

**Why should behavioural economics lead us to be  
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for larger governments?**

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## **Why should behavioural economics lead us to be sceptical about both mainstream economics and calls for larger governments?**

'Homo economicus', also known as economic man, is the perfect model of a human that is intelligent, analytical and unemotional, with the ability to make rational, logical and self-interested decisions. A large government can improve the welfare of the nation by intervening in citizens' lives. These are a few thoughts at the heart of economics. But what if these thoughts are wrong? What if there is a better way to approach economics and calls for government. This is what behavioural economics attempts to do, and this essay will explore the findings of behavioural economics that can lead one to be sceptical about both mainstream economics and calls for larger governments.

To start, mainstream economics is an expression used to describe theories which are considered to be of the neoclassical economics tradition. It uses various statistical and mathematical models to demonstrate theories and assess economic developments, and it fundamentally relies on 'rational choice theory', which is the assumption that individuals make decisions that will maximise their own utility.<sup>1</sup> The term 'rationality' in economics, with minor disagreements to what exactly encompasses the definition, can mostly be explained by three components: firstly, individuals have defined preferences and always aim at making decisions that will maximise those preferences; secondly, the preferences that individuals have accurately reflect the true costs and benefits of the available options, and lastly, in circumstances that do involve uncertainty, individuals will have well-formed beliefs about how uncertainty will resolve itself, and when new information is available, the individual will update their beliefs using Bayes' law, which is the presumed ability of being able to update probabilities when there is new information.<sup>2</sup>

This standard economic approach is useful as it does produce a theoretical framework that yields insight and approximations to economic behaviour; however, this simplified version of 'homo economicus' virtually ignores 'human behaviour' that has been studied by cognitive

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<sup>1</sup> Investopedia. (2010). *Mainstream Economics Definition | Investopedia*. [online] Available at: <http://www.investopedia.com/terms/m/mainstream-economics.asp> [Accessed 15 Jul. 2016].

<sup>2</sup> Camerer, C., Issacharoff, S., Loewenstein, G., O'Donoghue, T. and Rabin, M. (2003). Regulation for Conservatives: Behavioral Economics and the Case for "Asymmetric Paternalism". *University of Pennsylvania Law Review*, 151(3), p.1211.

and social psychologists.<sup>3</sup> The reason why mainstream economics did not incorporate 'human behaviour' in their models was because when economics became a distinct field of study at the turn of the 20<sup>th</sup> century, economists had hoped that the subject would act like a science, and as psychology was just emerging and not yet scientifically based, it was thought to be an unsteady foundation for economics.<sup>4</sup> Thus it was not included in the roots of neoclassical economics.

Nevertheless, over the years, some economists started to realise that this 'homo economicus' was unrealistic, and this became the burgeoning of behavioural economics. Behavioural economics is the field of research where psychology and economics intersects and suggests that human decisions are strongly influenced by context. It can vary across time and space, and is subject to cognitive bias, emotions and social influences.<sup>5</sup> At the core of behavioural economics is the realism of the psychological underpinnings of economic analysis in order to make improved theoretical insights, and better predictions.

Unlike mainstream economics, it sees individuals as 'irrational', as individuals often do not seek to maximise their own benefit from a particular course of action. This may be due to the fact that individuals are unable to access all the information that is required to make a maximising decision, but even if individuals were able to get all the information, their minds would be unable to process it properly.<sup>6</sup> This suggests that humans have 'cognitive limits' and therefore have bounded rationality, a concept by Herbert Simon, which can be defined as "the design of reasoning procedures resorted to by the human mind when making decisions between two worlds: the simple one and the chaotic or near-chaotic one."<sup>7</sup> It attempts to explain that judgement deviates from rationality and tends to be biased.

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<sup>3</sup> Thaler, R. and Mullainathan, S. (2016). *Behavioral Economics: The Concise Encyclopedia of Economics / Library of Economics and Liberty*. [online] Econlib.org. Available at: <http://www.econlib.org/library/Enc/BehavioralEconomics.html> [Accessed 15 Jul. 2016].

<sup>4</sup> Nowandfutures.com. (2002). *Behavioural Economics: Past, Present, Future*. [online] Available at: [http://nowandfutures.com/d2/BehavioralEconomics\(conventional\)ribe239.pdf](http://nowandfutures.com/d2/BehavioralEconomics(conventional)ribe239.pdf) [Accessed 17 Jul. 2016].

<sup>5</sup> Samson, A. (2014). *An Introduction to Behavioral Economics* \*. [online] Behavioraleconomics.com | The BE Hub. Available at: <https://www.behavioraleconomics.com/introduction-to-be/> [Accessed 18 Jul. 2016].

<sup>6</sup> Economist.com. (2009). *Herbert Simon | The Economist*. [online] Available at: <http://www.economist.com/node/13350892> [Accessed 19 Jul. 2016].

<sup>7</sup> Munier, B., Selten, R., Bouyssou, D., Day, R., Harvey, N., Hilton, D., Machina, M., Barrile, P., Parker, P., Sterman, J., Weber, E., Wernerfelt, B. and Wensley, R. (n.d.). Bounded Rationality Modeling. *SSRN Electronic Journal*.

It is important to understand the psychology behind how humans make decisions that can potentially lead to such biases. Kahneman and Tversky developed the architecture of cognition to explain such 'cognitive limits', which involves two systems that are referred to as System 1 and System 2. System 1 is fast, automatic, effortless, associative and often emotionally charged, and are usually governed by habit, thereby difficult to control or modify. System 2, on the other hand, entails the slower, serial, effortful thinking and it is deliberately controlled.<sup>8</sup> Whether System 1 or System 2 should be engaged is determined by two principles. The first is the 'least-effort' principle, which is when individuals attempt to minimise effort when making a judgement, as they have limited resources and time. These judgments are formed by the tendency to create a shortcut of rational decision making by using simplified strategies or rules of thumb, which are called 'heuristics'.<sup>9</sup> The second principle is the 'sufficiency' principle, which is the idea that people want to feel confident that they have made the right judgement, and if heuristics can generate sufficient confidence, there is no need to further proceed in the systematic process. However, if there is a judgement that involves many alternatives, heuristics alone is unable to provide a conclusive judgement, and therefore System 2 will have to be employed to make deliberate judgements.<sup>10</sup>

Most people rely on their System 1 to make decisions. As this system is mainly dependent on heuristics, some of these heuristics do lead to people being bias and goes directly against the standard economics model of probability judgement of using statistical sampling and Bayes' Law for updating probabilities in the face of new evidence. People often judge the probability of future events based on how easily such events can be imagined or remembered, hence use 'availability heuristics'.<sup>11</sup> This can lead individuals to be 'hindsight bias'<sup>12</sup>, which is when past events seem to become more prominent that they appeared while they were occurring, and therefore the individual believes that the even it more predictable than it actually is. An illustration of this is asking people to judge the frequency of different causes of death. For

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<sup>8</sup> Kahneman, D. (2003). Maps of Bounded Rationality: Psychology for Behavioral Economics. *American Economic Review*, 93(5), pp.1449-1475.

<sup>9</sup> Bazerman, M. (2016). *Judgment and Decision Making*. [online] Noba. Available at: <http://nobaproject.com/modules/judgment-and-decision-making> [Accessed 20 Jul. 2016].

<sup>10</sup> Steenbergen, M., Hangartner, D. and de Vries, C. (2011). *Choice under complexity: A Heuristic-Systematic Model of Electoral Behaviour*. 1st ed. [pdf] Chicago, pp.4-5. Available at: <http://www.catherinedevries.eu/ChoiceUnderComplexity.pdf> [Accessed 20 Jul. 2016]

<sup>11</sup> Nowandfutures.com. (2002). *Behavioural Economics: Past, Present, Future*. [online] Available at: [http://nowandfutures.com/d2/BehavioralEconomics\(conventional\)ribe239.pdf](http://nowandfutures.com/d2/BehavioralEconomics(conventional)ribe239.pdf) [Accessed 20 Jul. 2016].

<sup>12</sup> Radcliffe, B. (2013). *Hindsight Bias Definition | Investopedia*. [online] Investopedia. Available at: <http://www.investopedia.com/terms/h/hindsight-bias.asp> [Accessed 20 Jul. 2016].

example, there is often an overestimation of the number of deaths from aeroplane crashes rather than, say, asthma-caused deaths. This is largely due to the media emphasis on aeroplane crashes, making it easier to recall, but there is hardly any news about asthma-caused deaths. This is one of many examples that show how the availability of information, in this case, incorrect information, leads to a simple systematic error.<sup>13</sup> Another heuristic is 'representativeness' which is an assessment of the degree of correspondence between an outcome and a model.<sup>14</sup> This often has to do with a memory of a prototype, stereotype or average. An example of this is demonstrated in Figure 1.

**FIGURE 1:**

**Linda the Bank Teller example given by Kahneman and Tversky**

'Linda is 31 years old, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in anti nuclear demonstrations.'

Which is more probable?

- (1) Linda is a bank teller, or
- (2) Linda is a bank teller and is active in the feminist movement

In this example, the right answer to this statistical problem is (1) as "the probability of any one of two events is always equal to or greater than the probability of the two events occurring together"<sup>15</sup>. So, the probability that Linda is a bank teller has to be at least as great as the probability that she is a bank teller *and* a feminist. However, as Linda is presented in the light of what a stereotypical feminist is rather than a bank teller, this led to more people making the assumption that (2) was correct. Evidently, people rely on what they believe and know rather than the probability of that event realistically occurring.

Heuristics can both be a good and bad tool to use in order to make judgments, as it can be an optimal mechanism when there is limited cognition or time, but on the other hand, it disrupts

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<sup>13</sup> Lempert, K. (2016). *What are Heuristics? Representative vs. Availability Heuristics*. [online] Blog.cambridgecoaching.com. Available at: <http://blog.cambridgecoaching.com/the-psychology-tutor-what-are-heuristics> [Accessed 23 Jul. 2016].

<sup>14</sup> Sewell, M. (2016). *Representativeness Heuristic*. [online] Heuristics.behaviouralfinance.net. Available at: <http://heuristics.behaviouralfinance.net/representativeness/> [Accessed 20 Jul. 2016].

<sup>15</sup> Elliehausen, G. (2010). *FRB: Finance and Economics Discussion Series: Screen Reader Version - 201025*. [online] Federalreserve.gov. Available at: <http://www.federalreserve.gov/pubs/feds/2010/201025/> [Accessed 22 Jul. 2016].

logical principles that can lead to systematic errors. This cognitive system is one contributing factor that explains how individuals make decisions based on what they know and the complexity of the situation, and therefore as there is little information and cognitive limits, they are unable to make accurate and rational decisions as mainstream economists suggest.

More so, an assumption about rationality is that decisions are determined by the final state of an endowment, and therefore are 'reference independent'.<sup>16</sup> This means that preferences are not influenced by an individual's temporary asset position. It also undergoes the assumption that preferences do not change in relation to how they are presented, and that the preferences always are in line with incentives. This mainstream economic thought can easily be undermined by a few behavioural economic experiments.

The first experiment goes against Bernoulli's theory of expected utility in the context of risky choice. Bernoulli assumed that "states of wealth have a specified utility, and that decision rules for choice under risk is to maximise the utility of wealth."<sup>17</sup> Tversky and Kahneman easily proved this wrong as they were developing 'prospect theory', to show that "people think in terms of expected utility relative to a reference point rather than absolute outcomes."<sup>18</sup> They proposed two problems that illustrated how the utility function for wealth was an inadequate theory for choice, as seen in Figure 2.

**FIGURE 2:**

WHICH WOULD YOU PREFER IN EACH SITUATION?

1. A) A certain win of \$250  
B) A 25% chance to win \$1000 and a 75% chance to win nothing?
  
2. C) A certain loss of \$750  
D) A 75% chance to lose \$1000 and a 25% chance to lose nothing?

The different situations are framed as gains (situation 1) and losses (situation 2). In situation 1 more individuals chose (A), as this was the risk-averse option that would guarantee a

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<sup>16</sup> Nowandfutures.com. (2002). *Behavioural Economics: Past, Present, Future*. [online] Available at: [http://nowandfutures.com/d2/BehavioralEconomics\(conventional\)ribe239.pdf](http://nowandfutures.com/d2/BehavioralEconomics(conventional)ribe239.pdf) [Accessed 22 Jul. 2016].

<sup>17</sup> Kahneman, D. (2003). Maps of Bounded Rationality: Psychology for Behavioral Economics. *American Economic Review*, 93(5), pp.1449-1475

<sup>18</sup> Behavioraleconomics.com | The BE Hub. (2016). *Prospect theory*. [online] Available at: <https://www.behavioraleconomics.com/mini-encyclopedia-of-be/prospect-theory/> [Accessed 24 Jul. 2016].

'winning', even though the individual had a chance to win a greater amount of money. Contradictorily, in situation 2 people were more likely to go with (D), thus being 'risk-seeking', as there was a chance to not lose anything, even though there was a higher probability of losing a greater amount of money. This is generally because people dislike losses more than an equivalent gain. The utility function for wealth is incapable of explaining the dramatic switch from risk-aversion to risk seeking, and it is clear that people do not choose the option that would maximise their wealth with given probabilities.

Another discovery that violates the 'reference-independent' assumption was the 'anchoring effect'<sup>19</sup>. 'Anchoring' is the bias that is influenced by an initial anchor, even though the anchor might be completely random, and then to make a judgement by insufficiently adjusting the judgement from the anchor<sup>20</sup>. A study done by Ariely, Loewenstein and Prelec involved the selling of valuable consumer products. The products were a fancy computer mouse, bottles of wine, a box of chocolates and a \$100 wireless keyboard. They proceeded to ask students whether they would purchase a product based on a price that was the same as the last two digits of their social security number. (e.g. last two digits are 36 then the price of the product would be \$36) This was to ensure the randomness of the anchor. The students were then asked if they would buy the product for that price, and then asked the maximising amount that they would be willing to pay. It appeared that those with a higher social security number had a higher willingness to pay for the product than those with a lower social security number. For example, "people with numbers in the bottom half of the distribution priced a bottle of wine at \$11.62, while those with numbers in the top half priced the same bottle at \$19.95."<sup>21</sup> This demonstrates that people are easily influenced by an anchor and therefore behave irrationally as they do not evaluate the worth of the product.

In conjunction with this anchoring effect is an imprinting or arbitrary coherence. This is to say that people behave like 'goslings'<sup>22</sup>, which is the idea that the first price people see is what

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<sup>19</sup> Nowandfutures.com. (2002). *Behavioural Economics: Past, Present, Future*. [online] Available at: [http://nowandfutures.com/d2/BehavioralEconomics\(conventional\)ribe239.pdf](http://nowandfutures.com/d2/BehavioralEconomics(conventional)ribe239.pdf) [Accessed 24 Jul. 2016].

<sup>20</sup> Bazerman, M. (2016). *Judgment and Decision Making*. [online] Noba. Available at: <http://nobaproject.com/modules/judgment-and-decision-making> [Accessed 24 Jul. 2016].

<sup>21</sup> Nowandfutures.com. (2002). *Behavioural Economics: Past, Present, Future*. [online] Available at: [http://nowandfutures.com/d2/BehavioralEconomics\(conventional\)ribe239.pdf](http://nowandfutures.com/d2/BehavioralEconomics(conventional)ribe239.pdf) [Accessed 24 Jul. 2016].

<sup>22</sup> Bescak, E. (2009). *Some Things I Learned From Dan Ariely's "Predictably Irrational"*. [online] Eric Bescak's Online Journal. Available at: <https://erichbescak.wordpress.com/2009/06/16/some-things-i-learned-from-dan-arielys-predictably-irrational/> [Accessed 24 Jul. 2016].

they accept the price of the product to be, no matter how arbitrary the initial price was. This effect in combination with anchoring has implications, especially for consumer preferences. Without accounting for human behaviour, mainstream economic models, such as the law of supply and demand, can be challenged. Standard economics assumes that a balance between supply and demand determines the price of a product. This idea is dependent on the premise that supply and demand are independent, and that together they produce the market price. As the theory goes, consumers' willingness to pay is the demand side factor in determining the market price. Evidently, consumers' willingness to pay can be easily manipulated (anchoring and gosling effect) and therefore consumers do not know how much they are willing to pay for different goods and services nor do they have a good handle on their preferences. Also, the assumption of supply and demand being independent can be refuted, as anchoring manipulation suggests that they are dependent. Such anchoring comes from: manufacturers' suggested retail prices, promotions, advertised prices, and introductory prices and so on, which are supply-side variables.<sup>23</sup> This shows that instead of consumers' willingness to pay to be an influence on the market-clearing price, the causality is reversed and it is the market price that influences how much a consumer is willing to pay. Thus suggesting that supply and demand are not completely separately from each other. This is an example of by not understanding how people behave realistically; it can undermine a simple standard theory, in this case, supply and demand.

The assumption that people are rational underlines mainstream economics and many of its theories. Clearly, this idea is revoked by behavioural economics, as it proves that people do not always have a defined preferences as they are influenced by external forces, they are unable to maximise their preferences which reflect true costs and benefits as they have cognitive limits and when dealing with uncertainty, even with provision of probabilities, are unable to make optimal decision. Therefore, economists can be sceptical about mainstream economics, as the foundation of rationality is faulty.

However, there are doubts about behavioural economics. Foremost, it relies heavily on experimental observations. Some critics claim that this is not enough to make a general assumption; yet, mainstream economics is too based on assumptions, and behavioural economics, instead of making assumptions for models only endeavours to apply psychological insights to the standard theory in an attempt to make it more realistic. There is also criticism that behavioural economics does not provide an answer, but only shows deviations from the

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<sup>23</sup> Ariely, D. (2008). *Predictably irrational*. New York, NY: Harper.

standard model. However, this is part of the appeal of behavioural economics, as it does not tell an individual what decision to make, but warns them of the error they may make and therefore form better decisions altogether.<sup>24</sup> Although there is some scepticism about behavioural economics, it distinctly considers human behaviour, as opposed to 'homo economicus'. Behavioural economics was not purposefully developed to form a new standard model, but rather to improve the standard model so that it can provide more realistic insights and thus make better predictions.

Not only has the study of behavioural economics made mainstream economics questionable, but also the belief in calls for larger governments. A large government is one that is 'perceived as excessively interventionist and intrudes in many aspects of citizens' lives.'<sup>25</sup> It is argued that a larger government can: achieve greater equality, as they can redistribute income and wealth alongside improving equality of opportunity and outcome; they can address market failures, for example, by giving subsidies or provide goods with positive externalities; and they can intervene in macroeconomic issues such as recessions and unemployment.<sup>26</sup> Essentially, a large government's priority is to increase the welfare of all its citizens. Unfortunately, this is at the cost of the government being expensive to run, high taxation, heavy regulations, and a loss of freedom of choice. Some people believe that to improve social welfare will come at a cost, but behavioural economic proposes that there is a way in which they can improve social welfare, whilst being inexpensive to do so as well as respect people's freedom of choice. This solves the 'classic conservative dilemma'<sup>27</sup>, as conservative parties want a small state with low taxation, but simultaneously want good social welfare with as little interference as possible.

In saying so, governments can harness the findings of behavioural economics about how individuals make decisions and apply them to social policies. Such changes to policies involve none of the hard instruments of legislation and regulation usually involved and are generally

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<sup>24</sup> Fox, J. (2015). *From "Economic Man" to Behavioral Economics*. [online] Harvard Business Review. Available at: <https://hbr.org/2015/05/from-economic-man-to-behavioral-economics> [Accessed 25 Jul. 2016].

<sup>25</sup> Oxford dictionary. In: 1st ed. [online] Available at: <http://www.oxforddictionaries.com/definition/english/big-government> [Accessed 27 Jul. 2016].

<sup>26</sup> Pettinger, T. (2012). *Should the government intervene in the economy?* | *Economics Help*. [online] Economicshelp.org. Available at: <http://www.economicshelp.org/blog/5735/economics/should-the-government-intervene-in-the-economy/> [Accessed 27 Jul. 2016].

<sup>27</sup> Panlogic. (2016). *An Introduction to Behavioural Economics, Government and Digital Media*. [online] Available at: [http://panlogic.co.uk/downloads/An\\_Introduction\\_to\\_Behavioural-Economics-Government.pdf](http://panlogic.co.uk/downloads/An_Introduction_to_Behavioural-Economics-Government.pdf) [Accessed 27 Jul. 2016].

less costly and time-consuming. Behavioural economics being implemented into social policies can attempt to influence people's choices in a welfare-promoting direction while still allowing freedom of choice.<sup>28</sup> This concept is commonly referred to as 'libertarian paternalism'<sup>29</sup>, a term developed by Thaler and Sunstein, which is the idea of embracing freedom of choice at the same time trying to direct people to make the best choice for themselves.

Libertarian paternalism stems from understanding how the cognitive system works. It relies on people using their system 1 in making decisions, and therefore it attempts to manipulate the framework of choices so that people can make optimal decisions based on their system 1 without error. As a result, the decision-making process is a lot easier and feels more natural. This influence on decisions is called 'choice architecture'.<sup>30</sup> It acknowledges that the way choices are presented can lead to people making wrong decisions, and therefore its aim is not to coerce people to change their decision, but rather to 'alter the context of their decision – making people believe that they have changed their minds of their own accord'.<sup>31</sup> Hence, 'nudge' them in the right direction.

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<sup>28</sup> Sunstein, C. and Thaler, R. (2003). Libertarian Paternalism Is Not an Oxymoron. *The University of Chicago Law Review*, 70(4), p.1159.

<sup>29</sup> Thaler, R. and Sunstein, C. (2008). *Nudge*. New Haven, Conn.: Yale University Press.

<sup>30</sup> Thaler, R. and Sunstein, C. (2008). *Nudge*. New Haven, Conn.: Yale University Press.

<sup>31</sup> Panlogic. (2016). *An Introduction to Behavioural Economics, Government and Digital Media*. [online] Available at: [http://panlogic.co.uk/downloads/An\\_Introduction\\_to\\_Behavioural-Economics-Government.pdf](http://panlogic.co.uk/downloads/An_Introduction_to_Behavioural-Economics-Government.pdf) [Accessed 28 Jul. 2016].

FIGURE 3: Examples of nudging and regulating actions <sup>32</sup>

	<b>Nudging</b>	<b>Regulating</b>
<b>Smoking</b>	Make non-smoking more visible through mass media campaigns communicating that the majority do not smoke and the majority of smokers want to stop	Ban smoking in public places
	Reduce cues for smoking by keeping cigarettes, lighters and ashtrays out of sight	Increase the price of cigarettes
<b>Alcohol</b>	Serve drinks in smaller glasses	Regulate pricing through duty or minimum pricing per unit
	Make lower alcohol consumption more visible through highlighting in mass media campaigns that the majority does not drink to excess	Raise the minimum age for the purchase of alcohol
<b>Diet</b>	Designate sections of supermarket trolleys for fruit and vegetables	Restrict food advertising in the media directed at children
	Make salad rather than chips the default side order	Ban industrially produced trans fatty acids
<b>Physical Activity</b>	Make stairs, not lifts, more prominent and attractive in public buildings	Increase duty on petrol year on year (fuel price escalator)
	Make cycling more visible as a means of transport, e.g. through city bike hire schemes	Enforce car drop-off exclusion zones around schools

These ‘nudges’ seen in figure 3 all are a simple way of subconsciously suggesting to people what is best for their welfare, without the involvement of any regulations. The idea behind a ‘nudge’ is to either create incentives for some choices or possibly apply a small economic or cognitive cost on the other options. <sup>33</sup> They can attempt to correct misconstrued social norms, such as the belief that people drink excessively, but rather to state that people do not drink as much as one suspects, thus changing the ‘heuristics’ about drinking. More so, they can ‘frame’ different choices to lead to people choosing what is best, such as presenting healthy food in

<sup>32</sup> Rainford, P. and Tinkler, J. (2011). *Innovating through Design in Public Services Seminar Series 2010-2011*.

<sup>33</sup> Rainford, P. and Tinkler, J. (2011). *Innovating through Design in Public Services Seminar Series 2010-2011*.

the cafeteria in front of the unhealthy food, or if people are unable to choose, then to form a better default option.<sup>34</sup> This shapes citizens' behaviour in a predictable way, without the government being seen as intrusive.

In the United Kingdom, the coalition government in 2010 formed the Behavioural Insight Team (BIT), to incorporate behavioural insights into social policy planning. This involved over 150 randomised controlled trials in many areas of domestic policy. Some examples include: a large trial at job centres in order to support people back to work and encourage them off benefits, by making a simple goal orientated plan, which made it straightforward and effortless to follow, thereby making people feel more motivated to stay committed to the plan. They also sent text messages to people to prompt them to attend job affairs, as a small reminder so people did not have to mentally account for it, also increasing the attendance to job fairs. To increase tax compliance and other payments, they introduced a message on the payment letter stating that 'most people pay their tax, debts or fines on time', which boosted the number of people settling their payments as it created a 'social norm', and this alone brought £210 million forward in the 2012/2014 financial year. More so, the government wanted to improve their home efficiency programme, called the Green Deal, to progress energy saving and sustainability. They used methods such as 'door knocking' and 'letter dropping' marketing as well as incentive approaches to engage tenants and landlords to participate in energy efficient measures. These are a few of many examples of 'nudges' that the British government has recently implemented, with the results still to come. The goal was to make any policy as easy, attractive, social and timely as possible to change people's behaviour, without being viewed as coercive or costly to anyone.

In the United States, an example of such a beneficial 'nudge' is the 401(K) retirement plan and Save More Tomorrow. Before, the 401(K) plan used an 'opt-in' format, whereby the employee received information about the plan and had to fill out an enrolment form in order to join. This resulted in a lack of enrolment as people saw this as time-consuming reviewing information and filling out forms, hence having no willpower to sign up for it. This led to an alternative enrolment plan which was in an 'opt-out' format. It had an automatic enrolment, giving people all the information simultaneously, and unless the employee wanted to 'opt-out', they would be registered for the plan. There have been dramatic increases in the number

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<sup>34</sup> Thaler, R. and Sunstein, C. (2008). *Nudge*. New Haven, Conn.: Yale University Press.

of people saving; for example, Madrian and Shea <sup>35</sup>discovered results going from about 49% in initial enrolment to 86% in some companies. <sup>36</sup> More so, Thaler and Benartzi developed a method that would contribute to increasing savings rates in the 401(k) plan, called Save More Tomorrow. This is a plan where employees are invited to sign up for at the start of their 401(k) where their saving plans are annually increased whenever they receive an income raise. Employees do not leave the plan unless they 'opt-out' or have reached the maximum saving rate possible. This plan of automatic enrolment and Save More Tomorrow have proved to be promising methods of increasing savings which benefit the employee as they can expect a comfortable retirement without being fully dependent on social security. This savings model is pretty inexpensive compared to other proposals to increase savings, such as decreasing or eliminating taxation on savings, as well as not being forceful or time-consuming.

This idea of 'libertarian paternalism' sounds good, as it is not costly or full of regulations, however, there is the argument against it saying that any use of a public authority to alter the behaviour of citizens in any way, even if it is for their benefit, is still state interference. To counter this charge, Thaler and Sunstein stated "there is no such thing as a neutral design. Some organisation or agent must provide starting points of one kind or another." It is, therefore, best to have a starting point that is favourable for the welfare of citizens. There is also criticism whether or not these 'nudges' can be sustainable on a macro-level, or if they are merely solutions to minor problems. According to the British Medical Journal, there is a concern as there has been little evidence that these 'nudges' have effectively changed people's behaviour, as well as if these 'nudges' have the ability to improve health in the long run. More so, in order to create 'effective nudging', it may require some form of legislation, either to implement good nudges, such as placing fruits at checkouts, or to stop bad nudges from an industry, such as advertisements for unhealthy food aimed at children. Without such regulations to prevent bad nudges in existing industries, attempting to change people's attitude to good behaviour may be difficult to do as the industry has already made large impressions. It, therefore, may be more costly and time-consuming than originally anticipated in the proposal of libertarian paternalism. However, in all of this being said, there is no harm in trying a new approach to improve the welfare of a nation's citizens.

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<sup>35</sup> Madrian, B. and Shea, D. (n.d.). The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior. *SSRN Electronic Journal*.

<sup>36</sup> Sunstein, C. and Thaler, R. (2003). Libertarian Paternalism Is Not an Oxymoron. *The University of Chicago Law Review*, 70(4), p.1159.

To conclude, behavioural economics has proved that people have bounded rationality, as they have cognitive limits, follow simple heuristics, randomly place anchors, and behave like 'goslings', which all leads them to make non-maximising decisions, and therefore people cannot fit the perfect mould of 'homo economicus'. As rationality is the bedrock of mainstream economics, and it is clear that people are not as rational as mainstream economics suggest, it can lead one to be sceptical about the standard theories. As for calls for larger governments, behavioural economics has also demonstrated that this may be unnecessary, as a smart and small government by understanding how people behave and make decisions, can create frameworks which only nudges people to make the most beneficial decisions for themselves, whilst still giving citizens the freedom to determine their own future. Although behavioural economics may have disrupted long going beliefs about mainstream economics and calls for larger government, its main endeavour has been to discover a more accurate approach to economics in order to make more precise theories and predictions, and to improve the government's role in society that aims to help people without being a burden.

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