

Nudging, calculation, and utopia

Chris Berg^{1*}, Sinclair Davidson²

Abstract

In this paper we provide a critique of behavioural economics or nudging as a basis for practical policy making purposes. While behavioural economics operates as a plausible critique of standard neoclassical economics, it suffers from the same methodological errors inherent within that tradition. Just as socialist planners lacked the information (and incentives) to allocate resources across an entire economy and economists lack the information to optimally correct externalities, so too libertarian paternalists lack the information to second guess consumer preferences and opportunity costs.

Keywords

nudging — information problem — preferences

^{1,2}School of Economics Finance and Marketing, RMIT University, Melbourne, Australia

*Corresponding author: christopher.berg@rmit.edu.au

Introduction

Thaler and Sunstein's *Nudge: Improving Decisions about Health, Wealth, and Happiness* (2008) is that rare academic work that has directly spawned government action, and spawned it within a decade of its publication. In 2010 the Cameron government in the United Kingdom established a Behavioural Insights Team, with the self-applied nickname of the "nudge unit" within the Cabinet Office. In 2015 the Obama administration established the White House Social and Behavioral Sciences Team, and the Turnbull government in Australia established its own Behavioural Economics Team within the Department of Prime Minister and Cabinet. By Marx's (1845) standard –"The philosophers have only interpreted the world, in various ways; the point is to change it"– Thaler and Sunstein's philosophy of "libertarian paternalism" is great a success.

However, libertarian paternalism, or nudging theory, is less of an intellectual revolution than its rapid transmission into policy implies. Thaler and Sunstein (2008, p. 6) define nudges as follows:

A nudge, as we will use the term, is any aspect of the choice architecture that alters people's behavior in a predictable way 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.

We will argue in this paper that nudging theory, as defined here, bears many similarities to the socialist calculation debate, and also some of the fallacies associated with the market failure literature. In particular, nudging theory is a form of nirvana economics, as described by Harold (Demsetz 1969).

It also violates James Buchanan's (1969) cost and choice insights. These features make behavioural economics, and nudging in particular, poor tools in policy analysis beyond trivial instances.

While behavioural economics is widely seen as being a critique of standard neoclassical theory, it is firmly located within that tradition. Furthermore, many of the critiques of standard theory apply equally to behavioural economics. Thaler (2015, p. 251) declares that "the real of behavioural economics is to highlight behaviors that are in conflict with the standard rational model". Elsewhere he refers to those deviations as being "anomalies". Previously economists tended to describe deviations from standard theory as being "market failure", now such deviations are described as being "agent failure" (Horwitz 2016). Horwitz suggests this development is due to market failure economics being successfully challenged. If Horwitz is correct –and we think that he is– then nudging is simply the latest development in the long neoclassical retreat from socialist calculation.

In the 1920s it was widely believed that a socialist economy could not only replicate the success of a capitalist economy, but improve on its outcomes. Later economists came to the view market exchange was efficient relative to the planned economy but that "market failure" was ubiquitous and selective subsidy or taxation could improve upon private decision making. The economic superiority of socialism is now discredited. After the Chicago school revolution in economics, market failure theory is highly contested. Nudging has come to represent the latest economic approach that justifies bureaucratic substitution for private decisions.

The criticisms of such an approach, however, remain unchanged. Information costs, transactions costs, and neoclassical hubris -Hayek's (1988) fatal conceit- are better explanations for Thaler's anomalies than behavioural biases that can be detected and corrected by disinterested observers. Rela-

bellings these planners or bureaucrats as choice architects in no way changes what they are doing or resolves any of the insurmountable problems they face to actually achieve their stated goals.

Here we offer a critique of nudging that draws on the Hayekian information problem. Thaler and Sunstein claim their approach to nudging does not override the preferences of consumers with bureaucrats; rather, it allows consumers to choose according to their best preferences, “as judged by them” (2008, p. 5). In section II we look at the challenge of assessing preferences. In section III we look at prices. Section IV concludes by returning to Demsetz’s nirvana fallacy.

Preferences

Paternalism is formally defined by Kleinig (1984, p. 18) as when “X acts to diminish Y’s freedom, to the end that Y’s good may be secured”. (For readability, and following Thaler and Sunstein, here we describe X as a “bureaucrat” and Y as a “consumer”). Thaler and Sunstein reject the first pillar of Kleinig’s definition, arguing that paternalistic nudges do not diminish freedom. We do not tackle the question of coercion and freedom here (for discussion on this question, see Hausman and Welch (2010); Rebonato (2012)). As to the second pillar, Thaler and Sunstein have a specific understanding of what constitutes a consumer’s good. Historically, paternalistic intervention has been imposed on a large variety of grounds, such as the imposition of religious beliefs or conduct, under a belief that the subjects of that imposition benefit. Libertarian paternalists propose to measure a consumer’s good according to the consumer’s own preferences. Thaler and Sunstein’s argument is as follows: Consumers have two “semiautonomous selves” that harbour two distinct preferences orders. The first, being that of the “planner”, is long sighted, deliberative, and tends to favour exercise, lean meat, and saving for retirement. The second, being that of the “doer”, is short sighted, makes quick, if not instant decisions, and tends to favour Netflix, hamburgers, and Laphroaig 18. The planners and doer’s preferences are inconsistent; consumers may regret after an evening of television, hamburgers, and fine whisky that they had not been more virtuous. The doer personality too often dominates the planner personality because of the influence of temptation and mindlessness. The task of the libertarian paternalist then is to rebalance the odds in favour of the planner. In this way, the consumers maintain their own preference set while being encouraged to pursue their best preferences.

This psychological division of two distinct semiautonomous selves dates back to at least Wason and Evans (1975). Kahneman (2013) distinguishes between System I reasoning –the intuitive, fast, and effortless reasoning- and System II reasoning -which is deliberative, slow, and rational-. This approach does not perfectly map onto Sunstein and Thaler’s schematic. Mindlessness captures a difference between System I and System II reasoning, but temptation can win even when choosers have an opportunity to deliberate. The “received view” is that

System II reasoning is normatively preferable to System I reasoning (Evans 2012). Libertarian paternalism as described by Thaler and Sunstein follows this approach, insofar as it seeks to systematically favour System II decision making. However, as Gigerenzer and Goldstein (1996) argue, this normative claim ignores the evolutionary adaptive nature of System I reasoning; the “fast and frugal” processing of System I decision making embodies knowledge that the consumer may not be aware of, let alone an external bureaucrat-observer.

As this suggests, for the policymaker, determining which preferences are System I and System II is a knowledge problem. As Rebonato (2012, p. 157) points out, libertarian paternalists give themselves a more demanding task than either libertarians or paternalists: having to “divine the exact mix of self- and other-regarding preferences of the System-II self of each individual”. A simple heuristic seems to be that ex post judgments of choice are preferred to ex ante ones (Hausman 2012). It is unclear to us why future regret is a more meaningful expression of best preferences – that is, deliberative, rational, System II preferences - than current desire. First, regret is not always a deliberative choice. Second, anticipation of regret is “priced” into decisions ex ante. Elsewhere in *Nudge*, Thaler and Sunstein place much emphasis on the inertia caused by regret aversion. But regret aversion would seem to be a case of too much System II thinking –excessive deliberation and attempted rationality– rather than too little. Libertarian paternalists are faced with the challenge of distinguishing between optimal deliberation and excessive deliberation leading to inertia. Their ex post approach provides little guide through that morass.

An even more devilish problem for libertarian paternalists working to divine the best preferences of consumers is that the division between System I thinking and System II thinking has been undermined by work that has described the distinction as closer to a sliding scale than a binary switch. As Evans (2006, pp. 205-206) argues, after discussing the challenges of matching the dual system framework to cognitive systems, “it is far from evident . . . that a coherent theory based on two systems is possible”. The unimodel alternative (Keren and Schul 2009, Kruglanski and Gigerenzer 2011) suggests that both intuitive and deliberative judgements exist on the same continuum, and the decision process is guided by heuristics –that is, rules– which underpin both intuitive and deliberative judgements. A tri-dimensional processing model, developed by Varga and Hamburger (2014) presents the trade-off of cognitive effort and control (that is automatic versus deliberative processes) as a graphical space rather than a continuum.

The significance of these revisions to the dual processing model is to eliminate the cleanliness of Sunstein and Thaler’s attempt to discern an individual’s best preferences. Rather than two sets of preferences, unimodel or tri-dimensional processing models suggest each individual harbours a large range of possible sets of preferences. Even in a system in which all sets are transparent to the bureaucrat, this still leaves the question of which set is to be favoured. Dual process frame-

works make multiple preferences legible in the Scott (1998) sense, but these new approaches expose how reliant the Sunstein and Thaler approach is on the idea that consumers have distinct and semiautonomous selves, whose different interests the bureaucrat can judiciously balance. Non-libertarian paternalists, such as Conly (2013), surmount these problems by allowing bureaucrats to assume the role of planners on behalf of consumers –and thus imposing preferences– rather than trying to empower the consumers’ internal planner. In practice libertarian paternalists are likely to follow the same approach, substituting their preferences for those of consumers rather than trying to divine the consumer’s own (Rizzo and Whitman 2009). Indeed, as Mehta (2013) points out, any division of behaviour that treats variances from strict rationality as somehow ‘anomalous’ consists of the imposition of normative judgement by the planner-bureaucrat.

Prices and costs

The second calculation problem for libertarian paternalists is calculating the relevant costs of the choices they seek to influence. Sunstein and Thaler open *Nudge* with a story of a school cafeteria which varies the placement of unhealthy foods –the unhealthy example they use is French fries, and the healthy example is carrot sticks– placing some at eye level and others in separate locations. The placement of the food has a significant effect on what foods are chosen. This example, and the prominence Sunstein and Thaler choose to grant it, is worth examining as the principles apply to more substantive uses of libertarian paternalism like retirement savings and organ donation. It might be observed that moving carrot sticks (which properly require refrigeration) onto a shelf which previously held French fries (which require industrial food warmers to stay desirable) would be a non-trivial cost which needs to be weighed against the marginal change in consumption and, ultimately, the marginal benefit derived from that change. Likewise, as the fast and frugal model of Gigerenzer and Goldstein (1996) suggests, more deliberative decision-making has costs, and policy that tries to nudge consumers into making more deliberative decision-making has to be recognised as an imposition of costs that will bring about tradeoffs.

An equally challenging problem for libertarian paternalists is identifying the costs of these choices. The difference between French fries and carrot sticks is a stark one: the former is a starchy food, often fried in saturated fats, offering little nutritional benefit. The latter is full of antioxidants, fibre and important vitamins. It seems intuitive that more consumers should consume more carrots than French fries. But this is not necessarily true on all dimensions at all margins, when the monetary cost of (prepared and available) food is weighed up or the balance of an individual consumers’ diet is weighed up. Nor are most consumption choices as stark as the division between French fries and carrots. More food choices, we suggest, are between products that have ambiguous or unclear costs, whose health consequences are less comparable, and

for which an external observer would find similarly opaque. Consumers often find themselves choosing between brands or varieties of food rather than categories. The decision processes involved in making a decision between flavours and varieties of yoghurt in a yoghurt aisle are both more complex and likely more common than the choice between French fries and carrots. In this light, comparing French fries and carrots is akin to saying that a successful socialist economy should probably expend more of its resources on productive activity rather than unproductive activity: useful as a general principle, but the Politburo needs more detailed meeting agendas than that.

Even if they restrict their concerns to identifying obviously healthy and obviously unhealthy food, bureaucrats have not always proven themselves perfectly capable of that identification. The history of the food pyramid is a salutary example. Mid-twentieth century governments emphasised a diet heavy in complex carbohydrates and light in fat; a recommendation which is now being reversed in favour of the Mediterranean diet of large amounts of protein and fat and little complex carbohydrates (Taubes 2007, Teicholz 2014). While it is possible to argue that nutrition science is vastly superior than it was half a century ago, the crisis of replication in the sciences (Ioannidis 2005, Ioannidis 2012, Pashler and Wagenmakers 2012) and the increasingly problematic nature of the ‘evidence based medicine’ paradigm (Greenhalgh and Maskrey 2014, Keane and Berg 2016, Keane and Berg 2017) should urge all paternalists (libertarian or otherwise) to greater modesty in their recommendations.

More consequential nudges embody more complex judgements about the relative costs of choices and decision-making processes. Choices about retirement saving, organ donation, and schools are far from the binary healthy-unhealthy division of the cafeteria story. Nor are they as amenable to the ex post assessments that Sunstein and Thaler formally rely on. Obviously there can be no ex post preference in the case of organ donation. Likewise the nature of education as a credence good makes it hard for both consumers and bureaucrats to judge regret or satisfaction with a choice after that choice has been made. This is a general problem for libertarian paternalism. Non-libertarian paternalists can look at society-wide indicators for the social attributes they seek to control –obesity rates, for instance. But the libertarian paternalist lacks the feedback mechanism with which they might judge their interventions a success.

Conclusion

Libertarian paternalists have to guess at consumer preferences and opportunity costs and then make a value judgement as to desirability of those preferences and perhaps substitute different preferences. In doing so, they make two fundamental economic methodological errors in their argumentation. First the Demsetzian nirvana fallacy which specifies three specific problems planners make; they assume a free lunch, they assume the grass will be greener on the other side, and

they assume people could be different. Second, libertarian paternalists assume they can observe the choice set that consumers face, and the subsequent opportunity costs of their decision making. Buchanan (1969), however, has argued that the choice set and opportunity costs of choice cannot be observed ex post.

To be fair, libertarian paternalists are not the only agents to imagine they can correctly resolve all these assumptions and arrive at the correct decision. Socialist planners attempting to direct entire economies thought they could allocate resources better than private decision makers. Economists resolving externality problems thought they could correctly specify the correcting subsidy or tax. Nudging is simply the latest theory to provide some intellectual credibility to second guessing private decisions. In contrast to the Marxian objective of changing the world, we argue that nudging theory falls foul of Hayek's (1988) view – "The curious task of economics is to demonstrate to men how little they really know about what they imagine they can design".

References

- Buchanan, J. M. (1969). *Cost and choice: an inquiry in economic theory*. Chicago: University of Chicago Press.
- Conly, S. (2013). *Against autonomy: justifying coercive paternalism*. Cambridge: Cambridge University Press.
- Demsetz, H. (1969). Information and efficiency: another viewpoint. *Journal of Law and Economics*, 1–22.
- Evans, J. (2006). Dual system theories of cognition: Some issues. In *Proceedings of the 28th Annual Meeting of the Cognitive Science Society*, pp. 202–207.
- Evans, J. (2012). Dual process theories of deductive reasoning: facts and fallacies. *The Oxford handbook of thinking and reasoning*, 115–133.
- Gigerenzer, G. and D. G. Goldstein (1996). Reasoning the fast and frugal way: models of bounded rationality. *Psychological review* 103(4), 650–669.
- Greenhalgh, T., H. J. and N. Maskrey (2014). Evidence based medicine: a movement in crisis? *BMJ* 348:g3725.
- Hausman, D. M. (2012). *Preference, value, choice, and welfare*. Cambridge; New York: Cambridge University Press.
- Hausman, D. M. and B. Welch (2010). Debate: To nudge or not to nudge. *Journal of Political Philosophy* 18(1), 123–136.
- Hayek, F. (1988). *The Fatal Conceit: The Errors of Socialism*. Chicago: University of Chicago Press.
- Horwitz, S. (2016). Behavioural economics: A virginia political economy perspective. *Economic Affairs* 36(3), 273–281.
- Ioannidis, J. P. (2005). Why most published research findings are false. *PLoS med* 2(8), e124.
- Ioannidis, J. P. (2012). Why science is not necessarily self-correcting. *Perspectives on Psychological Science* 7(6), 645–654.
- Kahneman, D. (2013). *Thinking, fast and slow*. New York: Farrar, Straus and Giroux.
- Keane, M. and C. Berg (2016). Evidence-based medicine: A predictably flawed paradigm. *Trends in Anaesthesia and Critical Care* 9, 49–52.
- Keane, M. and C. Berg (2017). Is science the answer? *British Journal of Anaesthesia*. forthcoming.
- Keren, G. and Y. Schul (2009). Two is not always better than one a critical evaluation of two-system theories. *Perspectives on psychological science* 4(6), 533–550.
- Kleinig, J. (1984). *Paternalism*. Oxford: Clarendon Press.
- Kruglanski, A. W. and G. Gigerenzer (2011). Intuitive and deliberate judgments are based on common principles. *Psychological review* 118(1), 97.
- Mehta, J. (2013). The discourse of bounded rationality in academic and policy arenas: pathologising the errant consumer. *Cambridge Journal of Economics* 37, 1243–1261.
- Pashler, H. and E. J. Wagenmakers (2012). Editors' introduction to the special section on replicability in psychological science a crisis of confidence? *Perspectives on Psychological Science* 7(6), 528–530.
- Rebonato, R. (2012). *Taking liberties: a critical examination of Libertarian paternalism*. New York: Palgrave Macmillan.
- Rizzo, M. J. and D. G. Whitman (2009). Little brother is watching you: New paternalism on the slippery slopes. *Arizona Law Review* 51, 685–739.
- Scott, J. C. (1998). *Seeing like a state: how certain schemes to improve the human condition have failed*. New Haven: Yale University Press.
- Taubes, G. (2007). *Good calories, bad calories: challenging the conventional wisdom on diet, weight control, and disease*. New York: Knopf.
- Teicholz, N. (2014). *The big fat surprise: why butter, meat, and cheese belong in a healthy diet*. New York: Simon & Schuster.
- Thaler, R. H. (2015). *Misbehaving: the making of behavioral economics*. New York: W.W. Norton & Company.
- Thaler, R. H. and C. R. Sunstein (2008). *Nudge: improving decisions about health, wealth, and happiness*. New Haven: Yale University Press.
- Varga, A. L. and K. Hamburger (2014). Beyond type 1 vs. type 2 processing: the tri-dimensional way. *Frontiers in Psychology* 5, 1–4.
- Wason, P. C. and J. S. B. Evans (1975). Dual processes in reasoning? *Cognition* 3(2), 141–154.