

Misconceptions about nudges

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Abstract

Some people believe that nudges are an insult to human agency; that nudges are based on excessive trust in government; that nudges are covert; that nudges are manipulative; that nudges exploit behavioral biases; that nudges depend on a belief that human beings are irrational; and that nudges work only at the margins and cannot accomplish much. These are misconceptions. Nudges always respect, and often promote, human agency; because nudges insist on preserving freedom of choice, they do not put excessive trust in government; nudges are generally transparent rather than covert or forms of manipulation; many nudges are educative, and even when they are not, they tend to make life simpler and more navigable; and some nudges have quite large impacts.

JEL Classification: D01; D9; B41; H11; H2

Keywords

nudges — behavioral economic — default rules — manipulation

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Nudges are private or public initiatives that steer people in particular directions but that also allow them to go their own way (Thaler and Sunstein 2008; Thaler 2015). A reminder is a nudge; so is a warning. A GPS device nudges; a default rule, automatically enrolling people in some program, is a nudge (Ebeling and Lotz, 2015). To qualify as a nudge, an initiative must not impose significant material incentives (including disincentives).

A subsidy is not a nudge; a tax is not a nudge; a fine or a jail sentence is not a nudge. To count as such, a nudge must preserve freedom of choice. If an intervention imposes significant material costs on choosers, it might of course be justified, but it is not a nudge. Some nudges work because they inform people; other nudges work because they make certain choices easier; still other nudges work because of the power of inertia and procrastination.

In the ten years since *Nudge* was published, policymakers have shown a great deal of creativity and initiative in using nudges and other behaviorally informed approaches, often saving money and lives in the process. A full catalogue has yet to be produced, but partial accounts are available (Whitehead et al., 2017; Halpern, 2015; Sunstein, 2014). There has also been an extraordinary outpouring of new academic thinking and research on behaviorally informed approaches, with particular reference to public policy (for a sampling, see Sunstein and Reisch 2016).

As a result, we now know a great deal more about the consequences of information, reminders, and default rules (Johnson and Goldstein, 2013); about how to analyze the complex welfare effects of nudges (Allcott and Kessler, 2015); about the promise and the limits of mandatory choosing and prompted choice; about how to think about paternalism

(Conly, 2012); about whether people in diverse nations approve of nudges, or not (Reisch and Sunstein, 2016); and about when and why nudges fail. Much of what has been learned is insistently empirical (Halpern, 2015; Benartzi et al., 2017). With every month, new knowledge becomes available, and it is by turns chastening, surprising, confirmatory, and inspiring.

My goal here is not to celebrate what has been learned, or to engage the many productive objections, clarifications, and refinements (Goldin and Lawson, 2016; Allcott and Kessler, 2015; Goldin 2015; Rebonato, 2012), but more modestly to catalogue some common mistakes and misconceptions. Unfortunately, they continue to divert attention both in the public domain and in academic circles, and hence to stall progress.

A pervasive problem, I suggest, is undue abstraction, as people are misled by large-sounding nouns that do not engage with specific practices. Commenting on Sir Joshua Reynolds, William Blake suggested that “to Generalize is to be an Idiot. To Particularize is the Alone Distinction of Merit”. To be sure, Blake’s suggestion is itself a generalization (and to that extent self-contradictory). But let’s not be too fussy. Blake was right, and I shall try to follow his guidance here.

Without further ado¹:

¹ I am not going to struggle here over definitional questions, though in recent years, a great deal of work has been devoted to those questions. My hope is that the opening sentence of this essay is clear enough, at least if it is informed by the examples that immediately follow it. In the same vein, see *Nudge*, p. 8: “a nudge, as we shall use the term, is any aspect of the choice architecture that alters people behavior in a predictable way without forbidding any options or significantly changing their economic incentives”.

1. Nudges are an insult to human agency. In free societies, people are treated with respect. They are allowed to go their own way. Some people object that nudges are troublesome because they treat people as mere objects for official control (Waldron 2014).

The objection is off the mark. One of the main points of nudging is to preserve freedom of choice—and thus to maintain people’s capacity for agency (Sunstein, 2016). Many nudges are self-consciously educative, and hence they strengthen that very capacity; consider calorie labels, or warnings about risks associated with certain products. With information, warnings, and reminders, people are in a better position to choose their own way. Noneducative nudges, such as uses of healthy choice architecture at cafeterias or in grocery stores, allow people to choose as they wish.

Perhaps it could be argued that if the goal is to promote agency, some nudges, such as default rules, are problematic. But because such rules are omnipresent in both law and life, and often a great blessing, it is not easy to see how that argument might be made convincing. Would it make sense to excise default rules from the law of contract? To say that employers, hospitals, and banks are forbidden from using default rules? In practice, what would that even mean? Those who are inclined to reject default rules out of respect for individual agency would do well to ponder the countless contexts in which such rules make life simpler and easier to navigate. (On the immense importance of navigability, more in a moment).

A narrower argument would be that in certain settings, those who prize agency should insist on active choosing in preference to default rules. In *Nudge*, Thaler and I make exactly that argument in the context of organ donation, urging that when people receive drivers’ licenses, they ought to be asked whether they want to be organ donors. In some settings, active choosing is indeed better.

Note, however, that sometimes people cannot easily choose (because they lack bandwidth or expertise) or do not want to choose (Sunstein, 2015); they consider default rules to be a blessing. One reason is that people have limited time and attention (ibid.; Mullainathan and Shafir, 2015), and they exercise their own agency by relying on default rules. If we aim to respect individual agency, we will often be inclined to favor those rules *for that very reason* (Sunstein 2017b). For people who are busy, or who face poverty, default rules can be particularly valuable, even essential (Mullainathan and Shafir, 2015).

To be sure, it is a complex question when active choosing should be preferred to default rules, or vice-versa. A simple framework, on which much more would have to be said: Inquire into the costs of decisions and the costs of errors. That framework helps to explain and organize sensible intuitions about when a large menu is an excellent idea (because people like to choose, and because a default option would produce errors) and when it is a terrible blunder (because people do not wish to choose, and a default rule will serve them well enough).

2. Nudges are based on excessive trust in government. The most intuitive objection to nudging is rooted in fear of government. To put that objection in its sharpest form: Suppose that public officials are incompetent or corrupt. Suppose that your least favorite leaders are or will be in charge. Would you want them to nudge?

Or suppose that you are keenly alert to public choice problems, emphasized by James Buchanan and his followers, or “the knowledge problem”, emphasized by Friedrich Hayek and his followers. If interest groups are able to push government in their preferred directions, and if public officials lack crucial information, then you might insist: Do not nudge! Reliance on private markets might seem far better (Glaeser, 2006).

We should pause here to emphasize that a recognition of public choice problems, or the absence of relevant information, should lead first and foremost to an attack on mandates and bans, not on nudges. If we distrust government, we should be most concerned about coercion. For that reason, it is odd, and a continuing puzzle, that in recent years, those who distrust government have often aimed at nudges—and libertarian paternalism—rather than attacking the modern regulatory state, and perhaps adopting a full-scale program in favor of some version of Thatcherism, Hayekianism, or (much more radically) uncompromising enthusiasm for free markets. But let us put this point to one side. It is fair to worry that if governments err, official nudging may go badly wrong.

Indeed, behavioral science itself might be taken to put this worry in bold letters. There is no reason to think that public officials are immune to behavioral biases. In a democratic society, the electoral connection might mean that they will respond to the same biases that affect ordinary people (Kuran and Sunstein 1999). To be sure, structural safeguards might help, especially if they ensure a large place for technocrats, insistent on science and on careful attention to costs and benefits. But in any real-world polity, behavioral distortions on the part of public officials are difficult to avoid. We have had them in the past and we will have them in the future.

These are fair and important points, but if they are taken as an objection to nudging, they run into a logical problem: *a great deal of nudging is inevitable*. So long as government has offices and websites, it will be nudging. If the law establishes contract, property, and tort law, it will be nudging, if only because it will set out default rules, which establish what happens if people do nothing. (Much of the law is a form of choice architecture). If the government provides information, it will be nudging. As Hayek himself wrote, the task of establishing a competitive system provides “indeed a wide and unquestioned field for state activity”, for “in no system that could be rationally defended would the state just do nothing. An effective competitive system needs an intelligently designed and continuously adjusted legal framework as much as any other” (Hayek, 1943).

As Hayek well understood, a state that protects private property and that enforces contracts has to establish a set

of prohibitions and permissions, including a set of default entitlements, establishing who has what before bargaining begins. For that reason, it is literally pointless to exclaim, “do not nudge!” –at least if one does not embrace anarchy.

The second answer to those who distrust government is that because nudges maintain freedom of choice, they insist on a safety valve against official error. Those who favor nudges are keenly alert to the public choice problem and the knowledge problem, and to the possibility that public officials will show behavioral biases. Recall that if one distrusts government, the real focus should be on mandates and bans (as well as subsidies and taxes). Nudges ought not to be free from scrutiny, but they should be a relatively low priority, because they are less intrusive, and because they insist that people must be allowed to go their own way.

It is true, of course, that some nudging is optional. Government can warn people about smoking, opioid addiction, and distracted driving, or not. It can seek to protect consumers against deception and manipulation, or not. It can undertake public education campaigns, or not. If you think that government is entirely untrustworthy, you might want to avoid nudging whenever it can. In the abstract, that position cannot be ruled out of bounds. On highly pessimistic assumptions about the capacities and incentives of public officials, and highly optimistic assumptions about the capacities and incentives of those in the private sector, nudging should be minimized (Glaeser, 2006). But private actors nudge, and sometimes it is very much in their interest to exploit cognitive biases (Akerlof and Shiller, 2016). Consider, for example, efforts to promote purchases of unhealthy foods; to market cigarettes; and to encourage poor financial choices with respect to mortgages and credit cards (*ibid.*). Would it be a good idea to forbid public officials from taking steps to reduce smoking and distracted driving?

To be sure, nudges, like other interventions from such officials, should be constrained by democratic requirements, including transparency, public debate, and independent monitoring (including, critically, ongoing evaluation of how they work in practice). Public choice problems, and the knowledge problem, are real and important. Constraints of this kind can reduce the risks (without eliminating them). The fundamental point is that those risks are far larger with other tools, above all mandates and bans, which remove freedom of choice.

3. Nudges are covert. Some people have argued that mandates, bans, and taxes have one advantage: They are transparent. People know what they are. No one is fooled. By contrast, nudges are covert and in that sense sneaky, a form of trickery (Glaeser, 2006). They affect people without their knowledge.

For countless nudges, this objection is hard to understand. A GPS device nudges, and it is entirely transparent. Labels, warnings, and reminders are not exactly hidden; if they are, they will not work. When an employer automatically enrolls employees into a savings plan, subject to opt out, nothing

is hidden. (If it is, there is a problem; the right to opt out should be clear). In the United States, nudges have generally been adopted after an extended period of public comment. They have been on the front pages of newspapers. They have benefited, and been improved, by continuing scrutiny (Sunstein 2014). In these circumstances, the objection seems a bit daft.

Why, then, have intelligent people argued that nudges are covert? Is there anything at all to that objection? One possibility is that when people participate in a randomized controlled trial, they may not be informed of that fact. (A randomized trial might not work if people are told about the various conditions). But I suspect that the real answer is that *some nudges work, in practice, even though people do not focus on them, or even think about them* (Rebonato, 2012) While they are hardly hidden, the people who are influenced by them may be unaware of them, or at least unaware of their purposes and effects.

For example, a cafeteria might be designed so that the healthy foods are most visible and placed first, and people might choose them for that very reason. Such a design is hardly hidden; it is entirely transparent. People can see where foods are. At the same time, people may not be aware that their cafeteria has been specifically designed so as to promote healthy choices. To be sure, they know that the fruits are more visible than the brownies, but they might not know *why*, and their decision to select a fruit might be quick and automatic rather than reflective. Or people might not think much about the default rules that come with (say) an agreement with a rental car company. If people are automatically enrolled into some kind of insurance plan and allowed to opt out, they might say, “yeah, whatever”, and simply go along with the default. (By the way, *Nudge* identified only one new heuristic, and it’s that: the “yeah, whatever” heuristic).

In that sense, it is correct to say that some nudges can work even if or perhaps because people are unaware that they are being nudged. Note, however, that emerging evidence finds that the effects of such nudges are not diminished even if people are told that nudging is at work. Transparency about the existence and justification of default rules appears not to reduce their impact in general (Bruns et al. 2016; Loewenstein et al. 2015). For some people, such clarity may even *increase* that impact, by amplifying the informational signal that some default rules offer (Mackenzie et al 2006). On plausible assumptions, drawing attention to the healthy design of a cafeteria will actually increase the effect of that design, because it will convey valuable information. (To be sure, it may produce “reactance” in some consumers).

4. Nudges are manipulative. In a variation on the claim that nudges are covert, some people have objected that nudges are a form of manipulation (Conly 2010). But return to the hazards of abstraction and in particular (!) to the points I have just explored: If people are reminded that they have a doctor’s appointment next Thursday, no one is manipulating

them. The same is true if people are given information about the caloric content of food or if they are warned that certain foods contain shellfish or nuts, or that if they take more than the recommended dosage of Benadryl, something bad might happen.

To be sure, we could imagine a graphic warning about opioid addiction, or about the use of cell phones while driving, that would create immediate fear or revulsion, or intensely engage people's emotions; it might be objected that nudges of this kind count as a form of manipulation. To know whether they do, we need a definition of manipulation. To make a (very) long and complex story short, philosophers and others have generally converged on the view that an action can be counted as manipulative *if it subverts people's capacity for rational deliberation* (Barnhill 2014; Sunstein 2016). On any view, most nudges do not qualify. True, some imaginable nudges might cross the line, but that is very different from saying that nudges are manipulative as such.

5. Nudges exploit behavioral biases. Some people object that nudges “exploit” or “take advantage of” behavioral biases. Indeed, some people *define* nudges as exploitation of behavioral biases (Rebonato 2010). That does sound nefarious. But the objection is mostly wrong, and while people can define terms however they wish, this particular definition is a recipe for confusion. (One of its least attractive qualities is its use of framing; the word “exploit” suggests something untoward, whereas the term “take account of” does not –and is more accurate).

Many nudges make sense, and help people, whether or not behavioral biases are at work. A GPS is useful for people who do not suffer from any such bias. Disclosure of information is helpful even in the absence of any bias. A default rule simplifies life and can therefore be a blessing whether or not a behavioral bias is involved. As the GPS example suggests, many nudges have the goal of *increasing navigability* –of making it easier for people to get to their preferred destination. Such nudges stem from an understanding that life can be either simple or hard to navigate, and a goal of helpful nudging is to promote simpler navigation.

I wish that *Nudge* had made this point clearer, and had connected nudging to the central idea of navigability. (I devote a separate paragraph to the point, not because that is a good use of the paragraph break, but because it is worth singling out).

At the same time, it is true that some nudges counteract behavioral biases, and that some nudges work because of behavioral biases. For example, many human beings tend to suffer from present bias, which means that they give relatively little weight to the long term; many of us suffer from unrealistic optimism, which means that we tend to think that things will turn out better for us than statistical reality suggests. Some nudges try to counteract present bias and optimistic bias –as, for example, by emphasizing the long-term risks associated with smoking and drinking, or by suggesting the importance

of retirement planning.

Similarly, default rules work in part because of inertia, which undoubtedly counts as a behavioral bias. Relevant words from Samuel Beckett's *Waiting For Godot*:

Vladimir: Well? Shall we go?

Estragon: Yes, let's go.

(*They do not move*).

Many human beings are like Vladimir and Estragon (who were, by the way, unrealistically optimistic. Nudging can be effective because *they do not move*. But it is misleading –a form of rhetoric, in the not-good sense– to suggest that nudges “exploit” behavioral biases.

6. Nudges wrongly assume that people are irrational. Some critics object that nudges are based on a belief that human beings are “irrational”, which is both insulting and false². (It is also unclear what, exactly, is meant by the term “irrational”, which behavioral economists usually abhor, and almost never use). This objection takes different forms.

In one form, the objection is that while people rely on simple heuristics and rules of thumb, nothing is wrong with that; those heuristics and those rules, work well, and so nudging is not needed, and can only make things worse. In another form, the objection urges that the whole idea of nudging is based on weak psychological research and on an assortment of supposed laboratory findings that do not hold in the real world. In yet another form, the objection is that people can and should be educated rather than nudged. In what seems to me its best form, this objection urges that people's utility functions are complex and that outsiders may not understand them; what seems to be “irrationality” may be the effort to trade off an assortment of goals (Rebonato 2010). A mundane example: People might eat fattening foods not because they suffer from present bias, but because they greatly enjoy those foods. A less mundane example: People might fail to save for retirement not because they suffer from optimistic bias, but because they need the money now.

These objections raise many questions, and I shall be brisk with them here. No one should doubt that heuristics generally work well (that is why they exist), but they can also misfire. When they do, a nudge can exceedingly helpful. For example, people might use the availability heuristic, or something like it, in deciding whether a risk is serious. For those who lack statistical knowledge, it might be reasonable to do exactly that. But even if a risk has come to fruition in the recent past, it may nonetheless be low as a statistical matter. The availability heuristic can lead to severe and systematic errors, and a nudge might serve as a corrective to either hysteria or complacency.

² The least lovely, and the most peculiar, version of this claim comes from a German psychologist: “The interest in nudging as opposed to education should be understood against the specific political background in which it emerged. In the US, the public education system is largely considered a failure, and the government tries hard to find ways to steer large sections of the public who can barely read and write. Yet this situation does not apply everywhere” (Gigerenzer 2015).

It is true that many nudges build on well-established behavioral findings, demonstrating that people depart from perfect rationality. For example, default rules work in part because of the power of inertia (Johnson and Goldstein 2013); reminders are necessary and effective in part because people have limited attention; information will be more likely to influence behavior if it is presented in a way that is attentive to people's imperfect information-processing capacities. These and other claims are based on evidence, both in the laboratory and the real-world. Let us underline the latter point; much of the evidence comes from the real world and not from the laboratory at all (Benartzi et al. 2017; Sunstein and Reisch, 2016). To be sure, it is important to test whether a finding in one setting will generalize to others.

Those who embrace nudges do not use the term “irrationality”. On the contrary, they abhor it; “bounded rationality” is much better. Nor does anyone doubt that education can work. As I have emphasized, many nudges are educative and target deliberative capacities (System 2, in contrast to the more automatic System 1, as elaborated in Kahneman 2014) More ambitious educative efforts, such as efforts to teach statistical literacy, are usually complements to nudges, and rarely substitutes or alternatives. Whether they work is an empirical question, and no one doubts that in some settings, such efforts may have real promise.

It is also true (and important) that third parties might not be able to understand people's utility functions, which may reflect (for example) delight in high-calorie foods, alcohol, and very late nights out; that is one reason that nudgers insist on preserving freedom of choice. To the extent that nudging is inevitable, it is pointless to contend that because of the complexity of people's utility functions, nudging should be avoided. To the extent that nudging is optional, it should be undertaken with an appreciation of the risk of error and with careful efforts to ensure that it promotes, and does not undermine, people's welfare. A GPS device does not decrease welfare. In general, information about health risks and potential financial burdens should increase welfare (Agarwal et al., 2013). To be sure, the concept of welfare requires specification (Adler, 2011), but most nudges can be tested without getting into murky philosophical waters; we can have an “incompletely theorized agreement” that some approaches promote welfare, and others do not, without resolving disputes among Jeremy Bentham, John Stuart Mill, and Amartya Sen.

Of course nudges must be tested to ensure that they are doing what they are supposed to do (Halpern 2015; Thaler 2015). Some nudges fail. When they do, the right conclusion may be that freedom worked –or that we should nudge better (Sunstein 2017a).

7. Nudges work only at the margins; they cannot achieve a whole lot. If experts are asked to catalogue the world's major problems, many of them would single out poverty, hunger, unemployment, corruption, premature deaths, terrorism, and climate change. On one view, nudges are an unfortunate dis-

traction from what might actually help, or help most. Some skeptics think that with an understanding of nudging, we might have some fresh ideas about how to tweak letters from government to citizens, producing statistically significant increases in desirable behavior. But that is pretty small stuff. If behavioral economists want to make a contribution, shouldn't they focus on much more important matters?

It is true and important that behaviorally informed approaches are hardly limited to nudges; mandates, bans, and incentives may well have behavioral justifications (Thaler, 2017; Loewenstein and Chater, 2017; Conly 2010). The policy program of behavioral science is hardly exhausted by nudges (Thaler 2017). Mandates, bans, and incentives might turn out to be the best and most effective tool. It is also true that some nudges produce only modest changes. But sometimes they do not, and in multiple domains, nudges have proven far more cost-effective than other kinds of interventions, which means that per dollar spent, they have had a significantly larger impact (Benartzi et al., 2017).

By any measure, the consequences of some nudges are not properly described as modest. One reason is that a seemingly small initiative, directed at a very large population, may have massive effects. Another reason is that some initiatives have such effects all by themselves. Consider three examples:

1. As a result of automatic enrollment in free school meals programs, more than 11 million poor American children are now receiving free breakfast and lunch during the school year.
2. Credit card legislation, enacted in 2010, is saving American consumers more than \$10 billion annually; significant portions of those savings come from nudges and nudge-like interventions (Agarwal et al. 2013).
3. With respect to savings, automatic enrollment in pension programs has produced massive increases in participation rates (Chetty et al., 2012; Thaler, 2016).

New nudges, now in early stages or under discussion, could also have a major impact. If, for example, the goal is to reduce greenhouse gas emissions, automatic enrollment in green energy can have large effects (Ebeling and Lotz, 2015; Pichert and Katsikopoulos, 2008). The Earned Income Tax Credit is probably the most effective anti-poverty program in the United States, but many eligible people do not take advantage of it. Automatic enrollment would have large consequences for the lives of millions of people.

It is true, of course, that for countless problems, nudges are hardly enough. They cannot eliminate poverty, unemployment, and corruption. But by itself, any individual initiative –whether it is a tax, a subsidy, a mandate, or a ban– is unlikely to solve large problems. Denting them counts as an achievement.

For nudging, the last decade has been one of extraordinary achievements –not only because of the creation of many

“nudge units”—, but more fundamentally because of the incorporation of nudges in policymaking at the very highest levels and the acceleration of new findings, in academic circles and in government, that have produced conceptual and empirical breakthroughs (Mullainathan and Shafir 2015; Kling et al. 2012). Money has been saved; so have lives.

There is much more to do, and much more to learn. Misconceptions are a terrible distraction. Unburdened by them, let's get to work.

Acknowledgments

I am grateful to Richard Thaler for friendship, collaboration, and countless nudges, some of which have made this essay much better. Thanks also to Michelle Baddeley and Lucia Reisch for superb suggestions.

References

- Adler, Matthew (2011). *Welfare and fair distribution*. Cambridge: Cambridge University Press.
- Agarwal S., Chomsisengphet S., Mahoney N. and Stroebe J. (2013). “Regulating consumer financial products: Evidence from credit card”. *National Bureau of Economic Research*, Working Paper.
- Akerlof, George and Robert Shiller (2016). *Phishing for phools*. Princeton: Princeton University Press.
- Allcott, Hunt and Judd B. Kessler (2015). “The welfare effects of nudges: A case study of energy use social comparisons”. *National Bureau of Economic Research*, Working Paper 21671.
- Barnhill, Anne (2014). “What is manipulation?” in *Manipulation: Theory and practice* 50, 72 (Christian Coons and Michael Weber eds.).
- Benartzi, Shlomo et al. (2017). “Should Governments invest more in nudging?”. *Psychological Science*, available at <http://journals.sagepub.com/doi/abs/10.1177/0956797617702501>.
- Bruns, Hendrik et al. (2016). “Can nudges be transparent and yet effective?”. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2816227.
- Chetty, Raj, John N. Friedman, Soren Leth-Petersen, Torben Nielsen and Tore Olsen (2012). “Active vs. passive decisions and crowdout in retirement savings accounts: Evidence from Denmark”. Available at <http://www.nber.org/papers/w18565>.
- Conly, Sarah (2013). *Against autonomy*. Oxford: Oxford University Press.
- Ebeling, F., and Lotz, S. (2015). “Domestic uptake of green energy promoted by opt-out tariffs”. *Nature Climate Change* 5 (9), 868-871. Retrieved from: Doi: 10.1038/nclimate2681.
- Fryer Jr, R. G., Levitt, S. D., List, J., and Sadoff, S. (2012). “Enhancing the efficacy of teacher incentives through loss aversion: A field experiment” (No. w18237). *National Bureau of Economic Research*. Retrieved from: Doi: 10.3386/W18237
- Gigerenzer, Gerd (2015). “On the supposed evidence for libertarian paternalism”. *Review of Philosophy and Psychology* 3: 361.
- Glaeser, Edward (2006). “Paternalism and policy”. *University of Chicago Law Review* 73: 133-56.
- Goldin, Jacob and Nicholas Lawson (2016). “Defaults, mandates, and taxes: Policy design with active and passive decision-makers”. *American Law & Economics Review* 18: 438.
- Goldin, Jacob (2015). “Which way to nudge?”. *Yale Law Journal* 125: 227.
- Halpern, David (2015). *Inside the nudge unit*. London: Ebury Press,
- Hayek, Friedrich (1943). *The road to serfdom*. Chicago: University of Chicago Press.
- Homonoff, T. A. (2013). “Can small incentives have large effects? The impact of taxes versus bonuses on disposable bag use”. *Industrial Relations Section*, Princeton University Working Paper, (575). Retrieved from: <http://arks.princeton.edu/ark:/88435/dsp014q77fr47j>.
- Kling, Jeffrey and Sendhil Mullainathan, Eldar Shafir, Lee Vermeulen, and Marian V. Wrobel (2012). “Comparison friction: Experimental evidence from prescription drug plans”. *Quarterly Journal of Economics* 127: 199-235.
- Kuran, Timur and Cass R. Sunstein (1999). “Availability cascades and risk regulation”. *Stanford Law Review* 51: 683-762.
- Johnson, Eric and Daniel Goldstein (2013). “Decisions by Default”. In: Eldar Shafir (Ed.). *Behavioral foundations of policy*, Chapter 24, pp. 417-427. Princeton: Princeton University Press.
- Loewenstein, George and Chater, Nick (2017). “Putting nudges in perspective”. *Behavioral Public Policy* 1: 26-53.
- Loewenstein, George, Cindy Bryce, David Hagmann and Sachin Rajpal (2015). “Warning: You are about to be nudged”. *Behavioral Science & Policy* 1: 35-42.

- McKenzie, C. R., Liersch, M. J., and Finkelstein, S. R. (2006). “Recommendations implicit in policy defaults”. *Psychological Science* 17(5), 414-420. doi: 10.1111/j.1467-9280.2006.01721.x
- Mullainathan, Sendhil and Eldar Shafir (2014). *Scarcity*. New York: Picador.
- Pichert, Daniel and Konstantinos V. Katsikopoulos (2008). “Green defaults: Information presentation and pro-environmental behaviour”. *Journal of Environmental Psychology* 28: 63–73.
- Rebonato, Riccardo (2012). *Taking liberties*. London: Palgrave.
- Reisch, Lucia and Cass R. Sunstein (2016). “Do Europeans like nudges?”. *Judgment and Decision Making* 11: 310-25.
- Sunstein, Cass R. (2017a). “Nudges that fail”. *Behavioral Public Policy* 1: 4-25.
- Sunstein, Cass R. (2017b). *Human agency and behavioral economics*. London: Palgrave
- Sunstein, Cass R. (2015). *Choosing not to choose*. Oxford: Oxford University Press.
- Sunstein, Cass R. (2014). *Simpler: The future of Government*. New York: Simon and Schuster.
- Sunstein, Cass R. and Lucia Reisch (2016). *The economics of Nudge* (four volumes). Routledge.
- Thaler, Richard (2017). “Much ado about nudging”. *Behavioral Public Policy Blog*, available at <https://bppblog.com/2017/06/02/much-ado-about-nudging/>.
- Thaler, Richard (2015). *Misbehaving*. New York: Norton.
- Thaler, Richard H. and Cass R. Sunstein (2008). *Nudge: Improving decisions about health, wealth, and happiness*. New Haven: Yale University Press.
- Waldron, Jeremy (2014). “It’s All For Your Own Good”. *New York Review of Books*, available at <http://www.nybooks.com/articles/archives/2014/oct/09/cass-sunstein-its-all-your-own-good/>.
- Whitehead, Mark, Rhys Jones, Rachel Lilley, Jessica Pykett and Rachel Howell (2017). *Neuroliberalism: Behavioural Government in the Twenty-First Century*. New York: Routledge.