



Behavioural Economics Project

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TO WHAT EXTENT CAN BEHAVIOURAL ECONOMIC THEORIES BE USED TO ENCOURAGE MORE SUSTAINABLE BEHAVIOUR IN PEOPLE?

By Peter Neale

In this essay, I will consider the impacts of behavioural economic policies on sustainable behaviour, evaluate whether the impact is large enough and discuss further approaches or policies which would be effective. First, I must briefly define concepts such as sustainability and behavioural economics and then prove that it is imperative that the sustainability issues must be addressed with haste. It is also important to consider which topics fall under the overarching theme of sustainability and prove that obesity is one of these issues.

Behavioural economics is a branch of economics which deviates from neoclassical economics in three respects. Firstly, it recognises that people's behaviour is not motivated solely by their own material payoffs (social desirability and perceived justice influence human decision). Secondly, social approval and status are central motivators of human behaviour. Finally, people's choices are inhibited by cognitive restraints leading to irrational decisions (Fredrick Carlson and Olof Johansson-Stenman, 2012). The application of behaviour economics may be more effective than that of any other economic school (Keynesian, neo-classical, etc.) but what does it mean to 'use' behavioural economics? Techniques belonging to the behavioural school encompass a broad scope of economic 'tools' some of which include anchoring, priming, and framing. Briefly, techniques, in behavioural economics, may be described as any method of influencing or playing to people's biases to achieve a goal (this could be through marketing practices or to stride toward environmental sustainability for example). One of the most important techniques in behavioural economics is what is known as the default option. The default option can be seen as a type of framing effect because it frames a choice in such a way that it favours a specific option. The default option is important for two reasons. Firstly, it is very effective; this is seen in areas such as organ donation (Johnson & Goldstien, 2003), pension savings (Choi et al, 2004) and green energy providers (Pichert & Katskopoulos, 2008). Secondly it has a low cost, virtually zero since it is the difference between framing options in an alternative way. Behavioural economics is applied in an array of affairs, most notably through Nudge Units, one of which opened in the UK under Cameron's government in 2010. Nudge Units are manifestations of Thaler and Sunstein's work – Nudge theory – which defined Nudge as 'choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives' which cogently aligns with the brief definition of behavioural economics above. The provenance of behavioural economics is difficult to locate. Notwithstanding Daniel Kahneman's, and subsequently Thaler's, influence in the field, theorists as long ago as Adam Smith recognised some of the limitations of classical economic theory (in *The Theory of Moral sentiments* for example) and thus more modern thinkers cannot take all the credit.

Gro Harlem Brundtland defined sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." However, this definition carries some ineptitude in guiding future policies or action which would achieve sustainability. The World Wildlife Fund defined sustainability as the "improvement in the quality of human life within the carrying capacity of supporting ecosystems." Again, this definition does not provide apt guidance on

future behaviour. If we take the working definition of sustainability to be a combination of the two it may be described as 'improvement and development in the quality of human life within supporting ecosystems which does not compromise the ability of future generations to fulfil their own needs.' From this, we can decide whether a policy is sustainable or not given two conditions; firstly, the policy improves development or quality of human life and secondly, it does not compromise future generations' ability to fulfil their own needs. It is also important to consider the three-pronged approach to sustainable development to differentiate between social, environmental, and economic sustainability.

Obesity is an issue of sustainability in the sense that it effects the health of individuals to a degree which hampers their work, thus hindering economic sustainability, and decreases the own utility of those who are obese as well as the utility of others around them. In so far as obesity is an environmental issue, obesity tends to result from overconsumption of food which drives up demand for meat products (which has been shown to damage environmental sustainability through acute methane production). While the connection between high levels of obesity and aggregate demand for meat products may appear tenuous, it is obvious that if the obesity crisis were sufficiently mitigated this would cause a drop in aggregate supply of meat. Obesity "exacerbates or contributes to numerous other ailments, including stroke, peripheral artery disease, colon cancer, postmenopausal breast cancer, various musculoskeletal conditions (e.g., osteoarthritis) and gall bladder disease." Obesity is an issue (not only for these but also negative externalities imposed on the general population) and needs urgent attention because of innovations in food manufacturing which make unhealthy, processed foods cheaper to buy thus encouraging obesity. The reason obesity is an issue of sustainability is because of its adverse effects on society and hinders social sustainability.

Research in this essay has been conducted using secondary data found in scholarly articles. These articles are highly credible and have undergone peer review. Therefore, the data used in this essay is confidently reliable.

The recent surge in obesity (an increase from 30.5 to 41.9% from 1999 to 2020 – Centers for Disease Control and Prevention) can be attributed to a few things. Firstly, unhealthier, and processed food has become cheaper than alternatives in terms of relative economic costs and opportunity costs because it is quicker to cook a microwave meal than the homemade alternative. Secondly, a shift in jobs, from the manufacturing sector (where work is physically demanding) to jobs in the service and financial sectors, means that people are more sedentary and therefore less prone to exercise. Thirdly, rampant advertisement has driven more people into the arms of big fast-food and fizzy drink companies (supported by Grossman et al., 2012). On the latter, policies to circumvent this issue have been implemented in the past. For example, the television ban in Quebec reduced consumption of fast food by 11-22 million meals (about 2.2 to 4.4 billion calories) per year (Dhar and Baylis, 2011). This was a ban on advertising to children under the age of 12 who have supposedly more amenable minds than older teenagers and adults. This large reduction suggests that available information, provided via advertisement, plays a large role in fast food consumption. I believe that this was an effective policy and could be employed in other nations in a similar way to the legislation against the promotion of tobacco (e.g., 2003 Tobacco Advertising and Promotion act). The effects of fast-food advertisement regulation would be like that in Quebec, aiding to the mitigation of the obesity crisis.

Other than outright bans, various policies have been proposed to curb the epidemic, food labelling regulations, food taxes and subsidies, R&D and technology policies and farm support programs. A few of which I will discuss here. Noninformational nudges like reductions in portion and package sizes (Polls et al., 2007, Wansick and Cheney, 2005) and positioning of nutritious foods in prominent positions (or making less-nutritious foods less visible) in retail stores and in cafeterias (Hanks et al., 2012, Kroese et al., 2016) are found to be effective at changing eating patterns. Policies that stipulate the eminent positioning of healthy food items and the discrete position of unhealthy ones could largely affect the way in which people consume. Subtle changes like this are less outrageous than outright bans which could cause public outrage and are also shown to be effective. For example, Beshears et al. (2008) showed that in many circumstances, subjects are more likely to choose a default alternative – irrespective of its characteristics – than if the same alternative had to be actively chosen. The positioning of goods can be seen as a default option because the decision between various food options (some healthy and some unhealthy) are often made given the available information (i.e., what the eye can see). It may be objected that some people visit supermarkets and other shops with an unhealthy option already in mind. In such cases, policies stipulating the mere positioning of products may be ineffectual and more intensive policies such as excise tax on sugary or high calorie foods may need to be adopted however that is whole other conversation which I will not discuss here.

Sustainability issues such as climate change are also affected by behavioural economic policies. For example, investigations into people's motivations behind recycling in a Norwegian survey found that as many as 73% of the respondents answered that one of their main reasons was that they would like to see themselves as responsible citizens (Brekke et al., 2003) which fits comfortably into the behavioural school's assumption that people are driven, at least partially, by social desirability. Policies which disclose public participation in activities such as recycling may increase sustainable behaviour. This could be implemented through letters which inform people about their neighbours' levels of recycling or disclose their energy usage (on energy bills for example). Philanthropic efforts may also be furthered through disclosure of others' behaviour. It has been shown that information about what others do affect whether and how much people donate to charitable organisations (Alpizar et al. 2008a, Bardsley & Sausgruber 2005, Frey & Meier 2004, Shang & Croson, 2009).

The effectiveness of Nudge Units (which implement behavioural economic policies) has been debated and some are sceptical of their impact compared with outright bans. One reason, I argue, that behavioural economic policies are favourable to draconian regulation (e.g., green energy provider defaults rather than carbon permits) is that they are much more subtle and are less likely to stoke public outrage. Surely an outright ban on sugar would be met with far more indignation than the rearrangement of supermarket layouts. Furthermore, evidence which has been brought to light recently is promising. January of 2022 saw the publishing of RCTs To Scale: Comprehensive Evidence from Two Nudge Units which found a sizeable and highly statistically significant 8% increase in average control as a direct impact of Nudge Units in real world application. This shows a prominent shift from the theoretical to the practical application of behavioural economics. I believe that such policy should continue to be implemented via stipulations to have green defaults, opt-out pension schemes, rearrangement of supermarkets, calorie disclosure on menus and myriad more policies which facilitate the transition to a better society overall.

In this essay I have briefly outlined two concepts: behavioural economics and sustainability. I then considered current non-behavioural economic approaches to modern challenges, such as the obesity

crisis, and discussed real applications of behavioural economics and nudge theory under the overarching problem of sustainability. Finally, I evaluated the different approaches and concluded that the latter has proven effective not only statistically (an 8% increase in desired behaviour) but also normatively (a subtler approach to sensitive issues around peoples' choices is less likely to stoke public outrage), although it is difficult to predict whether such policy will become more effective as it is applied to more fields, I believe that the widespread application of default options (and similar policy) will expedite our movement to a more sustainable society.