca-expectations> found that some price comparison websites (PCWs) operating in the general insurance sector [failed to meet consumer expectations](#) and in some cases, FCA regulatory standards. The [detailed report](#) argued that “Many interpret the simple layout and presentation of information about the insurance products on PCWs as all they need to make a good decision, and a cognitive nudge not to look further.”

As recently as 2019, the owner of dating sites including Match.com, Tinder and OKCupid was sued by the [US Federal Trade Commission](#) for using fake love interest ads and “failing to provide a simple method for consumers to stop recurring charges being placed on their credit card, debit card, bank account or other financial account”.

This list could be extended and should include the common practice in business of fine tuning websites so that click-through rates and sales are increased. This is now common. Many companies constantly monitor their websites and tweak sections in ways that may not be noticed by customers. The options available to customers and the information given may change in ways that differ subtly. The customers are being nudged. The aim of these changes may be to deliver a better service but are also designed to improve sales. Well managed, this will not turn into sludge. However the marketing manager whose performance is assessed on sales can easily be incentivised to forceful and dubious techniques. In my darker moments, I fear that behavioural approaches when applied in the private sector are nothing more than marketing.

#### 4. What was promised, compared with what we got

That a technique can be misused does not suggest it should not be used. Designs that makes life difficult and deliberately set out to deceive have always been with us. It should not draw attention away from the many ways that nudging and behavioural approaches can be used to improve the delivery of services and meet the desired outcomes over a wide range of markets. The OECD behavioural insights website [lists case studies](#) ranging from consumer protection to environment and tax sourced from the 202 institutions around the world applying behavioural insight to public policy.

These successes should be applauded. It is the scale of the success and the limits of nudging that should be questioned.

Measurement is a key element in behavioural economics. Random control trials and experimentation are key research tools. It is no accident that there is a substantial cross-over between those working in the behavioural field and applied economists. The techniques they use are similar if not identical.

Measuring success is tricky. This is especially the case when it comes to tracking changes that will occur over time. When this is considered, behavioural approaches may be seen to fall short of their initial promise.

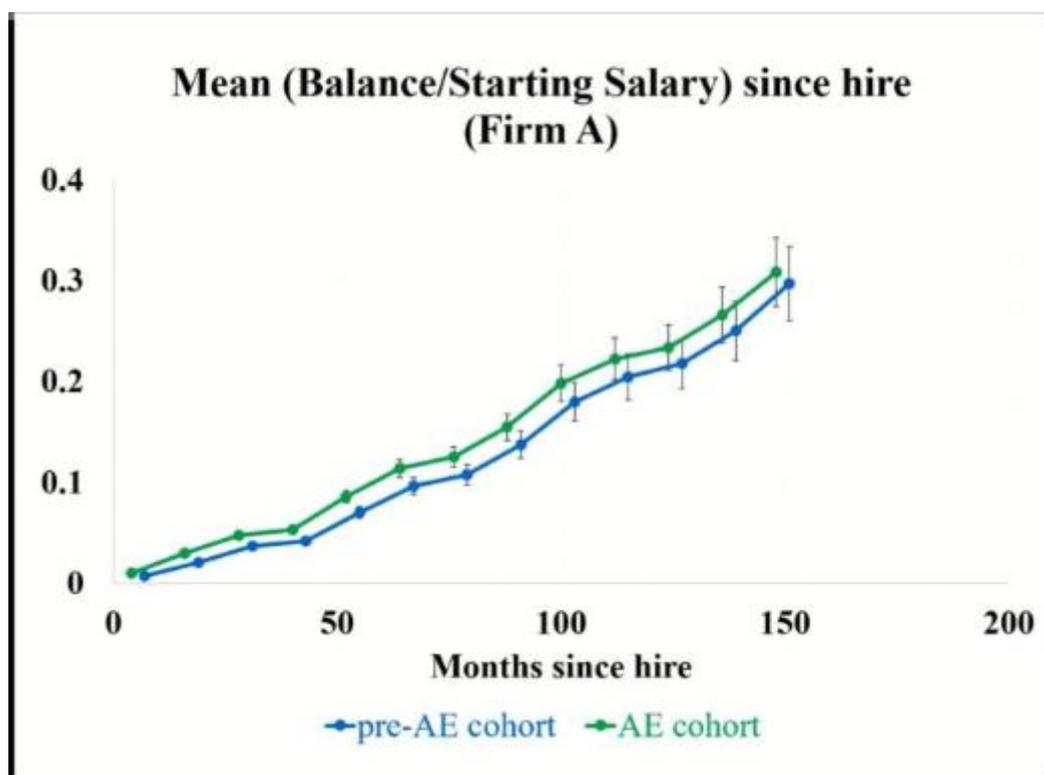
An increasing number of studies suggest that the initial positive effects of nudge can wear off over time. This was a key element of [David Laibson's presentation](#) to the American Economic Association / American Finance Association at the January 2020 ASSA conference.

One of the most effective nudges often cited has been changing default options to encourage saving into pensions in the US. The initial results were impressive. Participation rates in retirement schemes have been cited as increasing from 40 per cent to 90 per cent a year after introducing a default and average savings rates increase by one or two per cent. Variants of this, such as making a

commitment to automatically increase the amount saved by a set amount each year (the 'save more tomorrow' programme) have been shown to be even more effective.

One problem with this measurement of success is that saving for pensions occurs over many years, even decades. Success should be assessed over a similar time frame. Laibson's presentation notes more recent studies (watch from around 20 minutes into the lecture) show that the total wealth accumulated differs little between those who were in the default auto-enrolled cohort and those who entered before auto enrolment when looked at five and ten years from being hired.

Figure 2: Difference between wealth to income ratios in pension fund balances for pre auto enrolment and auto enrolment cohorts over time



Source: screen shot from 26'15" in David Laibson's January 2020 ASSA presentation

Two key reasons were offered to explain this. First, people access their pension savings for purposes other than retirement saving. This leakage can be high, especially for lower income earners. Second, data showed that those who did not enrol when first being hired, tended to join later and catch up to the contribution rates of those who were auto enrolled.

Another example of temporal versus long run effect cited by Laibson is the [UK Financial Conduct Authority's 2018 study](#) of changing the guidance to paying credit card debt. People were randomly assigned to either the standard repayment web page or an alternative web page.

The standard repayment page allowed either a minimum amount to be repaid each month, to clear the debt completely each month or to pay a fixed amount each month. In this condition, 36.9% chose the automatic minimum payment each month. 28.9% chose the automatic fixed amount.

The alternative web page had the minimum amount removed. There were other ways to access the automatic minimum payment but it required going to another web page or contacting the bank. In this condition 9.6% chose the automatic minimum and 49.8% the automatic fixed amount.

The initial effect seemed positive because the number of people choosing the automatic minimum fell. However, examining debt after a year showed no difference between the two groups. Several factors contributed to this. The authors found that consumers offset their increased automatic payments by making less frequent one-off, manual payments. Further, the difference between the automatic minimum payment made each month and the automatic fixed amount was small. There was also a modest fall in selecting any type of automatic payment. Given these results, the FCA paper is aptly titled “The semblance of success in nudging consumers to pay down credit card debt.”

A [2019 paper](#) by Dur, Fleming, van Garderen and van Lent, which looked at the effect of a social norm nudge in the Netherlands is yet another study that indicates differences between short and long run effects of a behavioural intervention. In it, 40,000 households whose saving buffer was less than the neighbourhood median were randomly assigned to a group that received a message outlining their relatively low saving buffer, or no message at all. It was hoped the comparison against the group average would increase saving by those nudged with the message. However, no effects were seen either in the short run or over the ensuing 12 months.

The reassessment of how effective nudges and other behavioural approaches reflect the replication crisis impacting many areas of social science. However, reassessment need not be a crisis. Behavioural economics prides itself on applying data in a rigorous manner. Examining the extra data that is being accumulated is likely to lead to a greater understanding of the role behavioural approaches have among other ways of addressing problems faced by individuals and increasing the welfare of society.

## **5. Conclusion: The limits of the behavioural approach**

The return of behavioural approaches to mainstream economic thinking should be applauded. Allowing behavioural issues to enter discussions helps break down commonly held views that economists view the world solely through a lens of rationality. The rigour of measurement and testing that are hallmarks of good behavioural research have also helped economics become more useful for business and society. It is precisely this rigour that is helping expose the limitations of the behavioural approach.

Where these limits exist, standard economic approaches such as taxing negative externalities need to be considered. Redistributive policies should also be considered. Two examples may suffice.

It is generally agreed that widespread action needs to be taken to address climate change. An important element of this is reducing greenhouse gas emissions. The way individuals live will need to adapt but expecting behavioural change to play a major part seems far-fetched. Kenneth Gillingham and James H. Stock reviewed the cost of reducing greenhouse gas emissions in a 2018 article for the [Journal of Economic Perspectives](#). Of the various options reviewed, small nudges were shown to have a noticeable effect in getting consumers to reduce energy use. However, it is noted that “the

total emissions reductions from such nudges are likely to be relatively small and partially transitory". Addressing climate change will take much more than lowering your electricity use to match that of your frugal neighbours.

Furthermore, telling or nudging people to save more will have little impact if the biggest problem people have is a low income and high outgoings. When it comes to personal and household finance, the behavioural approach can easily slide into finger wagging and puritanism. There is little recognition of the economic literature on issues such as human capital formation, inequality and inter-generational mobility. These undoubtedly play a role in ability of individuals to have enough money to be able to save.

Behavioural approaches carry a risk that they overstate the power of the individual and underplay the role of communities and the state in promoting the welfare of society. It is no accident that the Behavioural Insights Team was established at a time the UK government was pursuing the Big Society and then austerity programmes around 2010. A key selling point in setting up the team, as described by David Halpern in the 2015 book "Inside the Nudge Unit" was that "... nudge type approaches could achieve better outcomes, often at lower costs and with greater respect for personal choice than conventional regulation". (Kindle location 952) As more evidence is collected about the effectiveness of behavioural approaches, that claim is becoming more difficult to maintain.

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