Behavioural Economics, Consumer Behaviour, and Consumer Policy

State of the Art

Reisch, Lucia A.; Zhao, Min

Document Version
Accepted author manuscript

Published in:
Behavioural Public Policy

DOI:
10.1017/bpp.2017.1

Publication date:
2017

License
Unspecified

Citation for published version (APA):
Reisch, L. A., & Zhao, M. (2017). Behavioural Economics, Consumer Behaviour, and Consumer Policy: State of the Art. *Behavioural Public Policy*, *1*(2), 190–206. https://doi.org/10.1017/bpp.2017.1

Behavioural Economics, Consumer Behaviour, and Consumer Policy: State of the Art

Lucia A. Reisch and Min Zhao

Journal article (Accepted manuscript)

CITE: Reisch, L. A., & Zhao, M. (2017). Behavioural Economics, Consumer Behaviour, and Consumer Policy: State of the Art. *Behavioural Public Policy*, *1*(2), 190–206. DOI: 10.1017/bpp.2017.1

This article has been published in a revised form in *Behavioural Public Policy* http://dx.doi.org/10.1017/bpp.2017.1.

Behavioural economics, consumer behaviour, and consumer policy: State of the art

Accepted for publication in

Behavioural Public Policy, 1(2), 2017, Cambridge University Press

Accepted, preprint version – for citations, please use final manuscript

Lucia A. Reisch (*corresponding author*)
Full Professor of Consumer Behaviour and Policy
Copenhagen Business School
Porcelaenshaven 18a
DK – 2000 Frederiksberg
lre.msc@cbs.dk

Min Zhao
Associate Professor of Marketing
Carroll School of Management
Boston College
140 Commonwealth Avenue
Chestnut Hill, MA 02467
zhaomk@bc.edu

Abstract

Counter to the traditional assumption of neoclassical economics that individuals are rational *Homo oeconomici* that always seek to maximize their utility and follow their "true" preferences, research in behavioural economics has demonstrated that people's judgments and decisions are often subject to systematic biases and heuristics, and are strongly dependent on the context of the decision. In this article, we briefly review the transition of research from neoclassical economics to behavioural economics, and discuss how the latter has influenced research in consumer behaviour and consumer policy. In particular, we discuss the impact of key principles such as status quo bias, the endowment effect, mental accounting and the sunk-cost effect, other heuristics and biases related to availability, salience, the anchoring effect and simplicity rules, as well as the effect of other supposedly irrelevant factors such as music, temperature, and physical markers on consumers' decisions. These principles not only add significantly to research on consumer behaviour, they also offer readily available practical implications for consumer policy to nudge behaviour in beneficial directions in consumption domains including financial decision making, product choice, healthy eating, and sustainable consumption.

Keywords: behavioural economics; consumer behaviour; decision making; consumer policy; behaviourally based regulation

Behavioural economics, consumer behaviour, and consumer policy: State of the art

From *Homo oeconomicus* to *Homo consumens*

The insights from behavioural economics (BE) are now a well-established feature in consumer research and policy. Today, in fields from health behaviour to pension saving, from investment decisions to food choice, from sustainable consumption to the design of warning signs, the empirical and theoretical insights of BE have become a cornerstone of understanding consumer behaviour, helping inform policy makers how to nudge people to make better, smarter, healthier, and more sustainable choices (Sousa Lourenço, 2016; World Bank, 2014). Fundamentally, BE is concerned with the question of how people actually behave in decision-making situations and how their choices can be improved so that consumers' welfare is enhanced. A primary focus is placed on two aspects: first, on what are referred to as decision heuristics and biases on the part of consumers, and second, on the specific effect of the situation or decision context (Thaler and Sunstein, 2008).

While governments worldwide are increasingly making use of behavioural insights (e.g., Sunstein, 2016a; Whitehead et al., 2014; OECD, 2017a), and academia has acknowledged BE as a valuable new line of thought enriching our knowledge of consumer behaviour (Camerer and Loewenstein, 2004), this has not come uncontested. Rather, a fierce academic debate with neoclassical thought had to be won (Thaler, 2015). Neoclassical economics and governmental economic policy have long been overwhelmingly based on a view of the consumer as a rational *Homo*

oeconomicus who actively engages in a search for information on the best available product/service option, knows and considers all cost and benefits, and follows her "true" preferences. However, psychologists have long known that consumers usually display "bounded rationality" (Kahneman, 2003; Simon, 1956), in the sense that they depart from the standard account in predictable and systematic ways. Due to those departures, consumers can make serious errors by compromising their own interests (Luth, 2010).[1]

To date, in consumer policy, the *leitbild* of the "sovereign consumer", enlightened and empowered by information (the "information paradigm"), is still dominant (Oehler and Wendt, 2017). Consequently, consumer information, education, and advice remain the major policy tools to educate, enable, encourage, and empower consumers. Stricter regulatory tools (laws and regulations), as well as financial incentives (subsidies and transfers) and disincentives (taxes and fees), are typically reserved for the protection of life and health (OECD, 2010). In this view, consumer behaviour is largely determined by consumers' preferences (based on information provided and prior learning), individual income, and the goods and prices available (Brennan et al., 2014). This traditional approach assumes that attitudes, values, social norms, and other mental representations are all included in a consumer's preferences (Thaler, 1985), and that the human biases and heuristic strategies that have been identified in empirical consumer research are generally "irrelevant", not systematic, and can hence be neglected (Reisch and Sunstein, 2015).

However, these "supposedly irrelevant factors" (Thaler, 2015) are – quite to the contrary – rather decisive; small changes and small incentives can make big

differences (Halpern, 2015). Policies frequently run against the grain of human nature – our biases, the heuristics we use, the lack of discipline, and limited information-processing capacity; and too often, attempts to change behaviour are both ineffective and inefficient. This is not a surprise to marketing experts nor to consumer researchers; however, did it take some decades to include this knowledge in consumer policy, which has recently experienced a kind of empirical enlightenment based on behavioural economics.

In practice, consumers have to make many highly complex decisions, often in situations characterized by scarcity of time, knowledge, or negotiation power (Mullainathan and Shafir, 2013). Also, some areas covering essential products and services used to be more or less given in Europe; for decades, consumers were offered one or a few default options of pension schemes, health insurance, phone tariffs, and energy providers. Since the liberalisation of markets, largely based on EU regulation, complex decisions on such essential services and products have to be made individually. While choice and competitive markets are certainly highly rated assets of free-market economies, choice can also become a torment. Excessive choice might reduce – and not increase – consumer welfare (Mick, Broniarczyk, and Haidt, 2004). It is hence not surprising that consumers (very rationally, actually) turn to rules of thumb and mental shortcuts to ease this burden.

BE encourages systematic thinking about such problems in order to design policy solutions on the basis of the empirical evidence. In this empirically informed view of regulation (Sunstein, 2011), consumers are not seen as irrational; rather, heuristics and biases as well as situational dependency present both challenges and opportunities

for policy makers. One goal of behaviourally informed consumer policy is to design policy tools that are more effective, efficient, and less intrusive, and that ultimately guide consumers to make – and stick to – better decisions for themselves (Reisch and Thøgersen, 2017). These so-called nudges are defined as low-cost, choice-preserving, empirically informed approaches to regulatory issues, including disclosure requirements, default rules, simplification, and use of salience and social norms (Thaler and Sunstein, 2008; Oliver, 2017).

Consumer behaviour and behavioural economics

Below we review and discuss in detail key findings in consumer behaviour that are inspired by behavioural economics. We primarily focus on heuristics and biases that are closely related to the prevalent theories in behavioural economics – prospect theory and mental accounting (Kahneman and Tversky, 1979; Thaler, 2015) – and also discuss the impact of supposedly irrelevant factors on consumer behaviour. These findings offer a deep understanding of consumers' economically irrational behavior, and provide insights into overcoming various consumer fallacies and promoting desired behaviour.

Status quo bias. Among the many key principles that prospect theory identifies, reference point (options are perceived as either loss or gain against a reference point) and loss aversion (losses loom larger than gains) are the two most widely studied and applied aspects in consumer research (Kahneman, Knetsch, and Thaler, 1991). Supported by these two concepts, research demonstrates consumers' status quo bias and the endowment effect in various consumer decisions (Johnson and Goldstein, 2003; Ly et al., 2013; Thaler and Sunstein, 2008). Because of people's reference

dependence, they tend to rely on status quo, or pre-set default, and consider any deviation from these reference points as a loss. Subsequently, due to their loss aversion, consumers prefer maintaining the current or pre-set state (i.e., default) rather than switching away from the default. Evidence has been obtained across various consumer domains: Making enrollment in a retirement savings program automatic and setting a default contribution rate substantially facilitates people's savings behaviour (Carroll et al., 2009); setting organ donation as a default leads to significantly higher donation rates compared with when the default is to not donate (Johnson and Goldstein, 2003); setting higher tipping defaults results in higher average tips in consumption environments involving tipping (Haggag and Paci, 2014); and setting a "green" electricity default substantially reduces energy consumption (Lehner, Mont, and Heiskanen, 2016). In fact, the power of default is so strong that even disclosing how default works to influence consumer decisions does not reduce the effect of default (Steffel, Williams, and Podacar, 2016).

Endowment effect. Consumers' asymmetric responses to losses versus gains have also led to the endowment effect – an inclination to value more highly and pay more for an item that is already in one's possession than items that one does not yet own (Thaler, 1980). Classic endowment-effect research has shown that people's willingness to pay (WTP) for a mug was significantly higher when they pre-owned the mug compared with those who did not own the mug (Kahneman, Knetsch, and Thaler, 1991). Similar effects have been demonstrated in other domains such as a pen, candy bar, cleanup services, basketball tickets (Ariely, 2008), and even the trading of lottery tickets (Bar-Hillel and Neter, 1996). Recent research has taken a step further and shown that a mere perceived ownership can lead to the endowment effect and increase consumers'

willingness to pay for products. For example, endowment effect has been observed when consumers merely touch the screen to learn about the product versus using the mouse (Brasel and Gips, 2014), or simply think about how important a product is to oneself (Maddux et al., 2010). Based on these effects, one could predict that providing consumers with opportunities to try the products before they make a decision, or presenting the attractive products first before showing the price and surcharge, can lead to an endowment effect and increase valuations of products.

Mental accounting. Another key finding in BE that influences consumer research is mental accounting – a type of cognitive bookkeeping that individuals use to keep track of financial activities and to control consumption (Thaler, 1985). One of the key constructs to help consumers track and control their spending is earmarking, whereby they assign expenses into different (mental) categories (e.g., food, entertainment) and constrain their spending based on the pre-assigned budget in each category. This has been shown to improve self-control in overspending on products (that do not belong to the assigned category), and to reduce perceived pain of payment and thus increase the consumption enjoyment of products that have already been pre-assigned to a category (Prelec and Loewenstein, 1998). Similar earmarking effects have been found in saving, where workers received wages in envelopes earmarked with different purposes such as saving for health care or saving for child expenses, which significantly increased workers' savings behaviour (Soman and Zhao, 2011).

Sunk-cost effect. Another important construct in mental accounting literature is the sunk-cost fallacy, which refers to people's irrational behaviour to recover from expenditure that has already occurred (e.g., Soman and Gourville, 2001; Thaler,

1985). The sunk-cost effect is ubiquitous in consumer decisions. As a typical example, people will still go to ski on a rainy day despite the anticipation of a non-enjoyable consumption experience because a lift ticket for that day is prepaid (Arkes and Ayton, 1999). The magnitude of the sunk-cost effect can depend on many factors including the temporal gap between payment and consumption and the presentation of options (Soman and Gourville, 2001). In general, the more recent the payment is, the higher the sunk-cost effect will be; and sunk-cost effect will decrease as the distance between payment and consumption increases. Similarly, sunk-cost effect can be mitigated by bundling the prices of multiple transactions, as with the prefix dinner, or flat-rate consumptions that are widely adopted in phone plans, or annual memberships for museums. Credit card spending, for example, is a scenario that combines both factors: temporal gap between consumption and payment, and an aggregated payment of various transactions at the end of the month. Because these factors reduce the psychological cost of spending and perceived sunk cost, consumers are found to spend more when paying with a credit card compared to paying with cash (Soman, 2001). Interestingly, consumers' post-purchase connection with the product is shown to be stronger when paying with the more painful form of cash compared with the less painful credit cards (Shah et al., 2016).

While the sunk-cost effect often leads to irrational behavior and negative consequences such as wasting time on an unpleasant and unnecessary prepaid trip, this mechanism can be used to create interventions to help consumers overcome short-term pain to achieve long-term goals. For instance, studies have shown that different payment schedules for gym membership can create different levels of perceived sunk cost and impact consumers' frequency of gym visit. That is, the

greater and more vivid perceived sunk cost accrued to monthly payment of a gym fee significantly increases people's gym visits compared with other less frequent payment schedules such as quarterly, semi-annual, or annual payment schedules. Thus, a frequent payment schedule can foster consumers' healthy behaviour and their welfare in the long run (Gourville and Soman, 2002). Such positive sunk-cost effects can easily be applied in similar consumption scenarios to help consumers achieve a desirable long-term goal despite the effortful process of goal pursuit (e.g., taking challenging workshops, using new products involving high learning cost).

Availability heuristics. Besides prospect theory and mental accounting, other biases and heuristics have been shown to impact consumer behavior. As consumers are cognitive misers (Fiske and Taylor, 1991), they often do not process information extensively in an analytical way and instead rely on simple rules to make judgments and decisions, such as the availability and representativeness heuristics (Tversky and Kahneman, 1974). Availability bias refers to people's simple inference based on information that is easily accessed in their mind. In the consumer literature, scholars have conducted extensive research to examine how perceived availability, or ease of retrieval, can impact consumer decisions. In various product choices, consumers who were asked to generate fewer reasons for choosing a target product or to recall fewer positive features of a product had a more favorable attitude towards the target products compared with those who were asked to generate more reasons or to recall more features of the product, because recalling less is easier and the recalled options are more readily available (Menon and Raghubir, 2003). In the new-product domain, research has further examined the role of product newness in the effect of ease of retrieval on product adoption, showing that the availability heuristic is more

pronounced for really new products compared with incrementally new products, because consumers usually have little prior knowledge about really new products and are more susceptible to context effects (Zhao, Hoeffler, and Dahl, 2012). With regard to self-control, recent research has demonstrated that ease of recalling past success of self-control fosters consumers behaviour that is consistent with their long-term welfare, whereas lower perceived availability of past success hinders self-control (Nikolova, Lamberton, and Haws, 2016).

Salience heuristics. Related to the representativeness heuristics, researchers have shown that salience of information can play an important role in consumers' judgments and decisions (Alba and Chattopadhyay, 1986; Tversky and Kahneman, 1974), because salient information is more attention-grabbing. As such, salience is often employed to nudge consumers towards a desired behaviour. Consistent with the well-known examples of nudging healthy food choice by placing healthier food options in more visible and salient positions (Bucher et al., 2016), recent research has demonstrated the findings from the opposite perspective that highlighting an unhealthy label decreases consumers' choice of unhealthy food (Shah et al., 2014). A more recent large-scale research project in service marketing has further shown the effect of salience in encouraging the usage of online service to reduce cost (Castelo et al., 2015). In this study that was conducted in Ontario, Canada, only 10% of residents use online service for their license plate sticker renewals, and government needed to spend $35 million annually on infrastructure required for in-person service. Researchers designed a salience-based intervention on the renewal notice that was sent to residents by simply making the option of online service and its benefits more salient (compared with the traditional visit to physical service centers). The results

showed a significant switch of number of residents from visiting the physical service center to utilizing online service to renew their license plate, which not only helped consumers save time but also decreased the infrastructure cost at physical service centers and could save the government up to $612,000 annually.

Anchoring effect. Another heuristic is the anchoring effect, whereby people make estimates by anchoring on an arbitrary reference value in the decision context such as a phone number, social security number, or other random number generated by a wheel, and they indicated higher WTP when those random numbers were higher (Ariely, Lowenstein, and Prelec, 2003; Tversky and Kahneman, 1974). Building upon these classic findings, later research in consumer behaviour shows the anchoring effect based on the scales used in questions. For example, in the donation domain, studies have shown that the left-most number on a donation scale and the steepness of the increase on the scale can greatly impact donation magnitude (Bruyn and Prokopec, 2013). That is, donors use the left-most number on the scale as an anchoring point for whether or not they would like to make a donation, and their donation responses are stronger when the left-most number is lower than their past donation amount or past norm. More interestingly, their donation amount is higher when the increase on the scale is steeper (e.g., increase at a 50% rate vs. 20% rate). Similarly, in the credit card payment domain where a "minimum payment warning" is required on the credit card statement, research has identified a strong correlation between minimum repayment amount and actual repayment amount, suggesting that consumers use the minimum payment amount as an anchoring point for their payment decision (Salisbury, 2014; Stewart, 2009). Later research further showed that a randomly determined "suggested payment amount" on a credit card statement can

play a similar role by providing an anchoring point for consumers' credit card repayment decision, and it nudges consumers towards a more desirable payment decision that can reduce future credit card debt (Bartels and Sussman, 2016). Similarly, in the sustainable consumption domain, consumers use neighbours' recycling rate as a suggested social norm and are heavily influenced by these suggested percentages (Lehner, Mont, and Heiskanen, 2016).

The power of simplicity. Being cognitive misers, consumers are often intimidated by the large amount of information they are exposed to or the effort that is required for them to move towards a desired goal (Fiske and Taylor, 1991). Therefore one of the key nudging strategies to elicit positive behaviour is simplification. Simplifying steps for tax filing, for opening bank accounts, and applying to college have all yielded successful increase of the desired target behaviour (Ly et al., 2013). In the financial domain, research demonstrates that having one saving goal resulted in higher savings compared with having multiple saving goals, because the former case was simple while the latter increased the decision difficulty and led to saving deferral (Soman and Zhao, 2011). Similarly, choosing among many charity organizations needing help is overwhelming and leads volunteers to defer participation due to decision difficulty (Carroll, White, and Pahl, 2011), and having a large fund assortment size decreases likelihood to invest (Morrin et al., 2012). This simplicity rule has also been widely applied in the food consumption domain where consumers typically have to face complicated nutrition tables. Recent study shows that one simplified point of an overall nutrition scoring system can greatly promote healthier choices of food options with higher nutrition scores (Nikolova and Inman, 2015). In the sustainable consumption domain, simplicity-based interventions such as using traffic light signals

to indicate the water usage during a shower significantly reduced the effort to monitor water usage, shortened shower time, and increased water conservation (Ly et al., 2013).

The effect of contextual factors. An emerging stream of research in consumer behaviour further demonstrates the strong impact of seemingly irrelevant contextual cues in the decision environment. One of the early observations in this realm is the theory of channel forces, defined as small situational factors that facilitate a specific desired behaviour (Lewin, 1951; Ross and Nisbett, 1991). Researchers have subsequently used the term "channel factors" to refer to contextual interventions employed to influence behaviour. For example, studies have shown that among people who attended a workshop designed to encourage low-income individuals to open bank accounts, those who could submit the first (irrelevant) form to a bank representative at the workshop were more likely to actually open a bank account compared to those who merely received the application materials (Mullainathan and Shafir, 2009). While this intervention (cover page of the bank account application) might still be related to the target goal behaviour (albeit not critical), other research has shown that environmental cues that are unrelated to the goal can also have a substantial impact on behaviour (Custers and Aarts, 2010). For example, studies have illustrated the powerful effect of incidental music played in a retail environment in nudging consumers' product choice. That is, playing French (German) music in a wine store increased the purchase of French (German) wines (North, Hargreaves, and McKendrick, 1999). In a similar vein, research has indicated the impact of another seemingly irrelevant environmental cue – temperature – and has shown that warm temperatures increase participants' perception of social closeness to others and their

likelihood to conform to the crowd (Huang et al., 2014). Relatedly, exposure to physical warmth has been shown to activate the concept of emotional warmth, which elicits positive reactions and increases product valuation (Zwebner, Lee, and Goldenberg, 2014). On the other hand, cold temperature can activate need for warmth and increase consumers' liking of warm products such as a romantic movie (Hong and Sun, 2012). Correlations between weather and decision making have also been shown in recent research in the voting domain, where increases in wind speed were found to enhance the chances of electoral options in favor of safety, risk aversion, and continuation of the status quo (Jachimowicz, Menges, and Galinsky, 2016).

With regards to physical cues in the decision environment, research has found that seemingly irrelevant physical cues such as area carpet or a queuing guide in consumers' ubiquitous waiting scenarios can serve as a virtual boundary and change consumers' task commitment. Consumers crossing the virtual boundary and thus perceiving themselves to be inside the system are more likely to adopt an implemental mindset. This implemental mindset further increases consumers' optimism, persistence in waiting, and their propensity to act towards their goal (Zhao, Lee, and Soman, 2012). In a follow-up field study (Zhao, Lee, and Soman, 2012) that was focused on the anxiety-provoking delays between the time that a nonthreatening cancer is diagnosed and the first visit to the oncologist, researchers used the virtual boundary idea and found that a short phone call from a nurse to the patient acknowledging the receipt of the case, confirming basic information, and offering to forward any questions helped cancer patients perceive themselves to be inside the virtual system, which alleviated their anxiety and helped them stay optimistic. Other studies on the effect of physical cues have shown that the physical height at which

people perceive themselves to be at will change one's construal level, leading those making decisions at a higher perceived physical level (e.g., while walking on the higher level of a building or simply sitting on a higher chair) to prefer options involving long-term benefit, such as investment with better long-term outcomes, healthier food, and products with greater performance despite usage difficulty (Aggarwal and Zhao, 2015). Further, social environmental factors such as crowdedness can highlight safety-related constructs, resulting in consumers' greater preference for a safety-oriented option and more aversion to risk connected to gambles (Maeng, Tanner, and Soman, 2013). These effects can occur by merely showing people pictures with big crowds or fewer people. Lastly, individuals exposed to a disorganized environment are more likely to exhibit self-regulatory failure compared with exposure to an organized environment (Chae and Zhu, 2014).

To summarize, BE has substantially influenced consumer research in the past 20 to 30 years. Today, it is common knowledge and widely accepted that consumers are cognitive misers and that small, even unintended changes in the decision context can substantially influence their decisions. Principles such as the status quo bias, the endowment effect, mental accounting, and sunk costs are ubiquitous in consumer decisions; heuristics and biases based on availability, salience, anchoring, or simplicity guide many consumer decisions; and environmental factors such as music, temperature, warmth, and physical location can all play a significant role, even if those factors are irrelevant to the decision itself. These principles not only provide explanations for many seemingly irrational consumer behaviours, they also offer insights about how to de-bias irrational behaviour and facilitate desired behaviour. As the examples above illustrate, the principles and findings of BE have been applied in

many consumption and investment domains such as retirement saving, responsible spending, donation or investment, product choice and product valuation, healthy food choices and healthy behaviour, as well as green and sustainable consumption. Overall, BE has inspired an innovative research stream in consumer behaviour that adds significantly to more traditional consumer research and offers important and readily available practical implications for consumer policy.

Behaviourally informed consumer policy

Against this backdrop of increasing evidence on how consumers decide and behave in reality, public officials became interested in using nudges as additional, behaviourally based policy instruments. In the mid-2000s, behaviourally informed regulation was introduced into academic discourse and was soon applied to policy in fields ranging from healthy eating and weight loss to saving for retirement, standard terms in consumer contracts, energy conservation, and much more (Sunstein and Reisch, 2017; OECD, 2017a, b). Consumer policy – a policy that at its core aims to help consumers make "good deals" and to create an environment that supports the welfare and well-being of consumers in markets – recognized the opportunities of BE early on (e.g., Lunn, 2014; Luth, 2010; OECD, 2010). Designing policy instruments in line with human behaviour typically does not mean more but less regulation, not more bureaucracy but less paperwork, and more target-group-specific and problem-tailored solutions. Designing simple heuristics for investment decisions, making it easy and hassle-free to switch energy providers, setting smart defaults for pension schemes, creating useful disclosures of credit card fees, and making the healthy or sustainable choice the easy choice by applying smart-choice architecture in restaurants and canteens – these are just a few examples of such policies. Behaviourally based

consumer policy also means an empirical, reflective, sometimes experimental, and always iterative policy approach, including trials and pilot tests of remedies developed cooperatively with suppliers, intermediaries, and consumer organizations; then evaluating outcomes and feeding results back into the policy process to improve the policies tested (Sousa Lourenço et al., 2016).

As shown above, consumers do not decide in a vacuum but always in a choice context. Conscious design of choice architecture is ubiquitous, and there is no setting or situation without a choice architecture. So the question is not *whether* there should be a choice architecture but rather who designs the choice environment with what goals in mind, and whether and how this choice architect (e.g., the state, businesses, schools) is democratically legitimized (Sunstein, 2016c). Behaviourally informed consumer policy is based on the concept of libertarian paternalism, understood to include approaches that preserve freedom of choice but nonetheless incline or steer people in a particular direction (Sunstein, 2014). Nudges – the applications of libertarian paternalism – used as a policy tool should always be transparent and open for public discourse; and they have to be accepted and supported by the same democratic processes, public debate, and critical scrutiny of their costs and benefits as are applied to other political instruments (Sunstein, 2016b).

There are two empirical findings that both ethically concerned critics and policy makers should be aware of.

First, early studies on the effectiveness of nudges have shown that even when nudges and their intentions are made transparent and are communicated to subjects, they

seem not to lose their impact (Bruns et al., 2016; Loewenstein et al., 2015). Admittedly, the evidence base on this issue is still small, and more research has to be done covering different types of nudges in different consumption domains. However, there is no systematic reason, beyond general psychological reactance, to believe that transparency per se should harm a nudge's effectiveness substantially. Nudges are defined as stimuli that help people achieve what they want and plan to do *anyway,* i.e., behaviours that are in line with their own benefit. When people lack – temporarily or systematically – the psychological (e.g., self-regulation) or cognitive (e.g., skills and competence) resources needed to realize their goals, or if they are short of time, energy, or budget to prepare and make extensive decisions, nudges such as simplifications or defaults might increase rather than limit their sense of freedom, accomplishment, and autonomy (Mullainathan and Shafir, 2013). People might be well aware of that and endorse those liberty-preserving policies, particularly when these are openly communicated.

Second, people in the US and in 14 countries worldwide do approve of nudges as policy tools, on average and depending on the policy goal (Reisch and Sunstein, 2016; Sunstein et al., 2017), with a slight preference for so-called "System 2 nudges" in the US (Sunstein, 2016d). Based on Kahneman's (2011) dual process model of decision making, "System 2 nudges" are aimed at people's "slow" cognitive thinking and deliberative decision making, whereas "System 1 nudges" target people's rapid, intuitive decision-making mode. While surveys (Reisch and Sunstein, 2016) found an overall high approval of nudges as policy tools, there were three exceptions: subliminal messages in movie theatres for healthier eating (which actually do not qualify as nudges since they are deliberately not transparent but subliminal); a default

to donate to the Red Cross (or similar); and defaulting people into carbon-offset of their flights. These policy interventions were seen as highly intrusive if not manipulative; obviously and understandably, people do not like to be defaulted into spending even small amounts without active consent. The simplest lesson is: if people believe that a nudge has legitimate goals, and think that it fits with the interests or values of most people, they are overwhelmingly likely to favour it (Reisch and Sunstein, 2016; Sunstein et al., 2017).

To conclude, there are a few unsolved issues that deserve further scrutiny with regard to behaviourally based regulation targeting consumers:

First, it is often unclear how sustainable and long-running the effects of behavioural interventions are – and hence whether they have the potential to change habits and consumption patterns or rather have only a limited short-term impact. It would be worthwhile to invest more in long-term designs, such as panel or cohort studies and systemic long-term interventions and field experiments in real-world settings.

Second, it is important to observe whether and which unintended side effects behavioural interventions might bring about. Some nudge interventions might have unwanted *distributional effects* (an effect well known from sugar or fat taxes) or might not reach those most in need. Nudges might also give way to so-called *"moral licensing",* i.e., consumers might consider having "earned" unhealthy food after engaging in a "virtue" behaviour such as buying fair-trade coffee. Finally, and related to the latter, the *"rebound effect"* can lead to the paradoxical result that while the individual impact of a consumption decision declines (e.g., CO2 saved by using a

fuel-efficient car), the overall consumption impact increases due to intensified consumption (e.g., more car miles driven). While these unintended side effects are not limited to nudges as policy instruments, they might be less expected and visible as opposed to, e.g., the side effects of taxes. On principle, they should always be taken into consideration when assessing and comparing the costs and benefits of different policy instruments and choosing the optimal policy tool mix. Ultimately, all these issues are empirical questions – and hence valuable fields for future research in consumer behaviour and policy. Consumer organizations could take an active role in testing such interventions on a small scale, eventually cooperating with academia, suppliers, and regulators to run field and lab experiments to co-develop and test policy ideas (BIT, 2015).

Third, what is certainly needed to avoid unfounded criticism of manipulation and disrespect of sovereign people are socially debated, politically accepted, culturally adapted, and empirically tested rules for a "*good governance*" for behaviourally informed regulation, as recently proposed by Sunstein (2016b). There is an excellent conceptual base to start from, as well as a great deal of practical experience from behavioural units advising governments worldwide.

References

Aggarwal, P.P., and Zhao, M. 2015. Seeing the big picture: Effect of height on the level of construal. *Journal of Marketing Research,* 52 (1), 120-33.

Alba, J.W., and Chattopadhyay, A. 1986. Salience effects in brand recall. *Journal of Marketing Research,* 23, 363-69.

Ariely, D. 2008. *Predictably irrational.* New York: HarperCollins.

Ariely, D., Lowenstein, G., and Prelec, D. 2003. Coherent arbitrariness: Stable demand curves without stable preferences. *Quarterly Journal of Economics,* 118, 73-106.

Arkes, H.R., and Ayton, P. 1999. The sunk cost and Concorde effects: Are humans less rational than lower animals? *Psychological Bulletin,* 125, 591-600.

Bar-Hillel, M., and Neter, E. 1996. Why are people reluctant to exchange lottery tickets? *Journal of Personality and Social Psychology,* 70 (1), 17-27.

Bartels, D., and Sussman, A. 2016. Anchors, target values, and credit card payments. Working paper. University of Chicago.

Behavioural Insights Team – BIT. 2015. Update report, 2013-2015. London: BIT. Retrieved from: http://www.behaviouralinsights.co.uk/wp-content/uploads/2015/07/BIT_Update-Report-Final-2013-2015.pdf (20.07.2015).

Brasel, S.A., and Gips, J. 2014. Tablets, touchscreens, and touchpads: How varying touch interfaces trigger psychological ownership and endowment. *Journal of Consumer Psychology,* 24 (2), 226-33.

Brennan, L., Binney, W., Parker, L., Aleti, T., and Nguyen, D. 2014. Rational economic models (cognitive models). In L. Brennan, W. Binney, L. Parker, T. Aleti, and Dang Nguyen (eds.), *Social marketing and behaviour change: Models, theory and applications,* pp. 17-37. Cheltenham, UK: Edward Elgar.

Bruns, H., Kantorowicz-Reznichenko, E., Klement, K., Luistro Jonsson, M., and Rahali, B. 2016. Can nudges be transparent and yet effective? WiSo-HH Working Paper Series, Working Paper No. 33. Available at SSRN: https://ssrn.com/abstract=2816227.

Bruyn, A., and Prokopec, S. 2013. Opening a donor's wallet: The influence of appeal scales on likelihood and magnitude of donation. *Journal of Consumer Psychology,* 23 (4), 496-502.

Bucher, T., Collins, C., Rollo, M.E., McCaffrey, T.A., De Vlieger, N., Van der Bend, D., Truby, H., and Perez-Cueto, F.J. 2016. Nudging consumers towards healthier choices: A systematic review of positional influences on food choice. *British Journal of Nutrition,* 115 (12), 2252-63. doi: 10.1017/S0007114516001653.

Camerer, C.F., and Loewenstein, G.F. 2004. Behavioral economics: Past, present, future. In C. Camerer, G.F. Loewenstein, and M. Rabin (eds.), *Advances in Behavioral Economics,* pp. 3-51. Princeton, MA: Sage.

Carroll, G.D., Choi, J.J., Laibson, D.I., Madrian, B., and Metrick, A. 2009. Optimal defaults and active decisions. *Quarterly Journal of Economics,* 124 (4), 1639-74.

Carroll, L.S., White, M.P., and Pahl, S. 2011. The impact of excess choice on deferment of decisions to volunteer. *Judgment and Decision Making,* 6 (7), 629-37.

Castelo, N., Hardy, E., House, J., Mazar, N., Tsai, C., and Zhao, M. 2015. Moving citizens online: Salience and framing as motivators for behavioral change. *Journal of Behavioral Science and Policy,* 1 (2), 57-68.

Chae, B., and Zhu, R. 2014. Environmental disorder leads to self-regulatory failure. *Journal of Consumer Research,* 40 (6), 1203-18.

Custers, R., and Aarts, H. 2010. The unconscious will: How the pursuit of goals operates outside of conscious awareness. *Science,* 329 (5987), 47-50.

Fiske, S.T., and Taylor, S.E. 1991. *Social cognition.* New York: McGraw-Hill.

Gourville, J., and Soman, D. 2002. Pricing and the psychology of consumption. *Harvard Business Review,* 80 (9), 90-96.

Haggag, K., and Paci, G. 2014. Default tips. *American Economic Journal: Applied Economics,* 6 (3), 1-19.

Halpern, D. 2015. *Inside the nudge unit. How small changes can make big differences.* London: Ebury Publ.

Hong, J., and Sun, Y. 2012. Warm it up with love: The effect of physical coldness on liking of romance movies. *Journal of Consumer Research,* 39 (2), 293-306.

Huang, X.I., Zhang, M., Hui, M.K., and Wyer, R.S. 2014. Warmth and conformity: The effects of ambient temperature on product preferences and financial decisions. *Journal of Consumer Psychology,* 24 (2), 241-50.

Jachimowicz, J.M., Menges, J.I., and Galinsky, A.D. 2016. Weather affects voting decisions. Working paper. https://ssrn.com/abstract=2868054 or http://dx.doi.org/10.2139/ssrn.2868054.

Johnson, E.J., and Goldstein, D.G. 2003. Do defaults save lives? *Science,* 302 (5649), 1338-39.

Kahneman, D. 2003. Maps of bounded rationality: Psychology for behavioral economics. *The American Economic Review,* 93, 1449-75.

Kahneman, D. 2011. *Thinking, fast and slow.* New York: Farrar, Strauss and Giroux.

Kahneman, D., Knetsch, J., and Thaler, R. 1991. Anomalies: The endowment effect, loss aversion, and status quo bias. *Journal of Economic Perspectives,* 5 (1), 193-206.

Kahneman, D., and Tversky, A. 1979. Prospect theory: An analysis of decision under risk. *Econometrica,* 47, 263-91.

Lehner, M., Mont, O., and Heiskanen, E. 2016. Nudging – A promising tool for sustainable consumption behaviour? *Journal of Cleaner Production,* 134 (Part A), 166-77.

Lewin, K. 1951. Field theory in social science. In D. Cartwright (ed.), *Selected Theoretical Papers.* New York: Harper and Row.

Loewenstein, G., Bryce, C., Hagmann, D., and Rajpal, S. 2015. Warning: You are about to be nudged. *Behavioral Science and Policy,* 1 (1), 35-42.

Lunn, P. 2014. *Regulatory policy and behavioural economics.* Paris: OECD Publishing.

Luth, H.A. 2010. *Behavioural economics in consumer policy: The economic analysis of standard terms in consumer contracts revisited.* Antwerp: Intersentia.

Ly, K., Mažar, N., Zhao, M., and Soman, D. 2013. A practitioner's guide to nudging. Research Report Series, Rotman School of Management Report, University of Toronto.

Maddux, W.W., Yang, H., Falk, C., Adam, H., Adair, W., Endo, Y., Carmon, Z., and Heine, S. J. 2010. For whom is parting with possessions more painful? Cultural differences in the endowment effect. *Psychological Science,* 21 (12), 1910-17.

Maeng, A., Tanner, R.J., and Soman, D. 2013. Conservative when crowded: Social crowding and consumer choice. *Journal of Marketing Research,* 50 (6), 739-52.

Menon, G., and Raghubir, P. 2003. Ease of retrieval as an automatic input in judgments: A mere-accessibility framework? *Journal of Consumer Research,* 30, 230-43.

Mick, D.G., Broniarczyk, S.M., and Haidt, J. 2004. Choose, choose, choose, choose, choose, choose, choose, choose: Emerging and prospective research on the deleterious effects of living in consumer hyperchoice. *Journal of Business Ethics*, 52, 207-11.

Morrin, M., Inman, J., Broniarczyk, S., Nenkov, G., and Reuter, J. 2012. Investing for retirement: The moderating effect of fund assortment size on the 1/N heuristic. *Journal of Marketing Research,* 49 (4), 537-50.

Mullainathan, S., and Shafir, E. 2009. Savings policy and decision-making in low-income households. In M. Barr and R. Blank (eds.), *Insufficient funds: Savings, assets, credit and banking among low-income households,* pp. 121-45. New York: Russell Sage Foundation Press.

Mullainathan, S., and Shafir, E. 2013. *Scarcity: Why having too little means so much.* New York: Time Books/Henry Holt.

Nikolova, G., and Inman, J. 2015. Healthy choice: The effect of simplified point-of-sale nutritional information on consumer food choice behavior. *Journal of Marketing Research,* 52 (6), 817-35.

Nikolova, H., Lamberton C., and Haws, K.L. 2016. Haunts or helps from the past: Understanding the effect of recall on current self-control. *Journal of Consumer Psychology,* 2 (26), 245-56.

North, A.C., Hargreaves, D.J., and McKendrick, J. 1999. The influence of in-store music on wine selections. *Journal of Applied Psychology,* 84 (2), 271-76.

OECD (Organisation for Economic Co-operation and Development). 2010. *Consumer policy toolkit.* Paris: Organisation for Economic Co-operation and Development (OECD) Publishing.

OECD (Organisation for Economic Co-operation and Development). 2017a. *Behavioural insights and public policy. Lessons from around the world*. Paris: Organisation for Economic Co-operation and Development (OECD) Publishing.

OECD (Organisation for Economic Co-operation and Development). 2017b. *Tackling environmental problems with the help of behavioural insights.* Paris: Organisation for Economic Co-operation and Development (OECD) Publishing.

Oehler, A., and Wendt, S. 2017. Good consumer information: The Information Paradigm at its (dead) end? *Journal of Consumer Policy*, 40 (in press).

Oliver, A. 2017. *The origins of behavioural public policy*, Cambridge: Cambridge University Press.

Prelec, D., and Loewenstein, G. 1998. The red and the black: Mental accounting of savings and debt. *Marketing Science,* 17 (1), 4-28.

Reisch, L.A., and Sunstein, C.R. 2015. Behavioural economics and consumption. In D.T. Cook and J.M. Ryan (eds.). *The Wiley Blackwell encyclopaedia of consumption and consumer studies,* pp. 41-42. Hoboken, NJ: Wiley-Blackwell.

Reisch, L.A., and Sunstein, C.R. 2016. Do Europeans like nudges? *Judgment and Decision Making,* 1 (4), 310-25.

Reisch, L.A., and Thøgersen, J.B. 2017. Behaviourally informed consumer policy. In M. Keller, B. Halkier, T.-A. Wilska, and M. Truninger (eds.), *Routledge handbook on consumption.* London: Routledge (in press).

Ross, L., and Nisbett, R.E. 1991. *The person and the situation: Perspectives of social psychology.* London: McGraw-Hill.

Salisbury, L.C. 2014. Minimum payment warnings and information disclosure effects on consumer debt repayment decisions. *Journal of Public Policy and Marketing,* 33 (1), 49-64.

Shah, A., Bettman, J., Ubel, P., Keller, P.A., and Edell, J. 2014. Surcharges plus unhealthy labels reduce demand for unhealthy menu items. *Journal of Marketing Research,* 51 (6), 773-89.

Shah, A., Eisenkraft, N., Bettman, J.R., and Chartrand, T.L. 2016. "Paper or plastic?": How we pay influences post-transaction connection. *Journal of Consumer Research,* 42 (5), 688-708.

Simon, H. 1956. Rational choice and the structure of the environment. *Psychological Review,* 63, 129-38.

Soman, D. 2001. The mental accounting of sunk time costs: Why time is not like money. *Journal of Behavioral Decision Making,* 14, 169-85.

Soman, D., and Gourville, J. 2001. Transaction decoupling: How price bundling affects the decision to consume. *Journal of Marketing Research,* 38, 30-44.

Soman, D., and Zhao, M. 2011. The fewer the better: Number of goals and savings behavior. *Journal of Marketing Research,* 48 (6), 944-57.

Sousa Lourenço, J., Ciriolo, E., Rafael Rodrigues Vieira de Almeida, S., and Troussard, X. 2016. Behavioural insights applied to policy, European Report, 2016, Joint Research Centre (JRC) Report EUR 27726 EN. Brussels: JRC.

Steffel, M., Williams, E.F., and Podacar, R. 2016. Ethically deployed defaults: Transparence and consumer protection through disclosure and preference articulation. *Journal of Marketing Research,* DOI: 10.1509/jmr.14.0421.

Stewart, N. 2009. The cost of anchoring on credit-card minimum repayments. *Psychological Science,* 20 (1), 39-41.

Sunstein, C.R. 2011. Empirically informed regulation. *The University of Chicago Law Review,* 78 (4), 1349-1429.

Sunstein, C.R. 2014. *Why nudge? The politics of libertarian paternalism.* New Haven, CT: Yale University Press.

Sunstein, C.R. 2016a. The council of psychological advisers. *Annual Review of Psychology,* 67, 713-37.

Sunstein, C.R. 2016b. *The ethics of influence: Government in the age of behavioural science.* New York: Cambridge University Press.

Sunstein, C.R. 2016c. Fifty shades of manipulation. *Journal of Marketing Behavior,* 1 (3-4), 213-44.

Sunstein, C.R. 2016d. People prefer system 2 nudges (kind of). *Duke Law Journal,* 66, 121.

Sunstein, C.R., and Reisch, L.A. 2017. Introduction: The economics of nudge. In C.R. Sunstein and L.A. Reisch (eds.), *The economics of nudge.* 4 Volumes. Routledge Series "Critical Concepts in Economics", pp. 1-12. New York, NY: Routledge.

Sunstein, C. R., Reisch, L. A. Reisch, and J. Rauber 2017. A world-wide consensus on nudging? Not quite, but almost, *Regulation and Governance* (in press).

Thaler, R.H. 1980. Toward a positive theory of consumer choice. *Journal of Economic Behavior and Organization,* 1, 39-60.

Thaler, R.H. 1985. Mental accounting and consumer choice. *Marketing Science,* 4 (3), 199-214.

Thaler, R.H. 2015. *Misbehaving: The making of behavioural economics.* New York, NY: Norton.

Thaler, R.H., and Sunstein, C.R. 2008. *Nudge: Improving decisions about health, wealth, and happiness.* New Haven, CT: Yale University Press.

Tversky, A., and Kahneman, D. 1974. Judgment under uncertainty: Heuristics and biases. *Science,* 185 (4157), 1124-31.

Whitehead, M., Jones, R., Howell, R., Lilley, R., and Pykett, J. 2014. Nudging all over the world. Swindon/Edinburgh: ESRC Report.

World Bank. 2014. Mind, society, and behavior. World Development Report, 2015. Washington, DC: The World Bank Group.

Zhao, M., Hoeffler, S., and Dahl, D.W. 2012. Imagination difficulty and new product evaluation. *Journal of Product Innovation Management,* 29 (1), 76-90.

Zhao, M., Lee, L., and Soman, D. 2012. Crossing the virtual boundary: The effect of task-irrelevant environmental cues on task implementation. *Psychological Science,* 23 (10), 1200-07.

Zwebner, Y., Lee, L., and Goldenberg, J. 2014. The temperature premium: Warm temperatures increase product valuation. *Journal of Consumer Psychology,* 24 (2), 251-59.

[1] For a detailed discussion of the information paradigm and the behavioural turn in consumer policy, see: Reisch and Thøgersen, 2017, from which the present paper borrows.