

## Chapter 2

# Beneficial and Exploitative Nudges

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**Abstract** The effectiveness of nudges in raising the welfare of the population hinges on the policymakers employing them. A frequent criticism based on a logical inconsistency questions policymakers' immunity from the psychological biases of individuals that are the very foundation of nudging interventions. We argue that, rather than being concerned about policymakers' incapacity to raise the population's welfare, we should be concerned about their unwillingness to do so. We offer a solution to this problem. We resort to the constitutional level of decision-making in which voters are able to determine the procedures or processes by which governments may resort to nudging. Nudging should not be considered as an innocuous exception to constitutionally based decision-making. It must be admitted, though, that at first sight most nudges do seem to be beneficial to people. In a democracy, even 'Liberal Paternalism' may not be imposed on the population without its consent in principle.

### 2.1 Nudging as a Concept

Nudging is an attractive idea. With low or even zero-cost interventions paternalists help individuals overcome their limitations and act in their own best interest, as if they had complete information and the perfect willpower and cognitive abilities of the *homo oeconomicus*. The deviations from the standard economic model of rationality have been empirically identified and extensively analysed in 'Psychology and Economics'.<sup>1</sup> It has now been securely established that human beings are not always and in every respect perfectly maximizing their utility under complete information. They are subject to biases or distortions defined as systematic (i.e. non-random)

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<sup>1</sup>'Psychology and Economics' is often labelled 'Behavioural Economics'. We use the former expression since economics has always dealt with human behaviour. Surveys of this literature can be found in several books (e.g., Frey 1999, 2001; Kirchgässner 2008; Kahneman 2011) and journal articles (e.g., Conlisk 1996; Rabin 1998; DellaVigna 2009). Congdon et al. (2011) and DellaVigna (2009) offer useful albeit slightly different categorizations of psychological biases.

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deviations from the standard model of rationality. Individuals take shortcuts and decide on the basis of heuristics.<sup>2</sup> Such heuristics work well in most routine situations,<sup>3</sup> but they may also fail and lead to value-destroying outcomes.<sup>4</sup>

Nudging provides an elegant solution to the limitations of the *homo oeconomicus*<sup>5</sup>: Individuals are ‘softly’<sup>6</sup> induced, or nudged, to make better decisions. The government, i.e., politicians and public officials, offer solutions guiding people in the right utility maximizing direction. Importantly, individual decision makers are not forced to pursue that option if they choose not to do so. Nudging does not reduce individuals’ freedom of choice. Hence these policy interventions are often subsumed under the label of ‘liberal paternalism’.<sup>7</sup> The intervention by a ‘social planner’ is considered to be benign; the ‘choice architects’<sup>8</sup> act paternalistically by designing the environment so that individuals are steered towards welfare promoting decisions. Individuals would arrive at the same decision if they cognitively reflected them with sufficient information instead of relying on intuitive, or automatic, decision procedures.<sup>9</sup>

There are other concepts similar to Thaler and Sunstein’s liberal paternalism, such as ‘asymmetric paternalism’.<sup>10</sup> All of them are designed to help people improve their decisions and come closer to acting according to their own best interest.

Nudging, or liberal paternalism, has become highly popular in economics and far beyond. The interventions, it is assumed, are cheap if not costless. So even if their effect may not always be substantial, nudges can be more cost-effective than other policy interventions. Nudging is convincingly applied in particular in the areas of retirement savings, organ donation, and health (e.g., healthy diets, vaccination).<sup>11</sup> The interventions offered by liberal paternalists immediately stand to reason and appear totally acceptable. It is, for instance, difficult to reject nudging when applied to securing a reasonable material standard in old age. It is well known that most individuals find it difficult to look sufficiently into the future; they are subject to ‘hyperbolic discounting’.<sup>12</sup> As a consequence, they are reluctant to take the initiative

<sup>2</sup>See Tversky and Kahneman 1974, Gigerenzer et al. 1999, and, more recently, Camerer 2004.

<sup>3</sup>Gigerenzer, Hertwig and Pachur 2011.

<sup>4</sup>Conlisk 1996, Rabin 1998, and Kahneman 2003.

<sup>5</sup>In contrast, ‘hard paternalism’ as proposed, e.g., by Conly 2012, seeks to induce people to act in the desired way by forcing them to do so by laws and regulations whose violation is punished.

<sup>6</sup>Although in several cases nudging does not provide a solution to, but rather exploits, behavioral biases.

<sup>7</sup>The idea has been propagated by Sunstein and Thaler 2003, Thaler and Sunstein 2003, 2008, and Sunstein 2014. See also Binder and Lades 2015. The term ‘liberal’ is used in the classical sense as discussed by Mill 1859 in his book *On Liberty*.

<sup>8</sup>A term coined by Thaler and Sunstein 2008.

<sup>9</sup>Although several policy interventions pursue social rather than individual optimality.

<sup>10</sup>Camerer et al. 2003. Related concepts have been proposed by Gruber and Koszegi 2001, O’Donoghue and Rabin 2003, 2006, Jolls and Sunstein 2006, Bernheim and Rangel 2007.

<sup>11</sup>Excellent discussions are given e.g. by Schnellenbach 2011, 2012, Kirchgässner 2014, Madrian 2014, and Schnellenbach and Schubert 2014.

<sup>12</sup>Laibson 1997.

to enter an old age pension scheme. The situation is quite different when the default option is being enrolled in a pension scheme from which they may opt out if they so wish. Empirical research clearly suggests that the effect is substantial. Many more individuals are covered by voluntary old age insurance schemes, of which they greatly benefit when reaching retirement age.<sup>13</sup> Another related bias, the misprediction of future utility, has been identified and analysed in happiness research.<sup>14</sup> People systematically underestimate the future satisfaction they gain from relational contacts with friends, neighbours and relatives. In contrast, they overestimate the future utility of material goods such as a new home or car. As people get used to a new home or car rather quickly, the additional utility (or life satisfaction) gained from these goods vanishes over time. This effect is less likely to take place in personal relationships because they can continually generate value.

The popularity of the nudging concept has also been supported by the fact that it was propagated by two scholars<sup>15</sup> from the University of Chicago, whose department of economics is well known for its strong allegiance to free markets and its rejection of government interventions wherever possible.<sup>16</sup> The kind of paternalism implied by nudging seems acceptable as it does not reduce individuals' freedom but increases their present and future utility by overcoming the decision biases from which they suffer. It is also consistent with the insight that a market economy without any government intervention is inconceivable, not only because the government must set the rules under which the market works but also because there are 'merit' goods individuals cannot properly evaluate for many different reasons.<sup>17</sup> Liberal paternalism offers a reasonable way in which government interventions should take place without violating the basic value of human freedom.

Liberal paternalism has various other favourable features. It is certainly preferable to hard paternalism with its negative sanctions. It is also commendable that academics seriously focus on real-life issues and suggest policy measures. The establishment of 'nudging units', encouraging evidence-based policy making, began in the United Kingdom in 2010 and the United States, and has more recently been followed by countries such as Australia, Canada, Columbia, Denmark, France, Germany, Israel, Netherlands, New Zealand, Norway, Singapore, South Africa, Turkey and the European Union (with its planned 'foresight team'), and even Saudi Arabia.<sup>18</sup> It may however be doubtful whether all of these countries are sufficiently democratic to use nudges in their soft form.

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<sup>13</sup>E.g., Madrian and Shea 2001 and Choi et al. 2004.

<sup>14</sup>Loewenstein et al. 2003 and Frey and Stutzer 2014. For the overestimation of the future utility provided by material goods, see Lane 1991 and Frank 1999.

<sup>15</sup>Richard Thaler and Cass Sunstein, see ftn 8. (Sunstein is now associated with Harvard University).

<sup>16</sup>Leading members who promoted this ideology are Milton Friedman, George Stigler and Gary Becker.

<sup>17</sup>As is well discussed by Kirchgässner 2014. The concept of merit goods was introduced by Musgrave 1957.

<sup>18</sup>See, e.g., Madrian 2014, p. 665.

## 2.2 Critiques of the Nudging Concept

Despite the wide acceptance of liberal paternalism there is some well-founded criticism to consider. Indeed, there has been a lively scholarly discussion about the value of the concept.<sup>19</sup> Here only two major points of criticism will be mentioned.<sup>20</sup>

The first point of criticism is that the emphasis of liberal paternalism to suggest welfare enhancing *outcomes* is ill-taken as it interferes too much with individuals' freedom to decide. What should be done is to foster their critical thinking and their capacity to decide. This 'Autonomy-Enhancing Paternalism' strengthens the cognitive aspect of personal decisions, promotes self-empowerment, and seeks to make people independent of external influences.<sup>21</sup> Individuals are helped to overcome their distortions and to take well-considered choices. This gain in autonomy enables people to engage in mental strategies, thus de-biasing their decisions.<sup>22</sup> The goal is not to attempt to directly change outcomes but rather to improve the *processes* used to reach a decision. Autonomy-Enhancing Paternalism takes a dynamic perspective and wants to improve the decision-making process.

The second point of criticism notes that the political and bureaucratic decision-makers are themselves subject to biases and distortions.<sup>23</sup> They therefore suggest options to the individual decision-makers that do not improve their current or future welfare. This assumption is in line with Public Choice Theory, which has always argued that public decision-makers are subject to the same distortions as are other people.<sup>24</sup> It could even be argued that they act in a less careful manner because they decide about other people's, and not their own, money.<sup>25</sup> A glance at reality confirms this notion. Take, for example, the decision by the German government to pull down the Wall, which until 1989 separated the German Federal Republic from the German Democratic Republic. Only a few years later, the same government had to newly erect parts of the Wall in order to remind people that there had been this deadly division between the two countries. Some private persons had better predictive capacity. They anticipated that the Wall would become a tourist attraction and that it would be worthwhile to maintain it at least in some crucial parts.

However, the second criticism does not necessarily hold. There are certainly conditions under which public decision-makers have better information and more extensive advice from experts so that they are better able to overcome biases than

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<sup>19</sup> See e.g. the recent critique by Whitman and Rizzo 2015 of the welfare standards used by soft paternalists.

<sup>20</sup> See e.g. Sugden 2013, Schnellenbach and Schubert 2014.

<sup>21</sup> Binder and Lades 2015, also Hausman and Welch 2010, Mills 2013.

<sup>22</sup> See Larrick 2004.

<sup>23</sup> Glaeser 2006.

<sup>24</sup> See e.g. Mueller 1996, 2003 or Frey 1983.

<sup>25</sup> This argument has e.g. been advanced by Tullock 1965.

are more isolated individuals. Moreover, the lengthy administrative and political process should also help to reduce the most obvious distortions.

These criticisms shall not be further pursued because they have been well discussed in the literature. Rather, our contribution wants to consider an even more fundamental aspect, namely, that Liberal Paternalism may turn out to be disadvantageous to individuals, reducing their welfare.

### 2.3 Nudges from a Political Economy Perspective

The proponents of Liberal Paternalism seem to assume, as a matter of course, that the public decision-makers want to raise the welfare of the general population. They are thus following the ‘benevolent dictator approach’, assuming that politicians aim to maximize social welfare and can force public officials to act accordingly.

This is an assumption that has been strongly criticized since the very beginning of Public Choice Theory.<sup>26</sup> Public decision-makers are as self-interested as other persons are. Their general goal is to stay in power. In democracies this depends on being re-elected. Politicians are prepared to produce a political business cycle in order to reach that goal.<sup>27</sup> They actively exploit a particular bias, namely the short time horizon of the voters, to that effect. Before the election they spend money on particularly popular projects, or hand out money to the population in the form of higher old age pensions and higher transfers to lower income groups. Most importantly, they support strong interest groups by giving them special privileges, for instance by introducing import restrictions and reducing the taxes for the export industry, such as the tourist sector. More subtly, they may offer a sympathetic ear to lobbyists’ concerns about, and ideas for, certain nudging interventions. The costs of such policies are the more strongly discounted the lower is the probability of staying in power. Thus, a government faced with a low probability of staying in power is induced to spend more money shortly before elections because they are unlikely to bear the negative consequences during the forthcoming election period. In contrast, when a government expects to be re-elected, its time horizon extends over the next election period and beyond. Under this condition it can undertake ideological policies. These preferences may, but need not, be in line with the population’s welfare. The government may be ready to offer options nudging people into a direction increasing the population’s welfare if this is in line with the government’s ideology. Such social welfare enhancing policies may also be in the interest of public officials if they can thereby demonstrate their competence and their superior knowledge compared to ordinary people. Their behaviour is also influenced by a professional attitude inducing them to indeed seek ways to improve the welfare of the population. But again, this need not be the case, and there are many instances in which bureaucracies act in their own interest, in particular with respect to the wages and

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<sup>26</sup>Buchanan and Tullock 1962, Frey 1983, Mueller 1997. See also the textbook by Mueller 2003.

<sup>27</sup>E.g. Frey 1978, Tufte 1978, Frey and Schneider 1981.

privileges they enjoy. In that case they actively seek to exploit to their own advantage the biases in decision-making they observe in the population.

Liberal Paternalism has been discussed almost exclusively in the context of democratic countries where governments depend to some extent, and intermittently, on the will of the voters. But many countries in the world are governed by authoritarian rulers or by outright dictators.<sup>28</sup> While they constantly claim to rule in the interest of their people, this is of course not unambiguously the case. They will seek to actively exploit the distortions in decision-making that members of the population are prone to. They will offer additional options with the goal of nudging people in the direction benefiting them and their clientele.

The assumption that nudges will always be used in the interest of the population is most questionable, if not plainly wrong. It should be noted that private enterprises have always exploited individual decision distortions to sell products that are not always in the interest of their consumers or society at large.<sup>29</sup> An example are self-service shops where the cheaper products are put in an inconvenient location (mostly at the very bottom of the shelf), thereby nudging people to buy the more expensive products with a higher profit margin for the seller. Another example is candy bars whose convenient placement at the check-out prompts children to crave for them.

The next section discusses a specific government intervention with a long tradition in all countries, awards. These take the form of state orders, medals, decorations, and other distinctions.<sup>30</sup>

## 2.4 An Application of Nudging: Awards

Awards are given to individuals (and sometimes to groups) who are deemed to have performed particularly well.<sup>31</sup> They differ in several respects from monetary rewards such as bonuses, which are more directly linked to specific performance. Accepting an award nudges the recipient into a special relation of loyalty to the donor. The respective contract is tacit, incomplete, and difficult or impossible to enforce by the donors. The givers expect that a recipient of an award talks and behaves in a supportive way towards them. If the recipient violates this tacit contract, this is considered bad form. Other people would argue that the recipient should not have accepted

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<sup>28</sup>According to the widely used measure of political regimes, Polity IV, in 2013 about 40 % of all countries failed to meet the rather broad criteria of democratic rule. See <http://www.systemicpeace.org/CTfigures/CTfig16.htm>.

<sup>29</sup>We owe this point to Margit Osterloh.

<sup>30</sup>Switzerland is an exception.

<sup>31</sup>For the emerging literature on awards in economics see Ginsburgh 2003, Besley 2005, Frey 2005, 2006, 2007, Neckermann and Frey 2008, Malmendier and Tate 2009, Chan et al. 2014, Frey and Gallus 2014, Neckermann et al. 2014, Gallus 2015, and Gallus and Frey 2015. For the sociological literature see, e.g., Bourdieu 1979, 1985.

the award if he or she does not agree with the donor's ideology and policies. In turn the donor is expected to support the recipients materially or at least psychically if they run into trouble. In the case of monetary compensation there is no obligation of loyalty at all. Even the opposite may be true: payments can easily be used as justification to work for an organization that one publicly denounces.

Awards look innocuous at first sight. After all, they are a positive reward and only offer an option the potential recipient is free to decline. They therefore create no serious problems in democracies, though it may be considered somewhat arrogant to decline an award. Notable examples concerning major awards are Jean- Paul Sartre's rejection of the Nobel Prize in Literature in 1964, and Thomas Piketty's refusal to accept the Légion d'honneur in 2015. The situation is quite different in an authoritarian system. A person being offered an award by the ruler puts can find himself or herself in a most unfortunate situation. If he or she rejects the award, the ruler gets angry and can claim that his honour and that of the whole state is denigrated. If he or she accepts the award this signals a large measure of identification with the ruler. It is, for example, not well possible to accept the Order of a Hero of Labour of the Russian Federation (formerly Hero of Socialist Worker) but not to agree with the ruling ideology and policy.

Authoritarian rulers can exploit this hidden feature of awards by offering an award to regime critics. This puts the potential recipients in an uncomfortable position because both, whether they accept or reject the order, the decision will strongly reduce their welfare, while benefiting the ruler. In many cases, the potential recipient is nudged to take the award because offending the ruler imposes too high costs on him or her. This is an instance in which the added option (being offered an award) has a welfare decreasing effect on the persons concerned.

## 2.5 Making Nudges Beneficial

We have argued that nudges are not always in the interest of the population. Unlike most of the literature on Liberal Paternalism we suggest that governments may nudge people in a direction that fails to raise their welfare. Even seemingly glorious bestowals of honours in the form of state orders and decorations can carry substantial costs to the ostensible winners. Indeed, under significant conditions, especially when the political system is non-democratic, rulers tend to exploit nudges for their own benefit and to the detriment of the population's welfare.

In a recent article,<sup>32</sup> one of the architects behind the nudging concept admits, “[i]f we are especially fearful of official mistakes – coming from incompetence or bad motivations – we will want to minimize the occasions for nudging.” Rather than minimizing the occasions for nudging, we propose that they should be subjected to

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<sup>32</sup>Sunstein 2015 forthcoming, p. 13.

*constitutional rules*<sup>33</sup> in which voters are able to decide the procedures or processes under which governments may resort to nudging.

Nudging should not be accepted as an innocuous exception to constitutionally based decision-making, even if most applications appear to benefit people. In democracies, even ‘*Liberal Paternalism*’ must be based on the population’s consent in principle.

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## Bibliography

- Bernheim, Douglas B., and Antonio Rangel. 2007. Behavioral public economics: Welfare and policy analysis with non-standard decision makers. In *Behavioral economics and its applications*, ed. Peter Diamond and Hannu Vartainen, 7–84. Princeton: Princeton University Press.
- Besley, Timothy. n.d. *Notes on honours*. Unpublished working paper. London School of Economics.
- Bourdieu, Pierre. 1979. *La distinction. Critique Sociale du Jugement*. Paris: Les Editions de Minuit.
- Bourdieu, Pierre. 1985. The market of symbolic goods. *Poetics* 14: 13–44.
- Brennan, Geoffrey, and James M. Buchanan. 1985. *The reason of rules. Constitutional political economy*. Cambridge: Cambridge University Press.
- Buchanan, James M. 1965. *Constitutional economics*. Oxford: Blackwell.
- Buchanan, James, and Gordon Tullock. 1962. *The calculus of consent: Logical foundations of constitutional democracy*. Ann Arbor: University of Michigan Press.
- Camerer, Colin F. 2004. *Advances in behavioural economics*. Princeton: Princeton University Press.
- Camerer, Colin F., Samuel Issacharoff, George Loewenstein, Ted O’Donoghue, and Matthew Rabin. 2003. Regulation for conservatives: Behavioural and the case for ‘Asymmetric Paternalism’. *University of Pennsylvania Law Review* 151: 1211–1254.
- Chan, Ho Fai, Bruno S. Frey, Jana Gallus, and Benno Torgler. 2014. Academic honors and performance. *Labour Economics* 31: 188–204.
- Choi, James J., David Laibson, Brigitte C. Madrian, and Andrew Metrick. 2004. For better or for worse: Default effects and 401 (k) savings behavior. In *Perspectives on the economics of aging*, ed. David A. Wise, 81–126. Chicago: University of Chicago Press.
- Congdon, William J., Jeffrey R. Kling, and Sendhil Mullainathan. 2011. *Policy and choice: Public finance through the lens of behavioral economics*. Washington, DC: Brookings Institution Press.
- Conlisk, John. 1996. Why bounded rationality? *Journal of Economic Literature* 34(2): 669–700.
- Conly, Sarah. 2012. *Against autonomy: Justifying coercive paternalism*. Cambridge: Cambridge University Press.
- DellaVigna, Stefano. 2009. Psychology and economics: Evidence from the field. *Journal of Economic Literature* 47(2): 315–372.
- Frank, Robert. 1999. *Luxury fever*. New York: Free Press.
- Frey, Bruno S. 1978. Politico-economic models and cycles. *Journal of Public Economics* 9: 203–220.
- Frey, Bruno S. 1983. *Democratic economic policy*. Oxford: Blackwell.
- Frey, Bruno S. 1999. *Economics as a science of human behaviour*. Boston: Kluwer.

<sup>33</sup> Buchanan 1965, Brennan and Buchanan 1985, Mueller 1997.

- Frey, Bruno S. 2001. *Inspiring economics. Human motivation in political economy*. Cheltenham: Edward Elgar.
- Frey, Bruno S. 2005. *Knight fever: Towards an economics of awards*. CESifo Working Paper No. 1468.
- Frey, Bruno S. 2006. Giving and receiving awards. *Perspectives on Psychological Science* 1: 377–388.
- Frey, Bruno S. 2007. Awards as compensation. *European Management Review* 4: 6–14.
- Frey, Bruno S., and Jana Gallus. 2014. *Awards are a special kind of signal*. CREMA Working Paper No. 2014–04.
- Frey, Bruno S., and Friedrich Schneider. 1981. A politico-economic model of the United Kingdom. *Economic Journal* 88: 243–253.
- Frey, Bruno S., and Alois Stutzer. 2014. Economic consequences of miscalculating utility. *Journal of Happiness Research* 15: 937–950.
- Gallus, Jana, and Bruno S. Frey. 2015. *Awards: A strategic management perspective*. Unpublished working paper.
- Gallus, Jana. 2015. *Fostering voluntary contributions to a public good: A large-scale natural field experiment at wikipedia*. Unpublished working paper.
- Gigerenzer, Gerd, Peter M. Todd, and ABC Research Group. 1999. *Simple heuristics that make us smart*. New York: Oxford University Press.
- Gigerenzer, Gerd, Ralph Hertwig, and Thorsten Pachur. 2011. *Heuristics: The foundations of adaptive behavior*. New York: Oxford University Press.
- Ginsburgh, Victor. 2003. Awards, success and aesthetic quality in the arts. *Journal of Economic Perspectives* 17: 99–111.
- Glaeser, Edward L. 2006. Paternalism and psychology. *University of Chicago Law Review* 73: 133–156.
- Gruber, Jonathan, and Botond Koszegi. 2001. Is addiction ‘Rational’? Theory and evidence. *Quarterly Journal of Economics* 116: 1261–1303.
- Hausman, Daniel M., and Brynn Welch. 2010. Debate: To nudge or not to nudge. *Journal of Political Philosophy* 18(1): 123–136.
- Jolls, Christine, and Cass C. Sunstein. 2006. Debiasing through law. *Journal of Legal Studies* 35: 199–241.
- Kahneman, Daniel. 2003. Maps of bounded rationality: Psychology for behavioral economics. *American Economic Review* 93(5): 1449–1475.
- Kahneman, Daniel. 2011. *Thinking, fast and slow*. New York: Farrar, Strauss, Giroux.
- Kirchgässner, Gebhard. 2008. *Homo oeconomicus: The economic model of behaviour and its applications in economics and other social sciences*. Heidelberg: Springer.
- Kirchgässner, Gebhard. 2014. Sanfter Paternalismus, Meritorische Güter und der Normative Individualismus. *List Forum für Wirtschafts- und Finanzpolitik Sonderheft* 3: 210–238.
- Laibson, David. 1997. Golden eggs and hyperbolic discounting. *Quarterly Journal of Economics* 112(2): 443–477.
- Lane, Robert E. 1991. *The market experience*. Cambridge: Cambridge University Press.
- Larrick, Richard P. 2004. Debiasing. In *Blackwell handbook of judgment and decision making*, ed. Derek J. Koehler and Nigel Harvey, 316–337. Oxford: Blackwell Publishing.
- Loewenstein, George, Ted O’Donoghue, and Matthew Rabin. 2003. Projection bias in the prediction of future utility. *Quarterly Journal of Economics* 118: 1209–1248.
- Madrian, Brigitte C. 2014. Applying insights from behavioral economics to policy design. *Annual Review of Economics* 6: 663–688.
- Madrian, Brigitte C., and Dennis F. Shea. 2001. The power of suggestion: Inertia in 401 (k) participation and savings behavior. *Quarterly Journal of Economics* 116: 1149–1187.
- Malmendier, Ulrike, and Geoffrey Tate. 2009. Superstar CEOs. *Quarterly Journal of Economics* 124: 1593–1638.
- Martin, Binder, and Leonhard K. Lades. 2015. Autonomy-enhancing paternalism. *Kyklos* 68(1): 3–27.

- Mill, John Stuart. 1859. *On liberty*. New York: The Harvard Classics.
- Mills, Chris. 2013. Why nudges matter: A reply to goodwin. *Politics* 33(1): 28–36.
- Mueller, Dennis C. (ed.). 1996. *Perspectives on public choice*. Cambridge: Cambridge University Press.
- Mueller, Dennis C. (ed.). 1997. *Constitutional democracy*. Oxford: Oxford University Press.
- Mueller, Dennis C. 2003. *Public choice III*. Cambridge: Cambridge University Press.
- Musgrave, Richard A. 1957. A multiple theory of budget determination. *Finanzarchiv NF* 24: 333–343.
- Neckermann, Susanne, and Bruno S. Frey. 2008. Awards: A view from psychological economics. *Zeitschrift für Psychologie/Journal of Psychology* 216: 198–208.
- Neckermann, Susanne, Reto Cueni, and Bruno S. Frey. 2014. Awards at work. *Labour Economics* 31: 205–217.
- O'Donoghue, Ted, and Matthew Rabin. 2003. Studying optimal paternalism, illustrated by a model of sin taxes. *American Economic Review* 93: 186–191.
- O'Donoghue, Ted, and Matthew Rabin. 2006. Optimal sin taxes. *Journal of Public Economics* 90(10–11): 1825–1849.
- Rabin, Matthew. 1998. Psychology and economics. *Journal of Economic Literature* 36(1): 11–46.
- Schnellenbach, Jan. 2011. Wohlwollendes Anschubsen: Was ist mit liberalem Paternalismus zu erreichen und was sind seine Nebenwirkungen? *Perspektiven der Wirtschaftspolitik* 12: 445–459.
- Schnellenbach, Jan. 2012. Nudges and norms: On the political economy of soft paternalism. *European Journal of Political Economy* 28: 266–277.
- Schnellenbach, Jan. 2014. Individuelle Rationalität als Ziel paternalistischer Intervention: Eine verfassungsökonomische Perspektive. *List Forum für Wirtschafts- und Finanzpolitik Sonderheft* 3: 239–257.
- Schnellenbach, Jan, and Christian Schubert. 2014. *Behavioral public choice: A survey*. Available at SSRN: <http://ssrn.com/abstract=2390290>.
- Sugden, Robert. 2013. The behavioural economist and the social planner: To whom should behavioural welfare economics be addressed? *Inquiry* 56(5): 519–538.
- Sunstein, Cass R. 2014. *Why nudge? The politics of libertarian paternalism*. New Haven: Yale University Press.
- Sunstein, Cass R. 2015. Nudging and choice architecture: Ethical considerations. *Yale Journal on Regulation*. Forthcoming. [http://papers.ssrn.com/sol3/Papers.cfm?abstract\\_id=2551264](http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2551264)
- Sunstein, Cass R., and Richard H. Thaler. 2003. Libertarian paternalism is not an oxymoron. *University of Chicago Law Review* 70(4): 1159–1202.
- Thaler, Richard H., and Cass R. Sunstein. 2003. Libertarian paternalism. *American Economic Review* 93(2): 175–179.
- Thaler, Richard H., and Cass R. Sunstein. 2008. *Nudge – improving decisions about health, wealth and happiness*. London: Penguin Books.
- Tufte, Edward T. 1978. *The political control of the economy*. Princeton: Princeton University Press.
- Tullock, Gordon. 1965. *The politics of bureaucracy*. Washington, DC: Public Affairs Press.
- Tversky, Amos, and Daniel Kahneman. 1974. Judgment under uncertainty: Heuristics and biases. *Science* 185(4157): 1124–1131.
- Whitman, Douglas G., and Mario J. Rizzo. 2015. The problematic welfare standards of behavioral paternalism. *Review of Psychology* 6: 409–425.