

8 Behaviorally Informed

Cass R. Sunstein

In recent decades, behavioral economists have been incorporating empirical findings about human behavior into economic models (Kahneman 2011; Thaler 2015). Those findings have transformed our understandings of economic theory. They have also greatly affected our understandings of the role of economic incentives (Chetty et al. 2012) and the content of policy instruments. At the same time, they are providing instructive lessons about the appropriate design of “nudges”—low-cost, choice-preserving, behaviorally informed approaches to regulatory problems, including disclosure requirements, default rules, and simplification (Thaler and Sunstein 2008; Halpern 2015).

Economists have long emphasized the importance of incentives. Behavioral economists do not disagree that incentives matter, but they emphasize the need to see that choice architecture, understood as the background against which decisions are made, can have major consequences for both decisions and outcomes (Thaler 2015). Small, inexpensive policy initiatives, making modest design changes, can have large and highly beneficial effects in areas that include health, energy, the environment, savings, and much more. My main purposes here are to explore relevant evidence, to explore its implications for standard economic theory, to catalog behaviorally informed practices and reforms, and to discuss some lessons for policy. In the United States, numerous policies have been directly informed by behavioral findings, and behavioral economics has played an unmistakable role in countless domains (Sunstein 2013).

The relevant initiatives enlist such tools as disclosure, warnings, norms, and default rules, and they can be found in multiple areas, including fuel economy, energy efficiency, consumer protection, financial regulation, environmental protection, health care, and obesity prevention (Sunstein

2013). As a result, behavioral findings have become an important reference point for regulatory and other policy making in the United States (Sunstein 2016).

In the United Kingdom, then-Prime Minister Cameron created a Behavioural Insights Team with the specific goal of incorporating an understanding of human behavior into policy initiatives (Halpern 2015). The team has used these insights to promote initiatives in numerous areas, including smoking cessation, energy efficiency, organ donation, consumer protection, and compliance strategies in general (Halpern 2015). A great deal of money is being saved. Other nations have expressed keen interest in the work of the team, and its operations are expanding (Halpern 2015).

Behavioral economics has drawn attention in Europe more broadly. The Organisation for Economic Development and Co-operation has published a consumer policy toolkit that recommends initiatives rooted in behavioral findings (OECD 2010). In the European Union, the Directorate-General for Health and Consumers has also shown the influence of behavioral economics (DG SANCO 2010). A report from the European Commission, called “Green Behavior,” enlists behavioral economics to outline policy initiatives to protect the environment (European Commission 2012; iNudgeYou.com n.d.). Private organizations are making creative use of behavioral insights to promote a variety of environmental, health-related, and other goals (see iNudgeYou.com n.d.).

It is clear that behavioral findings have greatly affected economic theory (Thaler 2015) and are having a large impact on regulation, law, and public policy all over the world (Sunstein 2016). With increasing global interest in low-cost tools, that impact will inevitably grow over the next decades. In these circumstances, it is particularly important to have a sense of what we know, what we do not know, and how emerging understandings can inform sensible policies and reforms.

What We Know

Findings

Consider a simple view: Human beings try to maximize utility. To understand their behavior, two questions are important. (1) What do they care about? (2) What incentives do they face? On one view, if you can answer those questions, that is all we need to know on earth (more or less).

Behavioral economics has cast serious doubt on that view. Even if analysts have full information about (1) and (2), they may have little or no idea about what people will choose. At a minimum, there are two more questions. (3) How do people deviate from full rationality? (4) What is the relevant choice architecture? Without answers to (3) and (4), we might be at sea, or make predictions that go badly wrong.

For purposes of policy, the central findings of behavioral economics fall into four categories. What follows is not meant to be a comprehensive account; the focus is on those findings that have particular importance to what governments do.

Inertia and procrastination

a) Default rules often have a large effect on social outcomes. Both private and public institutions often establish “default rules”—rules that determine the result if people make no affirmative choice at all (Sunstein 2015). According to a well-known view in economics and the economic analysis of law, default rules have no effect, at least when transactions costs are zero: People will bargain their way to the efficient result, and that result will be the same, whatever the content of the default.

That view is not correct. In part because of the power of inertia, default rules can be extremely important, because they tend to stick. If the goal is to affect behavior, the right advice is often simple: Create a default rule that puts people in the situation that you favor. Where they start will often be where they end up.

In the domain of retirement savings, for example, the default rule has significant consequences. When people are asked whether they want to opt in to a retirement plan, the level of participation is far lower than if they are asked whether they want to opt out. Automatic enrollment significantly increases participation (Thaler 2015). Something similar is true in the environmental context. If people are automatically enrolled in green energy, there can be major effects on pollution levels (Sunstein 2016).

More generally, people may decline to change from the status quo even if the costs of change are low (or essentially zero) and the benefits substantial. In the context of energy and the environment, for example, we might predict that people might neglect to switch to fuel-efficient alternatives even when it is in their interest to do so (Sunstein 2015). It follows that complexity can have serious adverse effects by increasing the power of inertia, and that ease and simplification (including reduction of paperwork

burdens) can produce significant benefits. These benefits include increased compliance with law and greater participation in public programs. Often people do not act in advisable ways, not because they do not want to do so, but because the best path is obscure or difficult to navigate. Behavioral economists suggest that people will often use a GPS device, even when rational people might be expected not to need one.

b) Procrastination can have significant adverse effects, even when it is in people's interest not to procrastinate. According to standard economic theory, people will consider both the short term and the long term. They will take account of relevant uncertainties; the future may be unpredictable, and significant changes may occur over time. They will appropriately discount the future; it may be better to have money, or a good event, a week from now than a decade from now. In practice, however, some people procrastinate or neglect to take steps that impose small short-term costs but that would produce large long-term gains (Thaler 2015). They may, for example, delay enrolling in a retirement plan, starting to exercise, ceasing to smoke, or using some valuable, cost-saving technology.

When procrastination is creating significant problems, automatic enrollment in relevant programs might be helpful. Moreover, complex requirements, inconvenience, and lengthy forms are likely to make the situation worse and perhaps unexpectedly so.

c) When people are informed of the benefits or risks of engaging in certain actions, they are far more likely to act in accordance with that information if they are simultaneously provided with clear, explicit information about how to do so (Leventhal, Singer, and Jones 1965; Nickerson and Rogers 2010). On one view, such information should not matter, at least if it is easy to find. People will consider the costs of search, of course, but if those costs are low and the potential benefits are high, they will search.

But not always. For example, those who are informed of the benefits of a vaccine are more likely to become vaccinated if they are also given specific plans and maps describing where to go (Leventhal, Singer, and Jones 1965). Similarly, behavior has been shown to be significantly affected if people are informed, not abstractly of the value of "healthy eating," but specifically of the advantages of buying 1 percent milk as opposed to whole milk (Heath and Heath 2010). In many domains, the identification of a specific, clear, unambiguous path or plan has an important effect on social

outcomes; complexity or vagueness can ensure inaction, even when people are informed about risks and potential improvements. What appears to be skepticism or recalcitrance may actually be a product of ambiguity.

Framing and presentation

a) People are influenced by how information is presented or “framed” (Levin, Schneider, and Gaeth 1998). According to standard theory, “frames” should not matter. What matters is expected value. But psychologists and behavioral economists have found otherwise (Kahneman 2011).

If, for example, people are informed that they will gain a certain amount of money by using energy efficient products, they may be less likely to change their behavior than if they are told that they will lose the same amount of money by not using such products. When patients are told that 90 percent of those who have a certain operation are alive after 5 years, they are more likely to elect to have the operation than when they are told that after 5 years, 10 percent of patients are dead (Redelmeier, Rozin, and Kahneman 1993). It follows that a product that is labeled “90 percent fat-free” may well be more appealing than one that is labeled “10 percent fat.” It also follows that choices are often not made based solely on their consequences; assessments may be affected by the relevant frame.

b) Information that is vivid and salient usually has a larger impact on behavior than information that is statistical and abstract. With respect to public health, vivid displays can be more effective than abstract presentations of statistical risks. This point bears on the design of effective warnings. Attention is a scarce resource, and vivid, salient, and novel presentations may trigger attention in ways that abstract or familiar ones cannot.

In particular, salience greatly matters—far more so than standard economic theory has predicted. Why, for example, do people pay bank overdraft fees? One of the many possible answers is that such fees are not sufficiently salient to people, and the fees are incurred as a result of inattention or inadvertent mistakes. One study suggests that limited attention is indeed a source of the problem, and that once overdraft fees become salient, they are significantly reduced (Stango and Zinman 2011). When people take surveys about such fees, they are less likely to incur a fee in the following month, and when they take multiple surveys, the issue becomes sufficiently salient that overdraft fees are reduced for as much as 2 years. In many areas, the mere act of being surveyed can affect behavior by, for

example, increasing the use of water treatment products (thus promoting health) and the take up of health insurance; one reason is that being surveyed increases the salience of the action in question (Zwane et al. 2011).

A more general point is that many costs (or benefits) are less salient than purchase prices; they are “shrouded attributes,” to which some consumers do not pay much attention. Such add-on costs may matter a great deal but receive little consideration, because they are not salient.

c) People display loss aversion; they may well dislike losses more than they like corresponding gains (Thaler, Kahneman, and Knetsch 1991; McGraw et al. 2010; Card and Dahl 2011). Standard economic theory emphasizes the importance of expected value. A 90 percent chance of gaining \$500 is not any more good than a 90 percent chance of losing \$500 is bad. But human beings turn out to be loss averse; they much dislike losses, and they will do a great deal to avoid them (Kahneman 2011).

Whether a change counts as a loss or a gain depends on the reference point, which can be affected by mere description or by policy decisions, and which is often the status quo. A small tax—for example, on grocery bags—can have a large effect on behavior, even if a promised bonus has no effect at all; one reason is loss aversion. It follows that very small charges or fees can be a surprisingly effective policy tool. Partly as a result of loss aversion, the initial allocation of a legal entitlement can affect people’s valuations. Those who have the initial allocation may value a good more than they would if the allocation were originally elsewhere, thus showing an endowment effect (Thaler 2015).

Social influences

a) In multiple domains, individual behavior is greatly influenced by the perceived behavior of other people (Hirshleifer 1995). With respect to obesity, proper exercise, alcohol consumption, smoking, becoming vaccinated, and much more, the perceived decisions of others have a significant influence on individual behavior and choice. The behavior of peers has been found to have a significant effect on risky behavior among adolescents, including tobacco smoking, marijuana use, and truancy (Bisin, Moro, and Topa 2011; Card and Giuliano 2011).

In particular, food consumption is greatly affected by the food consumption of others, and indeed, the body type of others in the relevant group can affect people’s responses to their food choices, with a greater effect from those who are thin than from those who are heavy (McFerran et al. 2011).

Perception of the norm in the pertinent community can affect risk taking, safety, and health (Sunstein 2015; Thaler 2015). The norm conveys significant information about what ought to be done; for that reason, those who lack private information may follow the apparent beliefs and behavior of relevant others, sometimes creating informational cascades.

In addition, people care about their reputations. Thus they may be influenced by others so as not to incur their disapproval. In some contexts, social norms can help create a phenomenon of compliance without enforcement—as, for example, when people comply with laws forbidding indoor smoking or requiring buckling of seat belts, in part because of social norms or the expressive function of those laws. These points bear on the value and importance, in many domains, of private–public partnerships.

b) In part because of social influences, people are more likely to cooperate with one another, and to contribute to the solution of collective action problems, than standard economic theory predicts (Camerer 2003). People's willingness to cooperate is partly a product of an independent commitment to fairness, but it is partly a product of a belief that others will see and punish a failure to cooperate or to act fairly. Norms of reciprocity can be exceedingly important. In many contexts, the result is a situation in which people cooperate on the assumption that others are cooperating as well—and might punish those who fail to do so.

Difficulties in assessing probability

a) In many domains, people show unrealistic optimism (Jolls 1998; Sharot 2011). Standard economic theory does not see human beings as having systematically skewed probability judgments. But there is a systematic tendency toward optimism (Sharot 2011). The “above average” effect is common (Weinstein 1987); many people believe that they are less likely than others to suffer from various misfortunes, including automobile accidents and adverse health outcomes. One study found that although smokers do not underestimate statistical risks faced by the population of smokers, they nonetheless believe that their personal risk is less than that of the average smoker (Slovic 1998). Unrealistic optimism has neurological foundations, with people incorporating good news far more readily than bad news (see Sharot (2011) for an overview). A predictable result of unrealistic optimism is a failure to take appropriate precautions.

b) People often use heuristics, or mental shortcuts, when assessing risks (Kahneman and Frederick 2002; Kahneman 2011). For example, judgments about

probability are often affected by whether a recent event comes readily to mind (Tversky and Kahneman 1973). If an event is cognitively “available,” people may well overestimate the risk. If an event is not cognitively available, people might underestimate the risk. In short, “availability bias” can lead to inaccurate judgments about the probability of undesirable outcomes.

c) People sometimes do not make judgments on the basis of expected value, and they may neglect or disregard the issue of probability, especially when strong emotions are triggered (Loewenstein et al. 2001). When emotions are strongly felt, people may focus on the outcome and not on the probability that it will occur (Loewenstein et al. 2001). (This point obviously bears on reactions to extreme events of various sorts.) Prospect theory, which does not depend on emotions at all, suggests that for low and moderate changes, people may be risk averse with respect to gains but risk seeking with respect to losses; for very large changes, people may be risk seeking with respect to gains but risk averse for losses (Kahneman and Tversky 1979; Kahneman 2011).

Incentives and Choice Architecture

These various findings are hardly inconsistent with the conventional economic emphasis on the importance of material incentives; actual and perceived costs and benefits certainly matter. When the price of a product rises, or when it becomes clear that use of a product imposes serious health risks, the demand for the product is likely to fall (at least, and this is a significant qualification, if these effects are salient). But apart from strictly material incentives of this kind, evidence suggests the independent importance of (1) the social environment and (2) prevailing social norms. If, for example, healthy foods are prominent and easily accessible, people are more likely to choose them; one study finds an 8 to 16 percent decrease in intake simply by making food more difficult to reach (as, for example, by varying its proximity by 10 inches or altering the serving utensil; Rozin et al. 2011). The problem of childhood obesity is, at least in part, a result of the easy availability of unhealthy foods. The same point bears on smoking and alcohol abuse.

In fact, small nudges can have surprisingly large effects (Halpern 2015; Thaler 2015). For example, automatic enrollment in savings programs can have far larger effects than significant economic incentives do—a clear testimonial to the potential power of choice architecture and its occasionally

larger effect than standard economic tools (Chetty et al. 2012). Some evidence suggests that if people are asked to sign forms first rather than last—an especially minor change—the incidence of honesty increases significantly (Shu et al. 2012).

Markets, Government, and the Vexing Problem of Paternalism

It is natural to wonder whether an understanding of the findings outlined above justify paternalism or operate as a defense of more regulation (Conly 2013). With respect to paternalism in particular, it is true that some of the relevant findings supplement the standard accounts of market failures, suggesting that in some settings, markets may fail, in the sense that they may not promote social welfare even in the presence of perfect competition and full information. We are now in a position to identify a series of behavioral market failures, and these do appear to justify regulatory controls (Sunstein 2016). Responses to behavioral market failures might be counted as paternalistic.

If, for example, people focus on short-term costs and neglect long-term benefits, it is possible that disclosure policies that specifically emphasize the long term, or even regulatory requirements (involving, for example, energy efficiency), may be justified. It is also possible to identify “internalities”—problems of self-control and errors in judgment that produce within-person harms, as, for example, when smoking behavior leads to serious risks because of the victory of short-term considerations over the longer view. These too count as behavioral market failures, and responses may be paternalistic in character.

Richard Thaler and I have argued in defense of “libertarian paternalism” (Thaler and Sunstein (2008); see also Sunstein (2013)), understood as approaches that preserve freedom of choice while also steering people in directions that will make their lives go better (by their own lights). And it would be possible to think that at least some behavioral market failures justify more coercive forms of paternalism.

It should not be necessary to emphasize that public officials are subject to error as well. Indeed, errors may result from one or more of the findings traced above; officials are human and capable of error, too. Behavioral public choice explores this problem. The dynamics of the political process may or may not lead in the right direction. It would be absurd to say that behaviorally informed regulation is more aggressive than regulation that is

not so informed, or that an understanding of recent empirical findings calls for more regulation rather than less. The argument is instead that such an understanding can help inform the design of regulatory programs.

Behaviorally Informed Disclosure

Actually Informing Choice

Examples Many statutory programs recognize that information disclosure can be a useful regulatory tool, replacing or complementing other approaches. Recent initiatives have drawn directly from behavioral economics, emphasizing the importance of plain language, clarity, and simplicity.

a) Credit cards. The Credit Card Accountability, Responsibility, and Disclosure Act of 2009 (Credit CARD Act 2009) is designed in large part to ensure that credit card users are adequately informed. Among other things, the Act prohibits an increase in annual percentage rates without 45 days' notice, prohibits the retroactive application of rate increases to existing balances, and also requires clear notice of the consumer's right to cancel the credit card when the annual percentage rate is raised.

The Act also requires several electronic disclosures of credit card agreements. Specifically, it requires that (1) "each creditor shall establish and maintain an Internet site on which the creditor shall post the written agreement between the creditor and the consumer for each credit card account under an open-end consumer credit plan"; (2) "each creditor shall provide to the Board, in electronic format, the consumer credit card agreements that it publishes on its Internet site"; and (3) the "Board shall establish and maintain on its publicly available Internet site a central repository of the consumer credit card agreements received from creditors pursuant to this subsection, and such agreements shall be easily accessible and retrievable by the public" (Credit CARD Act 2009). The overall effect of the CARD Act has been extremely impressive, with more than \$20 billion in annual savings for consumers (Agarwal et al. 2013).

b) Nutrition. In the domain of nutrition, various disclosure requirements are in place. To take just one example, a final rule has been issued by the US Department of Agriculture (USDA), requiring provision of nutritional information to consumers with respect to meat and poultry products. Nutrition facts panels must be provided on the labels of such products. Under the

rule, the panels must contain information with respect to calories and both total and saturated fats (9 CFR § 317.309).

The rule clearly recognizes the potential importance of framing. If a product lists a percentage statement such as “80% lean,” it must also list its fat percentage. This requirement should avoid the confusion that can result from selective framing; a statement that a product is 80 percent lean, standing by itself, makes leanness salient, and may therefore be misleading.

c) Health care. The Patient Protection and Affordable Care Act of 2010 (Affordable Care Act) contains many disclosure requirements designed to promote accountability and informed choice with respect to health care. Indeed, the Affordable Care Act is, in significant part, a series of disclosure requirements, many of which are meant to inform consumers and to do so in a way that is alert to behavioral findings. Under the Act, a restaurant that is part of a chain with twenty or more locations doing business under the same name is required to disclose calories on the menu board. Such restaurants are also required to provide in a written form (available to customers on request) additional nutrition information pertaining to total calories and calories from fat, as well as amounts of fat, saturated fat, cholesterol, sodium, total carbohydrates, complex carbohydrates, sugars, dietary fiber, and protein (Affordable Care Act 2010). Early results suggest significant effects from calorie labels, concentrated among people who are overweight (Deb and Vargas 2016).

How, not only whether As social scientists have emphasized, disclosure as such may not be enough; regulators should devote care and attention to how, not only whether, disclosure occurs. Clarity and simplicity are often critical. In some cases, accurate disclosure of information may be ineffective if the information is too abstract, vague, detailed, complex, poorly framed, or overwhelming to be useful. If disclosure requirements are to be helpful, they must be designed to be sensitive to how people actually process information.

A good rule of thumb is that disclosure should be concrete, straightforward, simple, meaningful, timely, and salient. If the goal is to inform people about how to avoid risks or to obtain benefits, disclosure should avoid abstract statements (such as, about “healthy eating” or “good diet”) and instead clearly identify the steps that might be taken to obtain the relevant goal (by specifying, for example, what specific actions parents might take to reduce the risk of childhood obesity).

In 2010, the Department of Health and Human Services emphasized the importance of clarity and salience in connection with its interim final rule titled “Health Care Reform Insurance Web Portal Requirements,” which “adopts the categories of information that will be collected and displayed as Web portal content, and the data we will require from issuers and request from States, associations, and high risk pools in order to create this content.” (Department of Health and Human Services 2010). That web portal can be found at <http://www.healthcare.gov/>.

Behavioral economics, cognitive illusions, and avoiding confusion

If not carefully designed, disclosure requirements can produce ineffective, confusing, and potentially misleading messages. Behaviorally informed approaches are alert to this risk and suggest possible improvements. For instance, automobile manufacturers are currently required to disclose the fuel economy of new vehicles as measured by miles per gallon (MPG). This disclosure is useful for consumers and helps promote informed choice. As the Environmental Protection Agency (EPA) has emphasized, however, MPG is a nonlinear measure of fuel consumption (Environmental Protection Agency 2009). For a fixed travel distance, a change from 20 to 25 MPG produces a larger reduction in fuel costs than does a change from 30 to 35 MPG, or even from 30 to 38 MPG. To see the point more dramatically, consider the fact that an increase from 10 to 20 MPG produces more savings than an increase from 20 to 40 MPG, and an increase from 10 to 11 MPG produces savings almost as high as an increase from 34 to 50 MPG.

Evidence suggests that many consumers do not understand this point and tend to interpret MPG as linear with fuel costs. When it occurs, this error is likely to produce inadequately informed purchasing decisions when people are making comparative judgments about fuel costs. For example, people may well underestimate the benefits of trading a low-MPG car for one that is even slightly more fuel efficient. By contrast, an alternative fuel economy metric, such as gallons per mile, could be far less confusing. Such a measure is linear with fuel costs and hence suggests a possible way to help consumers make better choices.

Recognizing the imperfections and potentially misleading nature of the MPG measure, the Department of Transportation and EPA proposed in 2010 two alternative labels that are meant to provide consumers with

clearer and more accurate information about the effects of fuel economy on fuel expenses and on the environment (Environmental Protection Agency 2009). After a period of public comment, the Department of Transportation and EPA ultimately chose a label that borrows from both proposals (Environmental Protection Agency 2009). This approach calls for disclosure of the factual material included in the first option but adds a clear statement about anticipated fuel savings (or costs) over a 5-year period.

In a related vein, the USDA has abandoned the “Food Pyramid,” used for decades as the central icon to promote healthy eating. The Pyramid has long been criticized as insufficiently informative; it does not offer people any kind of clear “path” with respect to healthy diet. According to one critical account (Heath and Heath 2010, 61),

its meaning is almost completely opaque. ... To learn what the Food Pyramid has to say about food, you must be willing to decipher the Pyramid’s markings. ... The language and concepts here are so hopelessly abstracted from people’s actual experience with food ... that the message confuses and demoralizes.

In response to these objections, and after an extended period of deliberation, the USDA replaced the Pyramid with a new, simpler icon, consisting of a plate with clear markings for fruit, vegetable, grains, and protein (Sunstein 2013).

The plate is accompanied by straightforward guidance, including “make half your plate fruits and vegetables,” “drink water instead of sugary drinks,” and “switch to fat-free or low-fat (1%) milk.” This approach has the key advantage of informing people what to do, if they seek to have a healthier diet.

In some circumstances, the tendency toward unrealistic optimism may lead some consumers to downplay or neglect information about statistical risks associated with a product or an activity. Possible examples include smoking and distracted driving. In such circumstances, disclosure might be designed to make the risks associated with the product less abstract, more vivid, and salient. For example, the Family Smoking Prevention and Tobacco Control Act of 2009 requires graphic warnings with respect to the risks of smoking tobacco, and the Food and Drug Administration has finalized such warnings for public comment, with vivid and even disturbing pictures of some of the adverse outcomes associated with smoking.

Behaviorally Informed Tools: Summary Disclosure and Full Disclosure

Disclosure requirements of this kind are designed to inform consumers at the point of purchase, often with brief summaries of relevant information. Such summary disclosures are often complemented with more robust information, typically found on public or private websites. For example, the EPA offers a great deal of material on fuel economy online, going well beyond the information that is available on stickers, and the nutrition facts label is supplemented by a great deal of nutritional information on government websites. Approaches of this kind provide information that private individuals and institutions can adapt; reassemble; and present in new, helpful, imaginative, and often unanticipated ways. Some of the most valuable and creative uses of full disclosure are made by the private sector.

Other disclosure requirements are not specifically directed at consumers or end users at all. They promote public understanding of existing problems and help produce possible solutions by informing people about current practices. One example is the Emergency Planning and Community Right-to-Know Act (1986). At first, this law seemed to be largely a bookkeeping measure, requiring a “Toxic Release Inventory,” in which firms reported what pollutants they were using. But available evidence indicates that it has had beneficial effects, helping spur reductions in toxic releases throughout the United States (Hamilton 2005). One reason involves public accountability: Public attention can help promote behavior that fits with statutory purposes.

To be sure, mandatory disclosure can impose costs and burdens on both private and public institutions, and to the extent permitted by law, those costs and burdens should be considered when deciding whether and how to proceed. Empirical evidence on the actual effects of disclosure policies is indispensable (Greenstone 2009; Sunstein 2010; Schwartz et al. 2011).

Default Rules and Simplification

Social science research provides strong evidence that starting points, or “default rules,” greatly affect social outcomes. Default rules are one way of easing people’s choices, and they are used in countless domains by both public and private institutions.

Automatic Enrollment and Default Rules: Examples

Savings In the United States, employers have long asked workers whether they want to enroll in 401(k) plans; under a common approach, the default rule is nonenrollment. Even when enrollment is easy, the number of employees who enroll, or opt in, has sometimes been relatively low (Madrian and Shea 2001; Gale, Iwry, and Walters 2009). In the United States, some employers have responded by changing the default to automatic enrollment, by which employees are enrolled unless they opt out. The results are clear: Significantly more employees end up enrolled with an opt-out design than with opt-in (Gale, Iwry, and Walters 2009). This is so even when opting out is easy. Importantly, automatic enrollment has significant benefits for all groups, with increased anticipated savings for Hispanics, African Americans, and women in particular (Chiteji and Walker 2009; Orszag and Rodriguez 2009; Papke, Walker, and Dworsky 2009).

The Pension Protection Act of 2006 (Pension Protection Act 2006) draws directly on these findings by encouraging employers to adopt automatic enrollment plans. The Pension Protection Act does this by providing non-discrimination safe harbors for elective deferrals and for matching contributions under plans that include an automatic enrollment feature, as well as by providing protections from state payroll-withholding laws to allow for automatic enrollment. Building on these efforts, then-President Obama asked the Internal Revenue Service and the Treasury Department to undertake initiatives to make it easier for employers to adopt such plans (Internal Revenue Service 2009; Obama 2009).

School meals The National School Lunch Act (Healthy, Hunger-Free Kids Act 2012) takes steps to allow “direct certification” of eligibility, thus reducing complexity and introducing what is a form of automatic enrollment. Under the program, children who are eligible for benefits under certain programs will be “directly eligible” for free lunches and free breakfasts and hence will not have to fill out additional applications (Healthy, Hunger-Free Kids Act 2012). To promote direct certification, the USDA has issued an interim final rule that is expected to provide up to 270,000 children with school meals (Department of Agriculture 2011). In total, the program is enrolling more than 12 million children in the relevant program.

Payroll statements The Department of Homeland Security has changed the default setting for payroll statements to electronic from paper, thus reducing costs (Orszag 2010). In general, changes of this kind may save significant sums of money for both the private and public sectors.

Automatic Enrollment and Default Rules: Mechanisms and Complexities

A great deal of research has attempted to explore exactly why default rules have such a large effect on outcomes (Carroll et al. 2009; Dinner et al. 2009; Gale, Iwry, and Walters 2009). There appear to be three contributing factors. The first involves inertia and procrastination. To alter the effect of the default rule, people must make an active choice to reject the default. In view of the power of inertia and the tendency to procrastinate, people may simply continue with the status quo.

The second factor involves what might be taken to be an implicit endorsement of the default rule. Many people appear to conclude that the default was chosen for a reason; they believe that they should not depart from it unless they have particular information to justify a change.

Third, the default rule might establish the reference point for people's decisions; the established reference point has significant effects, because people dislike losses from that reference point. If, for example, the default rule favors energy-efficient light bulbs, then the loss (in terms of reduced efficiency) may loom large, and the tendency will be to continue with energy-efficient light bulbs. But if the default rule favors less efficient (and initially less expensive) light bulbs, then the loss in terms of upfront costs may loom large, and the tendency will be to favor less efficient light bulbs. In a significant number of domains, it might be possible to achieve regulatory goals, and to do so while maintaining freedom of choice and at low cost, by selecting good default rules and avoiding harmful ones (Sunstein 2015).

Some default rules apply to all of the relevant population, subject to the ability to opt out. Other default rules are personalized, in the sense that they draw on available information about which approach best suits individuals in the relevant population. A personalized default might be based on geographical or demographic variables; for example, income and age might be used in determining appropriate default rules for retirement plans. Alternatively, a personalized default might be based on people's own past choices to the extent that they are available.

An advantage of personalized default rules is that they may well be more accurate than “mass” default rules. As technology evolves, it should be increasingly possible to produce personalized defaults, based on people’s own choices and situations; such rules are likely to be far more accurate than more general ones. There will be excellent opportunities to use default rules to promote people’s welfare (Sunstein 2016). To be sure, any such rules must respect the applicable laws, policies, and regulations involving personal privacy and should avoid unduly crude proxies.

Simplification

Where it is not possible or best to change the default, a similar effect might be obtained merely by simplifying and facilitating people’s choices. Complexity can have serious unintended effects (including indifference, delay, and confusion), potentially undermining regulatory goals by reducing compliance or by decreasing the likelihood that people will benefit from various policies and programs (Sunstein 2013).

For example, a series of steps have been taken recently toward simplifying the Free Application for Federal Student Aid (FAFSA), reducing the number of questions through skip logic (a survey method that uses previous responses to determine subsequent questions) and allowing electronic retrieval of information (Office of Management and Budget 2010). Use of a simpler and shorter form is accompanied by a pilot initiative to permit online users to transfer data previously supplied electronically in their tax forms directly into their FAFSA applications.

These steps are intended to simplify the application process for financial aid and thus to increase access to college; there is good reason to believe that such steps will enable many students to receive aid for attending college when they previously could not do so. Similar steps might be taken in many other domains. And indeed, there is reason to believe that imperfect take-up of existing benefit programs, including those that provide income support, is partly a product of behavioral factors, such as procrastination and inertia. It follows that efforts to increase simplicity, including automatic enrollment, may have substantial benefits.

Well Beyond Incentives

My goals here have been to outline some of the key findings in behavioral economics, to show how they depart from standard economic theory, and to sketch some lessons for policy. A general conclusion is that although material incentives (including price and anticipated health effects) greatly matter, outcomes are independently influenced by choice architecture, including (1) the social environment and (2) prevailing social norms.

Because complexity can often have undesirable or unintended side effects—including high costs, noncompliance with law, and reduced participation in useful programs—simplification helps promote regulatory goals. Indeed, simplification can often have surprisingly large effects.

Reduced paperwork and form-filling burdens (as, for example, through fewer questions, use of skip patterns, electronic filing, and prepopulation) can produce significant benefits, not merely by reducing burdens but also by making programs more readily available. It is thus desirable to take steps to ease participation in such programs by increasing convenience and by giving people clearer signals about what, exactly, they are required to do.

References

- Affordable Care Act. 2010. The Patient Protection and Affordable Care Act of 2010. Pub L No 111–148, 124 Stat 119, codified in various sections of Title 42.
- Agarwal, Sumit, Souphala Chomsisengphet, Neale Mahoney, and Johannes Stroebl. 2013. “Regulating Consumer Financial Products: Evidence from Credit Cards.” NBER Working Paper 19484, National Bureau of Economic Research, Cambridge, MA.
- Bisin, Alberto, Andrea Moro, and Giorgio Topa. 2011. “The Empirical Content of Models with Multiple Equilibria in Economies with Social Interactions.” NBER Working Paper 17196, National Bureau of Economic Research, Cambridge, MA.
- Camerer, Colin F. 2003. *Behavioral Game Theory: Experiments in Strategic Interaction*. Princeton, NJ: Princeton University Press.
- Card, David, and Gordon B. Dahl. 2011. “Family Violence and Football: The Effect of Unexpected Emotional Cues on Violent Behavior.” *Quarterly Journal of Economics* 126 (4): 1879–1907.

Card, David, and Laura Giuliano. 2011. "Peer Effects and Multiple Equilibria in the Risky Behavior of Friends." NBER Working Paper 17088, National Bureau of Economic Research, Cambridge, MA.

Carroll, Gabriel D., James J. Choi, David Laibson, Brigitte C. Madrian, and Andrew Metrick. 2009. "Optimal Defaults and Active Decisions." *Quarterly Journal of Economics* 124 (4): 1639–1674.

Chetty, Raj, John N. Friedman, Soren Leth-Petersen, Torben Heien Nielsen, and Tore Olsen. 2012. "Active vs. Passive Decisions and Crowdout in Retirement Savings Accounts: Evidence from Denmark." NBER Working Paper 18565, National Bureau of Economic Research, Cambridge, MA.

Chiteji, Ngina, and Lina Walker. 2009. "Strategies to Increase the Retirement Savings of African American Households." In *Automatic: Changing the Way America Saves*, edited by William G. Gale, J. Mark Iwry, David C. John, and Lina Walker, 231–260. Washington, DC: Brookings Institution Press.

Conly, S. 2013. *Against Autonomy*. Cambridge: Cambridge University Press.

Credit CARD Act. 2009. Pub L No 111–24, 123 Stat 1734, codified in various sections of Titles 15 and 16.

Deb, Partha, and Carmen Vargas. 2016. "Who Benefits from Calorie Labeling? An Analysis of its Effects on Body Mass." NBER Working Paper 21992, National Bureau of Economic Research, Cambridge, MA.

Department of Agriculture. 2011. "Direct Certification and Certification of Homeless, Migrant and Runaway Children for Free School Meals." 76 Federal Register 22785–02, 22793.

Department of Health and Human Services. 2010. Centers for Disease Control and Prevention, Community Health Status Indicators (CHSI) to Combat Obesity, Heart Disease and Cancer, May 1. Retrieved from <http://www.data.gov/raw/2159>.

DG SANCO (European Commission's Directorate General for Health and Consumers). 2010. *Consumer Behaviour: The Road to Effective Policy-Making*. Retrieved from <http://ec.europa.eu/consumers/docs/1dg-sanco-brochure-consumer-behaviour-final.pdf>.

Dinner, Isaac, Daniel G. Goldstein, Eric J. Johnson, and Kaiya Liu. 2009. "Partitioning Default Effects: Why People Choose Not to Choose." Unpublished manuscript.

Emergency Planning and Community Right to Know Act. 1986. Pub L No 99–499, 100 Stat 1728, codified at 42 USC § 11001 et seq.

Environmental Protection Agency. 2009. "Fuel Economy Labeling of Motor Vehicles: Revisions to Improve Calculation of Fuel Economy Estimates." 74 Federal Register 61537–01, 61542, 61550–53 (amending 40 CFR Parts 86, 600).

European Commission. 2012. "Green Behavior." Future Brief 4, Science for Environment Policy, October. <http://ec.europa.eu/environment/integration/research/news alert/pdf/FB4.pdf>.

Gale, William G., J. Mark Iwry, and Spencer Walters. 2009. "Retirement Savings for Middle- and Lower-Income Households: The Pension Protection Act of 2006 and the Unfinished Agenda." In *Automatic: Changing the Way America Saves*, edited by William G. Gale, J. Mark Iwry, David C. John, and Lina Walker, 11–27. Washington, DC: Brookings Institution Press.

Greenstone, Michael. 2009. "Toward a Culture of Persistent Regulatory Experimentation and Evaluation." In *New Perspectives on Regulation*, edited by David Moss and John Cisternino, 111–125. Cambridge: The Tobin Project.

Halpern, David. 2015. *Inside the Nudge Unit*. London: Ebury.

Hamilton, James T. 2005. *Regulation through Revelation: The Origin, Politics, and Impacts of the Toxics Release Inventory Program*. Cambridge: Cambridge University Press.

Healthy, Hunger-Free Kids Act. 2012. Pub L No 111–296, 124 Stat 3183.

Heath, Chip, and Dan Heath. 2010. *Switch: How to Change Things When Change Is Hard*. New York: Broadway.

Hirshleifer, David. 1995. "The Blind Leading the Blind: Social Influence, Fads, and Informational Cascades." In *The New Economics of Human Behavior*, edited by Mariano Tommasi and Kathryn Ierulli, 188–215. Cambridge: Cambridge University Press.

Internal Revenue Service. 2009. "Retirement and Savings Initiatives: Helping Americans Save for the Future." http://www.irs.gov/pub/irs-tege/rne_se0909.pdf.

iNudgeYou.com. n.d. "Resources." <http://www.inudgeyou.com/resources>.

Jolls, Christine. 1998. "Behavioral Economics Analysis of Redistributive Legal Rules." *Vanderbilt Law Review* 51 (6): 1653–1677.

Kahneman, Daniel. 2011. *Thinking, Fast and Slow*. New York: Farrar, Straus, and Giroux.

Kahneman, Daniel, and Shane Frederick. 2002. "Representativeness Revisited: Attribute Substitution in Intuitive Judgment." In *Heuristics and Biases*, edited by Tom Gilovich, Dale Griffin, and Daniel Kahneman, 49–81. Cambridge: Cambridge University Press.

Kahneman, Daniel, and Amos Tversky. 1979. "Prospect Theory: An Analysis of Decision under Risk." *Econometrica* 47 (2): 263–292.

Leventhal, Howard, Robert Singer, and Susan Jones. 1965. "Effects of Fear and Specificity of Recommendation upon Attitudes and Behavior." *Journal of Personality and Social Psychology* 2 (1): 20–29.

Levin, Irwin P., Sandra L. Schneider, and Gary J. Gaeth. 1998. "All Frames Are Not Created Equal: A Typology and Critical Analysis of Framing Effects." *Organizational Behavior and Human Decision Processes* 76 (2): 149–188.

Loewenstein, George F., Elke U. Weber, Christopher K. Hsee, and Ned Welch. 2001. "Risk As Feelings." *Psychological Bulletin* 127 (2): 267–286.

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 (4): 1149–1187.

McFerran, Brent, Darren W. Dahl, Gavan J. Fitzsimons, and Andrea C. Morales. 2011. "How the Body Type of Others Impacts Our Food Consumption." In *Leveraging Consumer Psychology for Effective Health Communications*, edited by Rajeev Batra, Punam Anand Keller, and Victor J. Strecher, 151–170. Armonk, NY: M. E. Sharpe.

McGraw, A. Peter, Jeff T. Larsen, Daniel Kahneman, and David Schkade. 2010. "Comparing Gains and Losses." *Psychological Science* 21 (10): 1438–1445.

Nickerson, David W., and Todd Rogers. 2010. "Do You Have a Voting Plan? Implementation Intentions, Voter Turnout, and Organic Plan Making." *Psychological Science* 21 (2): 194–199.

Obama, Barack H. 2009. Weekly address, September 5.

Office of Management and Budget, Office of Information and Regulatory Affairs. 2010. Information collection budget of the United States government. http://www.whitehouse.gov/sites/default/files/omb/infoereg/icb/icb_2010.pdf.

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

Orszag, Peter. 2010. OMB, Director, SAVEings, March 29. <http://www.whitehouse.gov/omb/blog/10/03/29/SAVEings/>.

Orszag, Peter, and Eric Rodriguez. 2009. "Retirement Security for Latinos: Bolstering Coverage, Savings, and Adequacy." In *Automatic: Changing the Way America Saves*, edited by William G. Gale, Mark J. Iwry, David C. John, and Lina Walker, 173–198. Washington, DC: Brookings Institution Press.

Papke, Leslie E., Lina Walker, and Michael Dworsky. 2009. "Retirement Security for Women: Progress to Date and Policies for Tomorrow." In *Automatic: Changing the Way America Saves*, edited by William G. Gale, J. Mark Iwry, David C. John, and Lina Walker, 199–230. Washington, DC: Brookings Institution Press.

Pension Protection Act. 2006. Pub L No 109–280, 120 Stat 780, codified in various sections of Titles 26 and 29.

Redelmeier, Donald A., Paul Rozin, and Daniel Kahneman. 1993. "Understanding Patients' Decisions: Cognitive and Emotional Perspectives." *Journal of the American Medical Association* 270 (1): 72–76.

Rozin, Paul, Sydney Scott, Megan Dingley, Joanna K. Urbanek, Hong Jiang, and Mark Kaltenbach. 2011. "Nudge to Nobesity I: Minor Changes in Accessibility Decrease Food Intake." *Judgment and Decision Making* 6 (4): 323–332.

Schwartz, Janet, Jason Riis, Brian Elbel, and Dan Ariely. 2011. "Would You Like to Downsize That Meal? Activating Self-Control Is More Effective Than Calorie Labeling in Reducing Calorie Consumption in Fast Food Meals." Unpublished manuscript.

Sharot, Tali. 2011. *The Optimism Bias: A Tour of the Irrationally Positive Brain*. New York: Knopf.

Shu, Lisa L., Nina Mazar, Francesca Gino, Dan Ariely, and Max H. Bazerman. 2012. "Signing at the Beginning Makes Ethics Salient and Decreases Dishonest Self-Reports in Comparison to Signing at the End." *Proceedings of the National Academy of Sciences* 109 (38): 15197–15200.

Slovic, Paul. 1998. "Do Adolescent Smokers Know the Risks?" *Duke Law Journal* 47 (6): 1133–1141.

Stango, Victor, and Jonathan Zinman. 2011. "Limited and Varying Consumer Attention: Evidence from Shocks to the Salience of Bank Overdraft Fees." Working Paper 11–17, Federal Reserve Bank of Philadelphia.

Sunstein, Cass R. 2010. "Administrator, OIRA, Memorandum for the Heads of Executive Departments and Agencies, Disclosure and Simplification as Regulatory Tools." http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/disclosure_principles.pdf.

Sunstein, Cass R. 2013. *Simpler*. New York: Simon and Schuster.

Sunstein, Cass R. 2015. *Choosing Not to Choose*. Oxford: Oxford University Press.

Sunstein, Cass R. 2016. *The Ethics of Influence*. New York: Cambridge University Press.

Thaler, Richard H. 2015. *Misbehaving*. New York: Norton.

Thaler, Richard H., and Cass R. Sunstein. 2008. *Nudge*. New Haven, CT: Yale University Press.

Thaler, Richard H., Daniel Kahneman, and Jack L. Knetsch. 1991. "Experimental Tests of the Endowment Effect and the Coase Theorem." In *Quasi Rational Economics*, edited by Richard H. Thaler, 167–188. New York: Russell Sage.

Tversky, Amos, and Daniel Kahneman. 1973. "Availability: A Heuristic for Judging Frequency and Probability." *Cognitive Psychology* 5 (2): 207–232.

Weinstein, Neil D. 1987. "Unrealistic Optimism about Susceptibility to Health Problems: Conclusions from a Community-Wide Sample." *Journal of Behavioral Medicine* 10 (5): 481–500.

Zwane, Alix Peterson, Jonathan Zinman, Eric Van Dusen, William Pariente, Clair Null, Edward Miguel, Michael Kremer, et al. 2011. "Being Surveyed Can Change Later Behavior and Related Parameter Estimates." *Proceedings of the National Academy of Sciences* 108 (5): 1821–1826.

9 CFR § 317.309.

This is a section of [doi:10.7551/mitpress/11130.001.0001](https://doi.org/10.7551/mitpress/11130.001.0001)

The State of Economics, the State of the World

Edited by: Kaushik Basu, David Rosenblatt,
Claudia Sepúlveda

Citation:

The State of Economics, the State of the World

Edited by: Kaushik Basu, David Rosenblatt, Claudia Sepúlveda

DOI: 10.7551/mitpress/11130.001.0001

ISBN (electronic): 9780262353472

Publisher: The MIT Press

Published: 2020



The MIT Press



This work is available under the Creative Commons Attribution—NonCommercial—NoDerivatives 3.0 IGO license (CC BY-NC-ND 3.0 IGO) <http://creativecommons.org/licenses/by-nc-nd/3.0/igo>.

Some rights reserved

The findings, interpretations, and conclusions expressed in this work are those of the authors and do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy, completeness, or currency of the data included in this work and does not assume responsibility for any errors, omissions, or discrepancies in the information, or liability with respect to the use of or failure to use the information, methods, processes, or conclusions set forth. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Nothing herein shall constitute or be construed or considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

Attribution—Please cite the work as follows: The World Bank. 2019. *The state of economics, the state of the world* / edited by Kaushik Basu, Claudia Sepulveda, and David Rosenblatt. Published by MIT Press. © World Bank. License: Creative Commons Attribution—NonCommercial—NoDerivatives 3.0 IGO (CC BY-NC-ND 3.0 IGO).

Third-party content—The World Bank does not necessarily own each component of the content contained within the work. The World Bank therefore does not warrant that the use of any third-party-owned individual component or part contained in the work will not infringe on the rights of those third parties. The risk of claims resulting from such infringement rests solely with you. If you wish to re-use a component of the work, it is your responsibility to determine whether permission is needed for that re-use and to obtain permission from the copyright owner. Examples of components can include, but are not limited to, tables, figures, or images.

All queries on rights and licenses should be addressed to the Publishing and Knowledge Division, The World Bank, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: pubrights@worldbank.org.

This book was set in Stone Serif and Stone Sans by Westchester Publishing Services. Printed and bound in the United States of America.

Library of Congress Cataloging-in-Publication Data

Names: Basu, Kaushik, editor. | Sepúlveda, Claudia Paz, 1969– editor. | Rosenblatt, David, editor.

Title: *The state of economics, the state of the world* / edited by Kaushik Basu, Claudia Sepulveda, and David Rosenblatt.

Description: Cambridge, MA : MIT Press, [2019] | Includes bibliographical references and index.

Identifiers: LCCN 2018046336 | ISBN 9780262039994 (hardcover : alk. paper)

Subjects: LCSH: Economic development. | Information technology—Economic aspects. | Monetary policy. | Social change.

Classification: LCC HD82 .S8223 2019 | DDC 330.1—dc23

LC record available at <https://lcn.loc.gov/2018046336>

10 9 8 7 6 5 4 3 2 1