

ESSAY

Empirically Informed Regulation

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Our regulatory system . . . must measure, and seek to improve, the actual results of regulatory requirements.

...

[E]ach agency shall identify and consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public. These approaches include warnings, appropriate default rules, and disclosure requirements as well as provision of information to the public in a form that is clear and intelligible.

Executive Order 13563¹

INTRODUCTION

In recent years, a number of social scientists have been incorporating empirical findings about human behavior into economic models. These findings offer useful insights for thinking about regulation and its likely consequences. They also offer some suggestions about the appropriate design of effective, low-cost, choice-preserving approaches to regulatory problems, including disclosure requirements, default rules, and simplification.²

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¹ Executive Order 13563 §§ 1, 4, 76 Fed Reg 3821, 3821–22 (2011).

² See generally William J. Congdon, Jeffrey R. Kling, and Sendhil Mullainathan, *Policy and Choice: Public Finance through the Lens of Behavioral Economics* (Brookings 2011) (describing implications of behavioral economics for public finance); Peter Diamond and Hannu Vartiainen, eds, *Behavioral Economics and Its Applications* (Princeton 2007) (examining behavioral dimensions of public economics; economic development; law and economics; and health, wage determination, and organization economics); Hugh Schwartz, *A Guide to Behavioral Economics* (Higher Education 2008) (providing an introduction to behavioral economics for a general audience). The Office of Information and Regulatory Affairs (OIRA) has provided guidance on disclosure and simplification as regulatory tools. See Cass R. Sunstein, Administrator, OIRA, Memorandum for the Heads of Executive Departments and Agencies, Disclosure and Simplification as Regulatory Tools (June 18, 2010), online at

A general lesson is that small, inexpensive policy initiatives can have large and highly beneficial effects.³ The purpose of this Essay is to explore relevant evidence, to catalogue recent practices and reforms, and to discuss some implications for regulatory policy. And while the primary focus is on small, inexpensive regulatory initiatives, there is a still more general theme, which involves the importance of ensuring that regulations have strong empirical foundations, both through careful analysis in advance and through retrospective review of what works and what does not.

I. FINDINGS AND CONCERNS

A. Findings

For purposes of regulation, the central findings⁴ of recent social science research fall in four categories. What follows is not meant to be a comprehensive account of recent empirical findings; the focus is on those findings that have particular importance to regulatory policy.

1. 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. In part because of the power of inertia, default rules can be extremely important. 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.⁵ Automatic enrollment significantly increases participation.

http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/disclosure_principles.pdf (visited Jan 15, 2011). This memorandum is provided as Appendix B.

³ For a similar claim in another context, see Abhijit V. Banerjee and Esther Duflo, *Poor Economics: A Radical Rethinking of the Way to Fight Poverty* 267–73 (PublicAffairs 2011).

⁴ See generally Thomas Gilovich, Dale Griffin, and Daniel Kahneman, eds, *Heuristics and Biases: The Psychology of Intuitive Judgment* (Cambridge 2002) (compiling research on how people make judgments); Daniel Kahneman and Amos Tversky, eds, *Choices, Values, and Frames* (Cambridge 2000). For a recent discussion of many relevant findings, see generally Daniel Kahneman, *Thinking, Fast and Slow* (Farrar, Straus and Giroux 2011).

⁵ See Brigitte C. Madrian and Dennis F. Shea, *The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior*, 116 Q J Econ 1149, 1184 (2001). For a discussion of the effect of inertia on choice of travel modes, see Alessandro Innocenti, Patrizia Lattarulo, and Maria Grazia Pazienza, *Heuristics and Biases in Travel Mode Choice* *20 (LabSi Working Paper No 27/2009, Dec 2009), online at <http://www.labsi.org/wp/labsi27.pdf> (visited Apr 3, 2011).

More generally, people may decline to change from the status quo even if the costs of change are low and the benefits substantial.⁶ 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.

b) Procrastination can have significant adverse effects. 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 promise large long-term gains.⁷ People may, for example, delay enrolling in a retirement plan,⁸ starting to exercise, seeing a doctor, ceasing to smoke, or using some valuable, cost-saving technology.⁹

⁶ See William Samuelson and Richard Zeckhauser, *Status Quo Bias in Decisionmaking*, 1 J Risk & Uncertainty 7, 8 (1988); Madrian and Shea, 116 Q J Econ at 1176–77 (cited in note 5). With respect to the effects of complexity, consider the finding that efforts to ease and simplify household water connections in Morocco, and thus to create a private tap at home, produced substantial time gains and improvements in self-reported well-being. See Florencia Devoto, et al, *Happiness on Tap: Piped Water Adoption in Urban Morocco* *3–6 (MIT Department of Economics Working Paper No 11-05, Apr 2011), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1803576 (visited Aug 24, 2011). A noteworthy finding here is that the mere reduction of informational and administrative barriers produced large benefits, thus “underscor[ing] the power of the status quo and the potentially high returns of designing programs with simplicity and ease of access in mind.” Id at *6. See also Peter Tufano, *Just Keep My Money! Supporting Tax-Time Savings with US Savings Bonds* *26 (Harvard Business School Working Paper No 09-059, Aug 2010), online at <http://www.hbs.edu/research/pdf/09-059.pdf> (visited Aug 24, 2011) (finding that savings products, in particular US savings bonds, are significantly more likely to be chosen if the process for choosing them is eased and simplified).

⁷ See Ted O’Donoghue and Matthew Rabin, *Choice and Procrastination*, 116 Q J Econ 121, 121–22 (2001); Richard H. Thaler and Shlomo Benartzi, *Save More Tomorrow™: Using Behavioral Economics to Increase Employee Saving*, 112 J Pol Econ S164, S168–69 (2004). In the context of poverty, see Banerjee and Duflo, *Poor Economics* at 64–68 (cited in note 3). For a popular treatment, see generally Piers Steel, *The Procrastination Equation: How to Stop Putting Things Off and Start Getting Stuff Done* (Harper 2011).

⁸ See Dean Karlan, et al, *Getting to the Top of Mind: How Reminders Increase Saving* *1, 14 (Yale Economics Department Working Paper No 82, 2010), online at <http://karlan.yale.edu/p/Top-of-Mind-April2010.pdf> (visited Apr 3, 2011).

⁹ See Esther Duflo, Michael Kremer, and Jonathan Robinson, *Nudging Farmers to Use Fertilizer: Evidence from Kenya* *4–5 (NBER Working Paper No 15131, 2009), online at http://econ.arizona.edu/docs/Seminar_Papers/DufloS09.pdf (visited Apr 3, 2011) (finding that farmers in western Kenya do not make economically advantageous fertilizer investments, but that a small, time-limited discount on the cost of acquiring fertilizer can increase investments, thus producing higher welfare than either a laissez-faire approach or large subsidies).

One implication is that some people make choices that have short-term net benefits but long-term net costs (as is the case, for many, with smoking cigarettes). Another implication is that some people fail to make choices that have short-term net costs but long-term net benefits (as is the case, for some, with choosing more energy-efficient products). Procrastination, inertia, hyperbolic discounting,¹⁰ and associated problems of self-control¹¹ are especially troublesome when the result is a small short-term gain at the expense of a large long-term loss. There is a close connection between procrastination and myopia, understood as an excessive focus on the short-term.¹²

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 response to that information if they are simultaneously provided with clear, explicit information about how to do so.*¹³ 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.¹⁴ 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.¹⁵

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

¹⁰ See David Laibson, *Golden Eggs and Hyperbolic Discounting*, 112 Q J Econ 443, 445 (1997).

¹¹ See Richard H. Thaler and H.M. Shefrin, *An Economic Theory of Self-Control*, 89 J Pol Econ 392, 404 (1981). For an interesting application, see Jonathan H. Gruber and Sendhil Mullainathan, *Do Cigarette Taxes Make Smokers Happier?*, 5 *Advances in Econ Analysis & Pol* 1, 20 (2005).

¹² See Shlomo Benartzi and Richard H. Thaler, *Myopic Loss Aversion and the Equity Premium Puzzle*, 110 Q J Econ 73, 88 (1995).

¹³ See Howard Leventhal, Robert Singer, and Susan Jones, *Effects of Fear and Specificity of Recommendation upon Attitudes and Behavior*, 2 J Personality & Soc Psych 20, 27 (1965); David W. Nickerson and Todd Rogers, *Do You Have a Voting Plan? Implementation Intentions, Voter Turnout, and Organic Plan Making*, 21 Psych Sci 194, 198 (2010) (showing that people are significantly more likely to vote if asked to identify when and where they will vote). For a popular treatment with citations to the academic literature, see Chip Heath and Dan Heath, *Switch: How to Change Things When Change Is Hard* 15–17 (Broadway Books 2010).

¹⁴ See Leventhal, Singer, and Jones, 2 J Personality & Soc Psych at 22, 27–28 (cited in note 13).

¹⁵ See Heath and Heath, *Switch* at 15–17 (cited in note 13) (describing the effects of a targeted milk marketing campaign in West Virginia, which changed the local market share of low-fat milk from 18 percent to 35 percent over a six-month period).

informed about risks and potential improvements.¹⁶ What appears to be skepticism or recalcitrance may actually be a product of ambiguity.

2. Framing and presentation.

a) *People can be influenced by how information is presented or “framed.”*¹⁷ If, for example, people are informed that they will *gain* a certain amount of money as a result of 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 as a result of not using such products.¹⁸ When patients are told that 90 percent of those who have a certain operation are alive after five years, they are more likely to elect to have the operation than when they are told that after five years, 10 percent of patients are dead.¹⁹

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 solely on the basis of their

¹⁶ See Jason Riis and Rebecca Ratner, *Simplified Nutrition Guidelines to Fight Obesity*, in Rajeev Batra, Punam Anand Keller, and Victor J. Strecher, eds, *Leveraging Consumer Psychology for Effective Health Communications: The Obesity Challenge* 333, 334 (ME Sharpe 2011) (discussing the importance of simplicity for health-related communications). For examples of relevant advice in connection with dietary guidelines, see also *Selected Messages for Consumers* (Department of Agriculture Jan 2011), online at <http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2010/PolicyDoc/SelectedMessages.pdf> (visited Apr 4, 2011). These take the form of relatively specific guidance, such as, “Make half your plate fruits and vegetables,” “Switch to fat-free or low-fat (1%) milk,” and “Drink water instead of sugary drinks.” Id. See also Katherine L. Milkman, et al, *Using Implementation Intentions Prompts to Enhance Influenza Vaccination Rates* *4–7 (NBER Working Paper No 17183, June 2011), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1879044 (visited Aug 24, 2011) (finding that people are significantly more likely to become vaccinated if they are given a prompt that asks them to write down the date and time when they will do so, while also finding that a prompt that simply asks them to write down the date has no such effect). See also the discussion of the replacement of the “Food Pyramid” with the “Food Plate” accompanying notes 118–20.

¹⁷ See Irwin P. Levin, Sandra L. Schneider, and Gary J. Gaeth, *All Frames Are Not Created Equal: A Typology and Critical Analysis of Framing Effects*, 76 *Org Behav & Hum Dec Processes* 149, 150 (1998).

¹⁸ See Marti Hope Gonzales, Elliot Aronson, and Mark A. Costanzo, *Using Social Cognition and Persuasion to Promote Energy Conservation: A Quasi-Experiment*, 18 *J Applied Soc Psych* 1049, 1062 (1988). For a demonstration that people’s decisions about when to claim social security benefits are affected by framing, see Jeffrey R. Brown, Arie Kapteyn, and Olivia S. Mitchell, *Framing Effects and Expected Social Security Claiming Behavior* *4–5 (NBER Working Paper No 17018, May 2011), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1833155 (visited Aug 24, 2011) (finding that use of “breakeven analysis” leads people to claim early and that people are more likely to delay claiming when later claiming is framed as a gain rather than a loss).

¹⁹ See Donald A. Redelmeier, Paul Rozin, and Daniel Kahneman, *Understanding Patients’ Decisions: Cognitive and Emotional Perspectives*, 270 *JAMA* 72, 73 (1993). For a discussion of the efforts by the Department of Agriculture (USDA) to inform consumers about nutrition by preventing potentially confusing framing of fat content (for example, if a label says that meat is 90 percent lean, it must also say that it contains 10 percent fat), see text accompanying note 89.

consequences; assessments may be affected by the relevant frame. The importance of the particular frame depends on context. For healthy eating, gain-framed and loss-framed appeals do not show substantially different effects, while for physical activity, gain-framed appeals have been found to be more effective.²⁰

*b) Information that is vivid and salient can have a larger impact on behavior than information that is statistical and abstract.*²¹ With respect to public health, vivid displays can be more effective than abstract presentations of statistical risks.²² 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.²³

In particular, salience greatly matters. 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.²⁴ When people take surveys about such fees, they are less likely to incur a fee in the following month, and when they take a number of surveys, the issue becomes sufficiently salient that overdraft fees are reduced for as long as two years.²⁵ In many areas, the mere act of being surveyed can affect behavior by, for example, increasing use of water treatment products (thus promoting health)

²⁰ See Daniel J. O’Keefe and Jakob D. Jensen, *The Relative Effectiveness of Gain-Framed and Loss-Framed Persuasive Appeals Concerning Obesity-Related Behaviors: Meta-analytic Evidence and Implications*, in Batra, Keller, and Strecher, eds, *Leveraging Consumer Psychology* 171, 178–81 (cited in note 16).

²¹ See Richard Nisbett and Lee Ross, *Human Inference: Strategies and Shortcomings of Social Judgment* 57–58 (Prentice-Hall 1980). For a discussion of graphic health warnings on cigarette packages in a rule finalized by the Food and Drug Administration, see text accompanying notes 123–26.

²² See Nisbett and Ross, *Human Inference* at 43–62 (cited in note 21); Richard E. Nisbett, et al, *Popular Induction: Information Is Not Necessarily Informative*, in Daniel Kahneman, Paul Slovic, and Amos Tversky, eds, *Judgment under Uncertainty: Heuristics and Biases* 101, 112 (Cambridge 1982).

²³ For a discussion of some of the foundational issues, see Pedro Bordalo, Nicola Gennaioli, and Andrei Shleifer, *Saliency Theory of Choice under Risk* *1 (NBER Working Paper No 16387, Sep 2010), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1683137 (visited Apr 4, 2011).

²⁴ See Victor Stango and Jonathan Zinman, *Limited and Varying Consumer Attention: Evidence from Shocks to the Saliency of Bank Overdraft Fees* *27–28 (Fed Reserve Bank of Philadelphia Working Paper No 11-17, Apr 2011), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1817916 (visited Aug 24, 2011).

²⁵ *Id.* at *25, 27.

and the take-up of health insurance; one reason is that being surveyed increases the salience of the action in question.²⁶

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 in practice but receive little consideration in advance, simply because they are not salient.²⁷ An absence of attention to energy costs, which may be “shrouded” for some consumers, has potential implications for regulatory policy, including information provision.²⁸ A field experiment found that clear textual reminders that loan payments are due had a significant effect on payments—indeed, the same effect as an economic incentive in the form of a 25 percent decrease in interest payments.²⁹

*c) People often display loss aversion; they may well dislike losses more than they like corresponding gains.*³⁰ Whether a change counts as a loss or a gain depends on the *reference point*, which can be affected by policy decisions, and which is often the status quo. In part for this reason, 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*.³¹

²⁶ See Alix Peterson Zwane, et al, *Being Surveyed Can Change Later Behavior and Related Parameter Estimates*, 108 Proceedings Natl Acad Sci 1821, 1825–26 (2011).

²⁷ See Xavier Gabaix and David Laibson, *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*, 121 Q J Econ 505, 511 (2006).

²⁸ See Hunt Allcott, Sendhil Mullainathan, and Dmitry Taubinsky, *Externalizing the Internality* *5–6 (unpublished manuscript, July 2011), online at <http://web.mit.edu/allcott/www/AMT%202011%20-%20Externalizing%20the%20Internality.pdf> (visited Aug 24, 2011).

²⁹ See generally Ximena Cadena and Antoinette Schoar, *Remembering to Pay? Reminders vs. Financial Incentives for Loan Payments* (NBER Working Paper No 17020, May 2011), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1833157 (visited Aug 24, 2011).

³⁰ See Richard H. Thaler, Daniel Kahneman, and Jack L. Knetsch, *Experimental Tests of the Endowment Effect and the Coase Theorem*, in Richard H. Thaler, *Quasi Rational Economics* 167, 169 (Russell Sage 1991); A. Peter McGraw, et al, *Comparing Gains and Losses*, 21 Psych Sci 1438, 1444 (2010). Vivid evidence of loss aversion can be found in David Card and Gordon B. Dahl, *Family Violence and Football: The Effect of Unexpected Emotional Cues on Violent Behavior*, 126 Q J Econ 103, 105–06, 130–35 (2011) (finding an increase in domestic violence after a favored team suffers from an upset loss in football).

³¹ See Thaler, Kahneman, and Knetsch, *Experimental Tests* at 167 (cited in note 30). A detailed literature discusses the mechanisms behind the endowment effect and the circumstances in which it will be found. See, for example, Keith M. Marzilli Ericson and Andreas Fuster, *Expectations as Endowments: Evidence on Reference-Dependent Preferences from Exchange and Valuation Experiments* *23 (unpublished manuscript, May 2010), online at <http://ssrn.com/abstract=1505121> (visited Apr 4, 2011). For a recent finding of loss aversion in an interesting setting, see Devin G. Pope and Maurice E. Schweitzer, *Is Tiger Woods Loss Averse? Persistent Bias in the Face of Experience, Competition, and High Stakes*, 101 Am Econ Rev 129, 132 (2011) (concluding that loss aversion costs the top twenty golfers in the world \$640,000 a year on average).

3. Social influences.

a) *In multiple domains, individual behavior is influenced by the perceived behavior of other people.*³² With respect to obesity, proper exercise, alcohol consumption, smoking, becoming vaccinated, and much more, the perceived decisions of others can have a significant influence on individual behavior and choice.³³ The behavior of peers has been found to have a major impact on risky behavior among adolescents, including tobacco smoking, marijuana use, and truancy.³⁴

In particular, food consumption is affected by the food consumption of others, and indeed the body type of others in the relevant group has been found to affect people's food choices, with a greater effect from those who are thin than from those who are heavy.³⁵ Perception of the norm in the pertinent community can affect

³² See David Hirshleifer, *The Blind Leading the Blind: Social Influence, Fads, and Informational Cascades*, in Mariano Tommasi and Kathryn Ierulli, eds., *The New Economics of Human Behavior* 188, 189 (Cambridge 1995) ("When people can observe one another's behavior, they very often end up making the same choices."); Esther Duflo and Emmanuel Saez, *The Role of Information and Social Interactions in Retirement Plan Decisions: Evidence from a Randomized Experiment*, 118 Q J Econ 815, 839 (2003) (discussing retirement plan decisions); Hunt Allcott, *Social Norms and Energy Conservation* *5 (MIT Center for Energy and Environmental Policy Research Working Paper No 09-014, Oct 2009), online at <http://web.mit.edu/allcott/www/Allcott%202010%20-%20Social%20Norms%20and%20Energy%20Conservation.pdf> (visited Apr 5, 2011) (discussing energy conservation); Scott E. Carrell, Mark Hoekstra, and James E. West, *Is Poor Fitness Contagious? Evidence from Randomly Assigned Friends* *17 (NBER Working Paper No 16518, Nov 2010), online at <http://www.nber.org/papers/w16518> (visited Apr 5, 2011) (concluding that peers influence personal fitness and the likelihood of failing fitness requirements); Banerjee and Duflo, *Poor Economics* at 68 (cited in note 3) (noting that "knowledge travels" and that friends and neighbors of those given a free bed net "were also more likely to buy a net themselves"). For a treatment with a wide range of examples, see generally Nicholas A. Christakis and James H. Fowler, *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives* (Little, Brown 2009).

³³ See Hirshleifer, *The Blind Leading the Blind* at 188-89 (cited in note 32) (attributing patterns of alcohol, cigarette, and illegal drug consumption to "localized conformity"). For a finding of significant effects from social comparison on water consumption, see generally Paul J. Ferraro and Michael K. Price, *Using Non-pecuniary Strategies to Influence Behavior: Evidence from a Large-Scale Field Experiment* (NBER Working Paper No 17189, July 2011), online at <http://www.nber.org/papers/w17189.pdf> (visited Aug 24, 2011).

³⁴ See David Card and Laura Giuliano, *Peer Effects and Multiple Equilibria in the Risky Behavior of Friends* *4 (NBER Working Paper No 17088, May 2011), online at <http://www.nber.org/papers/w17088.pdf> (visited Aug 24, 2011); Alberto Bisin, Andrea Moro, and Giorgio Topa, *The Empirical Content of Models with Multiple Equilibria in Economies with Social Interactions* *52-54 (NBER Working Paper No 17196, June 2011), online at <http://www.newyorkfed.org/research/economists/topa/multimay11b.pdf> (visited Sept 25, 2011) (finding strong effects of social interactions on smoking).

³⁵ See Brent McFerran, et al, *How the Body Type of Others Impacts Our Food Consumption*, in Batra, Keller, and Strecher, eds., *Leveraging Consumer Psychology* 151, 161-63 (cited in note 16).

risk taking, safety, and health.³⁶ The norm conveys significant information about what ought to be done. For that reason, people may follow the apparent beliefs and behavior of relevant others, sometimes creating *informational cascades*.³⁷ In addition, people care about their reputations, and for that reason, they may be influenced by others so as not to incur their disapproval.³⁸

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 the buckling of seat belts, in part because of social norms or the expressive function of those laws.³⁹ 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.*⁴⁰ People's willingness to cooperate is partly a product of an independent commitment to fairness; 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

³⁶ See Department of Agriculture and Department of Health and Human Services, Dietary Guidelines for Americans 2010 56, online at <http://www.health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf> (visited Apr 5, 2011) (emphasizing the relevance of “social and cultural norms and values” for “nutrition and physical activity”).

³⁷ See Hirshleifer, *The Blind Leading the Blind* at 191 (cited in note 32) (“[A]n *informational cascade* occurs when the information implicit in predecessors’ actions—or resulting payoffs—is so conclusive that a rational follower will *unconditionally* imitate them, without regard to information from other sources.”). See also Duflo and Saez, 118 Q J Econ at 819 (cited in note 32) (suggesting that social influences affect participation in retirement plans). For an interesting application, see Brian Knight and Nathan Schiff, *Momentum and Social Learning in Presidential Primaries* *13–16 (NBER Working Paper No 13637, Nov 2010), online at http://www.nber.org/papers/w13637.pdf?new_window=1 (visited Apr 29, 2011) (exploring social learning in the context of presidential primaries and finding that early voters have a disproportionate influence in the selection of candidates compared to late voters).

³⁸ See Timur Kuran, *Private Truths, Public Lies: The Social Consequences of Preference Falsification* 35–38 (Harvard 1997).

³⁹ See Robert A. Kagan and Jerome H. Skolnick, *Banning Smoking: Compliance without Enforcement*, in Robert L. Rabin and Stephen D. Sugarman, eds, *Smoking Policy: Law, Politics, and Culture* 69, 72 (Oxford 1993) (finding that a source of compliance with a law prohibiting smoking indoors was public support); Tho Bella Dinh-Zarr, et al, *Reviews of Evidence Regarding Interventions to Increase the Use of Safety Belts*, 21 Am J Prev Med 48, 49 (2001) (suggesting that efforts to enforce safety belt use are effective in large part because they help to make safety belt use a social norm); Maggie Wittlin, Note, *Buckling under Pressure: An Empirical Test of the Expressive Effects of Law*, 28 Yale J Reg 419, 443–47 (2011) (finding that laws requiring seatbelt use have significant effects even controlling for citations issued), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1759993 (visited Apr 5, 2011).

⁴⁰ See Colin F. Camerer, *Behavioral Game Theory: Experiments in Strategic Interaction* 46 (Princeton 2003).

a situation in which people cooperate on the assumption that others are cooperating as well and might punish those who fail to do so.⁴¹

4. Difficulties in assessing probability.

a) *In some domains, people show unrealistic optimism.*⁴² The “above average” effect is common.⁴³ 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 while smokers do not underestimate the statistical risks faced by the population of smokers, they nonetheless believe that their personal risk is less than that of the average nonsmoker.⁴⁴ Unrealistic optimism is associated with the “good news–bad news effect,” through which people give more weight to good news than to bad news. This finding is related to confirmation bias, which occurs when people give special weight to information that confirms their antecedent beliefs.⁴⁵

b) *People often use heuristics, or mental shortcuts, when assessing risks.*⁴⁶ For example, judgments about probability are often affected by whether a recent event comes readily to mind.⁴⁷ If an event is cognitively “available,” people might well overestimate the risk. If an event is not cognitively available, people might well underestimate the risk.⁴⁸ In short, “availability bias” can lead to inaccurate judgments about the probability of undesirable outcomes.⁴⁹

⁴¹ See James Habyarimana, et al, *Coethnicity: Diversity and the Dilemmas of Collective Action* 108–09 (Russell Sage 2009); Herbert Gintis, et al, *Moral Sentiments and Material Interests: Origins, Evidence, and Consequences*, in Herbert Gintis, et al, eds, *Moral Sentiments and Material Interests: The Foundations of Cooperation in Economic Life* 3, 8 (MIT 2005).

⁴² See Christine Jolls, *Behavioral Economics Analysis of Redistributive Legal Rules*, 51 Vand L Rev 1653, 1659 (1998). See generally Tali Sharot, *The Optimism Bias: A Tour of the Irrationally Positive Brain* (Knopf 2011).

⁴³ See Neil D. Weinstein, *Unrealistic Optimism about Susceptibility to Health Problems: Conclusions from a Community-Wide Sample*, 10 J Behav Med 481, 494 (1987).

⁴⁴ See Paul Slovic, *Do Adolescent Smokers Know the Risks?*, 47 Duke L J 1133, 1136–37 (1998).

⁴⁵ See David Eil and Justin M. Rao, *The Good News–Bad News Effect: Asymmetrical Processing of Objective Information about Yourself*, 3 Am Econ J: Microecon 114, 117 (2011), online at <http://ices.gmu.edu/wp-content/uploads/2010/08/The-Good-News-Bad-News-Effect-Asymmetric-Processing-of-Objective-Information-about-Yourself-by-Rao-and-Eil.pdf> (visited Apr 5, 2011).

⁴⁶ See generally Daniel Kahneman and Shane Frederick, *Representativeness Revisited: Attribute Substitution in Intuitive Judgment*, in Gilovich, Griffin, and Kahneman, eds, *Heuristics and Biases* 49 (cited in note 4).

⁴⁷ See Amos Tversky and Daniel Kahneman, *Availability: A Heuristic for Judging Frequency and Probability*, 5 Cog Psych 207, 221 (1973).

⁴⁸ See Elke U. Weber, *Experience-Based and Description-Based Perceptions of Long-Term Risk: Why Global Warming Does Not Scare Us (Yet)*, 77 Climatic Change 103, 107–08 (2006).

⁴⁹ See Paul Slovic, Baruch Fischhoff, and Sarah Lichtenstein, *Cognitive Processes and Societal Risk Taking*, in Paul Slovic, ed, *The Perception of Risk* 32, 37–38 (Earthscan 2000);

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.*⁵⁰ When emotions are strongly felt, people may focus on the outcome and not on the probability that it will occur.⁵¹ 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.⁵²

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 salient⁵³). 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;⁵⁴ one study finds an 8 to 16 percent decrease in intake if

Laurette Dubé-Rioux and J. Edward Russo, *An Availability Bias in Professional Judgment*, 1 J Behav Dec Making 223, 234 (1988).

⁵⁰ See George F. Loewenstein, et al, *Risk as Feelings*, 127 Psych Bull 267, 280 (2001).

⁵¹ See Yuval Rottenstreich and Christopher K. Hsee, *Money, Kisses, and Electric Shocks: On the Affective Psychology of Risk*, 12 Psych Sci 185, 185 (2001). For a demonstration that probability is often neglected with respect to things, but not with respect to money (without, however, emphasizing the role of emotions), see A. Peter McGraw, Eldar Shafir, and Alexander Todorov, *Valuing Money and Things: Why a \$20 Item Can Be Worth More and Less than \$20*, 56 Mgmt Sci 816, 827 (2010). For a discussion of emotions and risk, see generally Paul Slovic, ed, *The Feeling of Risk: New Perspectives on Risk Perception* (Earthscan 2010).

⁵² See Daniel Kahneman and Amos Tversky, *Prospect Theory: An Analysis of Decision under Risk*, 47 Econometrica 263, 268–69 (1979).

⁵³ See Congdon, Kling, and Mullainathan, *Policy and Choice* at 126 (cited in note 2) (“A corrective tax on gasoline that individuals do not perceive or understand will not be effective in reducing carbon emissions.”).

⁵⁴ For a vivid presentation, see Brian Wansink, David R. Just, and Joe McKendry, *Lunch Line Redesign*, NY Times A35 (Oct 21, 2010), and in particular this suggestion:

A smarter lunchroom wouldn’t be draconian. Rather, it would nudge students toward making better choices on their own by changing the way their options are presented. One school we have observed in upstate New York, for instance, tripled the number of salads students bought simply by moving the salad bar away from the wall and placing it in front of the cash registers.

For related evidence, see generally Anne Thorndike, et al, *A 2-Phase Labeling and Choice Architecture Intervention to Improve Healthy Food and Vending Choices* (unpublished manuscript, 2011) (on file with author) (finding that a color-coded labeling intervention increased healthy choices and that increased visibility and convenience of healthy choices also had a significant effect).

food is made slightly more difficult to reach (as, for example, by varying its proximity by ten inches or altering the serving utensil).⁵⁵ The problem of childhood obesity is, at least in part, a product of the easy availability of unhealthy foods.⁵⁶ The same point bears on smoking and alcohol abuse.

Here is another way to put the point. The existing social environment and current social norms provide the backdrop for many choices and can greatly affect outcomes. Consumer products are accompanied by default rules of various sorts; consider, for example, rental car and cell phone agreements, where it is possible to opt in or to opt out of a range of features, and where the default rule may greatly matter. With respect to water quality, air quality, sewage treatment, immunization, and health care, the social environment provides relevant background, which is often taken for granted, and which need not, for many people much of the time, become a serious source of deliberation and choice. For people who are well-off, the relevant background, much of which has not been an object of reflection on their part, is highly desirable and may be taken for granted without causing harm. But for some people, the background is not so benign, and reflection and choice are required.

The broader point is that when some aspect of the background is changed—when, for example, a new default rule is provided for savings plans, or when good choices become simpler and easier to make—significant changes may occur.⁵⁷ And when some people, cities, and states do well and others poorly, the reason will sometimes have a great deal to do with certain aspects of the relevant background, which allow those who do well to take for granted and not even to think about important matters, whereas those who do poorly must focus on and attempt to fix key features of the relevant background.⁵⁸

⁵⁵ See Paul Rozin, et al, *Nudge to Nobesity I: Minor Changes in Accessibility Decrease Food Intake*, 6 *Judgment & Dec Making* 323, 329 (2011).

⁵⁶ See Janet Currie, et al, *The Effect of Fast Food Restaurants on Obesity and Weight Gain*, 2 *Am Econ J: Econ Pol* 32, 60 (2010); Department of Agriculture and Department of Health and Human Services, *Dietary Guidelines for Americans 2010* at 55–56 (cited in note 36) (emphasizing that “[p]eople regularly make decisions about food and physical activity in a variety of community settings” that “play an integral role in affecting individuals’ and families’ food and physical activity choices through their organizational environments and policies”).

⁵⁷ See Banerjee and Duflo, *Poor Economics* at 15 (cited in note 3).

⁵⁸ See id at 68–69. See also id at 269:

The poor bear responsibility for too many aspects of their lives. The richer you are, the more the “right” decisions are made for you. The poor have no piped water, and therefore do not benefit from the chlorine that the city government puts into the water supply. If they want clean drinking water, they have to purify it themselves.

In many contexts, seemingly modest differences in the social environment exert a large influence on outcomes even if they do not greatly alter material incentives.⁵⁹ Social norms have an independent effect: whether people smoke cigarettes, exercise, buckle their seat belts, text while driving, eat healthy foods, or enroll in a retirement plan is significantly influenced by the perceived norm within the relevant group.⁶⁰ This point suggests the potential importance of leadership in the private sector and of private–public partnerships in these and other domains.

B. Concerns

1. Are predictions possible?

It is tempting to respond that these diverse findings might point in different directions, even for the same subpopulation faced with the same problem, and hence that clear predictions cannot be made in particular cases. For example, will people save too little or too much? Will they take optimal, excessive, or insufficient precautions against the risks associated with poor diet?

By itself and in the abstract, an understanding of loss aversion, the availability heuristic, and social influences does not produce clear answers. Such an understanding could, on plausible assumptions, suggest that people will save too much or take excessive precautions, or, on other plausible assumptions, suggest the opposite conclusions. And it may well be the case that loss aversion, unrealistic optimism, the availability heuristic, and social influences are simultaneously at work and point in different directions, making predictions difficult or impossible. For example, unrealistic optimism may lead people to underestimate certain risks, while the availability heuristic may lead people to overestimate the same risks. Although procrastination will cause delay, loss aversion may lead people to act promptly.

It is true that if these findings are taken as a whole and in the abstract, they will not lead to a clear or unique prediction about behavior. Particular situations must be investigated in detail in order to understand likely outcomes. We will often be able to identify

⁵⁹ For a discussion of many illustrations in the context of food choices, see Brian Wansink, *Mindless Eating: Why We Eat More Than We Think* 10 (Bantam 2006). For discussions and many illustrations in the context of development, see generally Banerjee and Duflo, *Poor Economics* (cited in note 3); Dean Karlan and Jacob Appel, *More Than Good Intentions: How a New Economics Is Helping to Solve Global Poverty* (Dutton 2011).

⁶⁰ See notes 267–70 and accompanying text.

mechanisms rather than law-like generalizations.⁶¹ For the purposes of this Essay, it is not necessary to engage these questions in detail. Low-cost regulatory policies, such as disclosure and simplification, may be justified even if we do not have a clear understanding, in the abstract, of whether the relevant behavior is mostly a product of loss aversion or social influences. Of course it is also true that the design of a disclosure policy should be based on an understanding of how people process information, and that a sensible approach to simplification will require understandings of whether and why complexity can create problems and of what kinds of simplification can eliminate those problems.

2. Markets versus government.

An understanding of the findings outlined above does not, by itself, demonstrate that “more” regulation would be desirable.⁶² To be sure, 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.⁶³ 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 perhaps 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 judgments 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.⁶⁴

But even if the standard accounts of potential market failures are supplemented, it does not necessarily follow that more regulation is justified. Perhaps reliance on the private sector is best. Perhaps markets

⁶¹ See Jon Elster, *A Plea for Mechanism*, in Peter Hedström and Richard Swedberg, eds., *Social Mechanisms: An Analytical Approach to Social Theory* 45, 47–49 (Cambridge 1998) (distinguishing explanatory mechanisms from “scientific laws” and noting that a mechanism provides an explanation that is “more general than the phenomenon that it subsumes”); Jon Elster, *Explaining Social Behavior: More Nuts and Bolts for the Social Sciences* 27–31 (Cambridge 2007).

⁶² See Edward L. Glaeser, *Paternalism and Psychology*, 73 U Chi L Rev 133, 133–34 (2006).

⁶³ See Congdon, Kling, and Mullainathan, *Policy and Choice* at 40–48, 62–66 (cited in note 2) (discussing the implications of behavioral findings for public finance and offering a range of explorations of how standard accounts must be supplemented).

⁶⁴ See id. at 120–22. For a related discussion, seeing an “internality” as stemming from inattention, see Allcott, Mullainathan, and Taubinsky, *Externalizing the Internality* at *5–6 (cited in note 28).

will eventually address the problem better than regulators would, and for multiple reasons, the cure might be worse than the disease.⁶⁵

Indeed, some of the findings might argue in favor of less rather than more regulation. When, for example, people are able to solve collective action problems on their own, government is not needed.⁶⁶ In certain circumstances, automatic enrollment is preferable to mandates and bans. Moreover, market forces can provide a great deal of help in the face of human error. For example, the private sector has relied increasingly on automatic enrollment in savings plans,⁶⁷ and countless companies attempt to promote better diet and more exercise (perhaps expecting to obtain more customers as a result).

It should not be necessary to acknowledge 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 may also err. The dynamics of the political process may or may not lead in the right direction. It would be absurd to say that empirically 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 to inform the design of regulatory programs.

For example, many such programs require disclosure, and such disclosure should be designed so as to be helpful and informative rather than unintelligible or meaningless. When procrastination and inertia are causing harm, simplification may produce unexpectedly large benefits, and officials should avoid unnecessary complexity. Private–public partnerships, maintaining freedom of choice, may be far better than top–down dictation by government.

3. Incomplete information.

Although the empirical literature is large and growing, continuing research is highly desirable. Executive Order 13563 explicitly emphasizes the importance of efforts to “measure, and seek to improve, the actual results of regulatory requirements.”⁶⁸ It also calls for “the periodic review of existing significant regulations” to

⁶⁵ See Glaeser, 73 U Chi L Rev at 150–56 (cited in note 62) (outlining arguments against undue support for government intervention based on behavioral economics).

⁶⁶ See Congdon, Kling, and Mullainathan, *Policy and Choice* at 47 (cite in note 2).

⁶⁷ In 2010, 57 percent of 401(k) plan sponsors offered automatic enrollment, over three times the corresponding figure in 2006 (17 percent). See Karen M. Kroll, *401(k) Auto-Enrolling Jumps in Status* (Computerworld Feb 23, 2011), online at <http://news.idg.no/cw/art.cfm?id=3F6628D0-1A64-6A71-CED67B3F64B2D54A> (visited Apr 5, 2011).

⁶⁸ 76 Fed Reg at 3821 (cited in note 1). See also Michael Greenstone, *Toward a Culture of Persistent Regulatory Experimentation and Evaluation*, in David Moss and John Cisternino, eds, *New Perspectives on Regulation* 113, 114 (Tobin Project 2009).

ascertain those actual results.⁶⁹ With respect to retrospective review, consider the suggestion that the “single greatest problem with the current system is that most regulations are subject to a cost–benefit analysis only in advance of their implementation. This is the point when the least is known and any analysis must rest on many unverifiable and potentially controversial assumptions.”⁷⁰ On this view, it is important to consider a series of reforms designed to “instill a culture of experimentation and evaluation.”⁷¹

With respect to the particular concerns, it would be valuable to have a better understanding of how the relevant findings apply within heterogeneous groups; the findings are far from uniform within the population, and for purposes of policy, heterogeneity may matter.⁷² It would also be valuable to have a better understanding of actual conduct within diverse settings—for example, the decision whether to purchase fuel-efficient cars and appliances in the face of short-term costs and long-term benefits. We have good reason to believe that some people do not buy energy-efficient products even when it would be in their economic interest to do so,⁷³ but the conceptual and empirical issues are complex and have not been fully sorted out.

⁶⁹ 76 Fed Reg at 3822 (cited in note 1).

⁷⁰ Greenstone, *Persistent Regulatory Experimentation* at 115 (cited in note 68).

⁷¹ *Id.* at 120.

⁷² See Hans-Martin von Gaudecker, Arthur van Soest, and Erik Wengström, *Heterogeneity in Risky Choice Behaviour in a Broad Population*, 101 *Am Econ Rev* *27 (forthcoming 2011), online at <http://ssrn.com/abstract=1351186> (visited Sept 25, 2011).

⁷³ See Environmental Protection Agency and National Highway Traffic Safety Administration, *Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards*, 75 Fed Reg 25324-01 (2010). As stated in the preamble to this rule,

The central conundrum has been referred to as the Energy Paradox in this setting (and in several others). In short, the problem is that consumers appear not to purchase products that are in their economic self-interest. There are strong theoretical reasons why this might be so:

- Consumers might be myopic and hence undervalue the long-term.
- Consumers might lack information or a full appreciation of information even when it is presented.
- Consumers might be especially averse to the short-term losses associated with the higher prices of energy efficient products relative to the uncertain future fuel savings, even if the expected present value of those fuel savings exceeds the cost (the behavioral phenomenon of “loss aversion”).
- Even if consumers have relevant knowledge, the benefits of energy-efficient vehicles might not be sufficiently salient to them at the time of purchase, and the lack of salience might lead consumers to neglect an attribute that it would be in their economic interest to consider.
- In the case of vehicle fuel efficiency and perhaps as a result of one or more of the foregoing factors, consumers may have relatively few choices to purchase vehicles with greater fuel economy once other characteristics, such as vehicle class, are chosen.

But even at this stage, existing research offers helpful lessons for regulatory policy.⁷⁴ Particular attention has been devoted to the possible development of minimally burdensome, low-cost, choice-preserving approaches, such as automatic enrollment and disclosure requirements, that promote regulatory goals while maintaining individual authority, ownership, and control.⁷⁵ Empirically informed approaches, taking account of recent work in the social sciences (including behavioral economics), can be considered in many domains, including financial regulation, public health, labor, environmental protection, energy use, motor vehicle safety, and consumer protection.⁷⁶

Relevant research suggests that four such approaches have particular promise: (1) using disclosure as a regulatory tool, especially

A great deal of work in behavioral economics identifies and elaborates factors of this sort, which help account for the Energy Paradox. This point holds in the context of fuel savings (the main focus here), but it applies equally to the other private benefits, including reductions in refueling time and additional driving. For example, it might well be questioned whether significant reductions in refueling time, and corresponding private savings, are fully internalized when consumers are making purchasing decisions. (citations omitted).

Id at 25510–11. For a discussion of the energy paradox, see Adam B. Jaffe and Robert N. Stavins, *The Energy Paradox and the Diffusion of Conservation Technology*, 16 *Resource & Energy Econ* 91, 92–94 (1994); Congdon, Kling, and Mullainathan, *Policy and Choice* at 114–15 (cited in note 2); Hunt Allcott and Nathan Wozny, *Gasoline Prices, Fuel Economy, and the Energy Paradox* (2010), online at <http://web.mit.edu/allcott/www/Allcott%20and%20Wozny%202010%20-%20Gasoline%20Prices,%20Fuel%20Economy,%20and%20the%20Energy%20Paradox.pdf> (visited Apr 5, 2011) (finding that people pay excessive attention to short-term costs and that energy-efficiency requirements can produce substantial gains).

⁷⁴ For a variety of perspectives, see generally Diamond and Vartiainen, eds, *Behavioral Economics and Its Applications* (cited in note 2) (suggesting that behavioral modeling can contribute to the design of economic policy). See also George Loewenstein, Troyen Brennan, and Kevin G. Volpp, *Asymmetric Paternalism to Improve Health Behaviors*, 298 *JAMA* 2415, 2416–17 (2007) (advocating choice-preserving policies aimed at encouraging people to choose healthier food options without harming those who will choose healthy options on their own).

⁷⁵ See, for example, Colin Camerer, et al, *Regulation for Conservatives: Behavioral Economics and the Case for “Asymmetric Paternalism,”* 151 *U Pa L Rev* 1211, 1227–36 (2003). For a discussion of potential applications of behavioral economics to financial savings, see William G. Gale, et al, *Introduction*, in William G. Gale, et al, eds, *Automatic: Changing the Way America Saves* 1, 3–5 (Brookings 2009). For a related discussion of energy efficiency, see generally Hunt Allcott and Sendhil Mullainathan, *Behavioral Science and Energy Policy*, 327 *Sci* 1204 (2010).

⁷⁶ See Sendhil Mullainathan, *Psychology and Development Economics*, in Diamond and Vartiainen, eds, *Behavioral Economics and Its Applications* 85, 95–97 (cited in note 2); Truman F. Bewley, *Fairness, Reciprocity, and Wage Rigidity*, in Diamond and Vartiainen, eds, *Behavioral Economics and Its Applications* 157, 157–59 (cited in note 2); Richard G. Frank, *Behavioral Economics and Health Economics*, in Diamond and Vartiainen, eds, *Behavioral Economics and Its Applications* 195, 195–96 (cited in note 2); Sendhil Mullainathan and Eldar Shafir, *Savings Policy and Decisionmaking in Low-Income Households*, in Rebecca M. Blank and Michael S. Barr, eds, *Insufficient Funds: Savings, Assets, Credit, and Banking among Low-Income Households* 121, 140–42 (Russell Sage 2009).

if disclosure policies are designed with an appreciation of how people process information; (2) simplifying and easing choices through appropriate default rules, reduction of complexity and paperwork requirements, and related strategies; (3) increasing the salience of certain factors or variables; and (4) promoting social norms through private–public partnerships and other approaches that operate in the service of agreed-upon public goals. Empirically informed approaches of this kind are already in place, including a number of recent initiatives.

II. DISCLOSURE AS A REGULATORY TOOL

This Part explores the uses of disclosure as a regulatory tool. It is important to distinguish between *summary disclosure*, often provided at the point of purchase, and *full disclosure*, typically provided on the Internet. A central point is that disclosure policies should be based on an understanding of how people process information. For example, summary disclosure will not be helpful if it is ambiguous or unduly complex, or if it uses a scale that is not meaningful to consumers. A general goal should be to promote empirical testing, including randomized experiments, of disclosure policies to learn whether they will work or are actually working.⁷⁷ Such testing may well include retrospective analysis of the kind promoted by Executive Order 13563.

A. Actually Informing Choice

1. Examples.

Many statutory programs recognize that information disclosure can be a useful regulatory tool, replacing or complementing other approaches.⁷⁸ Traditionally, information production and disclosure have been considered an appropriate regulatory response to market failures that stem from asymmetric or inadequate information.⁷⁹ Properly designed disclosure requirements can significantly improve the operation of markets, leading consumers to make more informed decisions.⁸⁰ Central examples include legislative efforts to require

⁷⁷ See Karlan and Appel, *More Than Good Intentions* at 23–38 (cited in note 59).

⁷⁸ See Archon Fung, Mary Graham, and David Weil, *Full Disclosure: The Perils and Promise of Transparency* 5–6 (Cambridge 2007); Brian Wansink and Matthew M. Cheney, *Leveraging FDA Health Claims*, 39 J Consumer Aff 386, 393, 396 (2005).

⁷⁹ See Howard Beales, Richard Craswell, and Steven C. Salop, *The Efficient Regulation of Consumer Information*, 24 J L & Econ 491, 513 (1981).

⁸⁰ See Fung, Graham, and Weil, *Full Disclosure* at 6 (cited in note 78); Yong H. Chu, et al, *Improving Patrons' Meal Selections through the Use of Point-of-Selection Nutrition Labels*, 99 Am J Pub Health 2001, 2002–05 (2009). For an interesting set of suggestions, see Emir

disclosure of the risks associated with smoking, of potential savings from energy efficiency, and of information that bears on health.

a) Credit cards. The Credit Card Accountability, Responsibility, and Disclosure Act of 2009⁸¹ (Credit CARD Act) is designed in large part to ensure that credit card users are adequately informed and that they receive advance notice of changes in terms. Specifically, and among other things, the Act requires clear and conspicuous disclosure of annual percentage rates (APR) and finance charges,⁸² prohibits an increase in APR without forty-five days notice,⁸³ prohibits the retroactive application of rate increases to existing balances,⁸⁴ and requires clear notice of the consumer's right to cancel the credit card when the APR is raised.⁸⁵

The Act also requires a number of electronic disclosures of the terms of credit card agreements. Specifically, it requires that (1) “[e]ach 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) “[e]ach creditor shall provide to the [Federal Reserve] 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.”⁸⁶

b) Tires. The Department of Transportation has been directed to require tire manufacturers to label their replacement tires for fuel efficiency, safety, and durability.⁸⁷ Such a label is intended to promote informed choices on the part of consumers.

Kamenica, Sendhil Mullainathan, and Richard Thaler, *Helping Consumers Know Themselves* *10 (unpublished manuscript, Jan 2011), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1742505 (visited Apr 5, 2011). For a discussion of how best to inform consumers through full disclosure, including disclosure of their own past choices, see Cass R. Sunstein, Administrator, OIRA, Memorandum for the Heads of Executive Departments and Agencies, *Informing Consumers through Smart Disclosure* (Sept 8, 2011), online at <http://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/informing-consumers-through-smart-disclosure.pdf> (visited Sept 27, 2011).

⁸¹ Pub L No 111-24, 123 Stat 1734, codified in various sections of Titles 15 and 16.

⁸² See Credit CARD Act § 204, 15 USC 1632(d).

⁸³ See Credit CARD Act § 101(a), 15 USC § 1637(i)(1).

⁸⁴ See Credit CARD Act § 101(b), 15 USC § 1666i-1(a).

⁸⁵ See Credit CARD Act § 102(a), 15 USC § 1637(k).

⁸⁶ See Credit CARD Act § 203, 15 USC § 1632.

⁸⁷ See 49 USC § 32304A (requiring a “national tire fuel efficiency consumer information program . . . to educate consumers about the effect of tires on automobile fuel efficiency, safety, and durability” and authorizing the Department of Transportation to require information at the point of sale and via the Internet).

c) *Nutrition*. In the domain of nutrition, many 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.⁸⁸

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.⁸⁹ 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 insufficiently informative.

d) *Health care*. The Patient Protection and Affordable Care Act of 2010⁹⁰ (Affordable Care Act) contains a large number of disclosure requirements designed to promote accountability and informed choice with respect to health care.⁹¹ Indeed, the Affordable Care Act is, in part, a series of disclosure requirements. For example, § 1103 of the Act calls for disclosure of “[i]mmediate information that allows consumers to identify affordable coverage options.”⁹² It requires the establishment of an Internet portal to enable people to find affordable coverage options,⁹³ including information about eligibility, availability, premium rates, cost sharing, and the percentage of total premium revenues spent on health care, rather than administrative expenses.⁹⁴

Pursuant to the Act, the Department of Health and Human Services (HHS) has also proposed a rule to require insurance companies to provide clear summaries of relevant information to prospective customers.⁹⁵ The information includes the annual premium,

⁸⁸ See 9 CFR § 317.309.

⁸⁹ See 9 CFR § 317.309.

⁹⁰ Pub L No 111-148, 124 Stat 119, codified in various sections of Title 42.

⁹¹ For one example, see <http://www.healthcare.gov> (visited Jan 16, 2011), designed to increase transparency and to promote comparison shopping. See also Affordable Care Act § 6401(a), 42 USC § 1395cc(j).

⁹² Affordable Care Act § 1103, 42 USC § 18003.

⁹³ The statute provides: “Not later than July 1, 2010, the Secretary, in consultation with the States, shall establish a mechanism, including an Internet website, through which a resident of any State may identify affordable health insurance coverage options in that State.” Affordable Care Act § 1103(a)(1), 42 USC § 18003(a)(1).

⁹⁴ Affordable Care Act § 1103(b)(1), 42 USC § 18003(b)(1).

⁹⁵ Department of Health and Human Services, Patient Protection and Affordable Care Act; Exchange Function in the Individual Market: Eligibility Determinations; Exchange Standards for Employers, 76 Fed Reg 51202-01, 51210 (2011).

the annual deductible, the services that are not covered, and the costs of going to an out-of-network provider.⁹⁶

Under another provision of the Act, certain chain restaurants are required to disclose calorie information on their menus. Such restaurants are also required to provide in written form (available to customers upon request) additional nutritional information involving amounts of fat, saturated fat, cholesterol, sodium, total carbohydrates, complex carbohydrates, sugars, dietary fiber, and protein.⁹⁷

It should be clear from this brief and partial survey that the range of recent disclosure requirements is very wide. Such approaches have considerable promise.⁹⁸

2. How, not only whether.

As social scientists have emphasized, disclosure as such may not be enough; it is important to consider *how, not only whether, disclosure occurs*.⁹⁹ Clarity and simplicity are often critical. In some cases, even accurate disclosure of information may be ineffective if the information is too abstract, vague, detailed, complex, poorly framed, or overwhelming to be useful.¹⁰⁰ Disclosure requirements should be designed for *homo sapiens*, not *homo economicus* (the agent in economics textbooks). In addition, emphasis on certain variables may attract undue attention and prove to be misleading. 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

⁹⁶ See *id.* See also Department of Health and Human Services, *Providing Clear and Consistent Information to Consumers about Their Health Insurance Coverage* (Aug 22, 2011), online at <http://www.healthcare.gov/news/factsheets/labels08172011a.html> (visited Aug 25, 2011); Department of Health and Human Services, *Sample Insurance Coverage Template*, online at <http://www.healthcare.gov/news/factsheets/labels08172011b.pdf> (visited Aug 25, 2011) (providing policy information templates).

⁹⁷ See Affordable Care Act § 4205(b), 21 USC § 343(q)(5)(H). See also 21 USC § 343(q)(1)(C)–(D).

⁹⁸ See Fung, Graham, and Weil, *Full Disclosure* at 170–82 (cited in note 78); Scot Burton, et al., *Attacking the Obesity Epidemic: The Potential Health Benefits of Providing Nutrition Information in Restaurants*, 96 Am J Pub Health 1669, 1674 (2006).

⁹⁹ See Riis and Ratner, *Simplified Nutrition Guidelines to Fight Obesity* at 334 (cited in note 16) (emphasizing the importance of simplicity to promote effective communication of health messages); Jessica Wisdom, Julie S. Downs, and George Loewenstein, *Promoting Healthy Choices: Information versus Convenience*, 2 Am Econ J: Applied Econ 164, 175–76 (2010); Julie S. Downs, George Loewenstein, and Jessica Wisdom, *Strategies for Promoting Healthier Food Choices*, 99 Am Econ Rev 159, 162 (2009); Wansink and Cheney, 39 J Consumer Aff at 394 (cited in note 78).

¹⁰⁰ See Susanna Kim Ripken, *The Dangers and Drawbacks of the Disclosure Antidote: Toward a More Substantive Approach to Securities Regulation*, 58 Baylor L Rev 139, 160–63 (2006).

inform people about how to avoid risks or to obtain benefits, disclosure should avoid abstract statements (promoting, for example, “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 actions parents might take to reduce the risk of childhood obesity). Health claims in particular have been found more likely to succeed if they are targeted at a problem that is both personally relevant and vivid, if they emphasize quantitative health benefits, and if they are aimed at demographic groups that are particularly at risk, such as young children or pregnant women.¹⁰¹

In 2010, HHS emphasized the importance of clarity and salience in connection with its interim final rule entitled “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.”¹⁰² The preamble to the interim final rule is empirically informed in the sense that it is directly responsive to how people process information:

In implementing these requirements, we seek to develop a Web site (hereinafter called the Web portal) that would empower consumers by increasing informed choice and promoting market competition. To achieve these ends, we intend to provide a Web portal that provides information to consumers in a clear, salient, and easily navigated manner. We plan to minimize the use of technical language, jargon, or excessive complexity in order to promote the ability of consumers to understand the information and act in accordance with what they have learned. . . . [W]e plan to provide information, consistent with applicable laws, in a format that is accessible for use by members of the public, allowing them to download and repackage the information, promoting innovation and the goal of consumer choice.¹⁰³

On June 30, 2010, HHS launched that web portal at <http://www.healthcare.gov/>.

¹⁰¹ See Wansink and Cheney, 39 *J Consumer Aff* at 389, 391 (cited in note 78).

¹⁰² Department of Health and Human Services, Health Care Reform Insurance Web Portal Requirements, 75 *Fed Reg* 24470, 24470 (2010).

¹⁰³ 75 *Fed Reg* at 24471 (cited in note 102).

3. Testing disclosure.

To the extent possible, agencies should study in advance the actual effects of alternative disclosure designs to ensure that information is properly presented and will actually inform consumers.¹⁰⁴ The “Nutrition Facts” labels on many food products followed such a process of advance study, with careful investigation of consumer responses to different presentations of the relevant material.¹⁰⁵

Actual experience can, of course, provide valuable information. Because they are more likely to yield information about actual behavior, experimental or quasi-experimental studies are preferred to focus groups; randomized experiments have particular advantages.¹⁰⁶ At the same time, focus groups can be useful, especially if they are carefully designed to assess likely behavior (rather than simply asking people which presentations or formats they most like).

4. Avoiding confusion.

If not carefully designed, disclosure requirements can produce ineffective, confusing, and potentially misleading messages. Empirically informed approaches are alert to this risk and suggest possible improvements.

a) *MPG and beyond.* Automobile manufacturers are currently required to disclose the fuel economy of new vehicles as measured by miles per gallon (MPG).¹⁰⁷ This disclosure is useful for consumers and helps to promote informed choice. As the Environmental Protection Agency (EPA) has emphasized, however, MPG is a nonlinear measure of fuel consumption.¹⁰⁸ For a fixed travel distance, a change from twenty to twenty-five MPG produces a larger reduction in fuel costs than does a change from thirty to thirty-five MPG, or even from thirty to thirty-eight MPG. To see the point more dramatically, consider the fact that an increase from ten to twenty MPG produces more savings than an increase from twenty to forty MPG, and an increase from ten to eleven MPG produces savings almost as high as an increase from

¹⁰⁴ Note in this regard that under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act), Pub L No 111-203, 124 Stat 1376, “[a]ny model form issued pursuant to this subsection shall be validated through consumer testing.” Dodd-Frank Act § 1032(b)(3), 12 USC §5532(b)(3).

¹⁰⁵ See Wansink, *Mindless Eating* at 8–9 (cited in note 59).

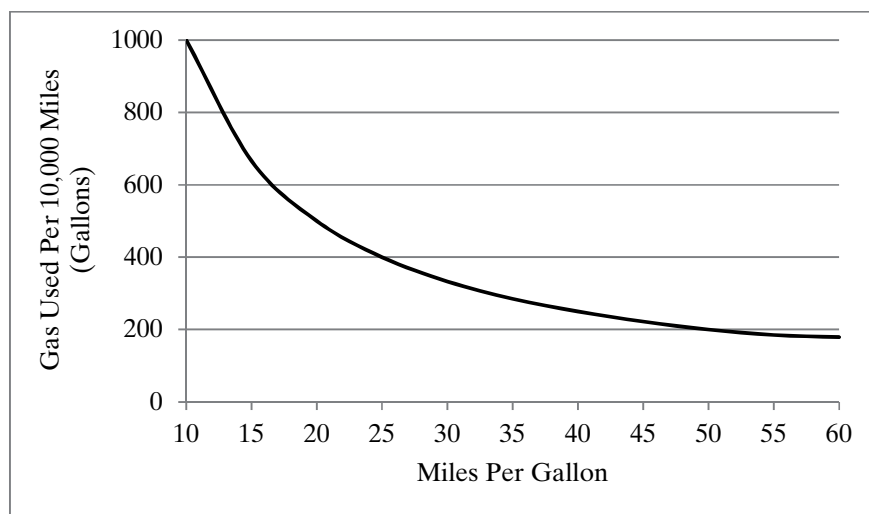
¹⁰⁶ See Lynette Ryals and Hugh Wilson, *Experimental Methods in Market Research: From Information to Insight*, 47 *Intl J Mkt Rsrch* 347, 348, 351 (2005).

¹⁰⁷ 40 CFR § 600.302-08.

¹⁰⁸ See Environmental Protection Agency, Fuel Economy Labeling of Motor Vehicles: Revisions to Improve Calculation of Fuel Economy Estimates, 74 *Fed Reg* 61537-01, 61542, 61550–53 (2009) (amending 40 CFR Parts 86, 600).

thirty-four to fifty MPG.¹⁰⁹ The following figure displays the nonlinearity of the MPG measure:

FIGURE 1. GALLONS OF GAS USED PER 10,000 MILES DRIVEN AS A FUNCTION OF FUEL EFFICIENCY OF CAR (EXPRESSED IN MPG)



Source: Larrick and Soll, 320 Sci at 1593 (cited in note 109).

Evidence suggests that many consumers do not understand this point and tend to interpret MPG as linear with fuel costs.¹¹⁰ 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 one-hundred miles, 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.¹¹¹

A closely related finding is that because of the MPG illusion, consumers tend to *underestimate* the fuel cost differences among low-MPG vehicles and tend to *overestimate* the fuel cost differences among high-MPG vehicles.¹¹² Recognizing the imperfections and the potentially misleading nature of the MPG measure, the Department of

¹⁰⁹ See Richard P. Larrick and Jack B. Soll, *The MPG Illusion*, 320 Sci 1593, 1593 (2008).

¹¹⁰ See id at 1594.

¹¹¹ For one view, see Carolyn Fischer, *Let's Turn CAFE Regulation on Its Head* *1-2 (Resources for the Future, Issue Brief No 09-06, May 2009), online at <http://www.rff.org/RFF/Documents/RFF-IB-09-06.pdf> (visited Jan 17, 2011).

¹¹² Hunt Allcott, *Consumers' Perceptions and Misperceptions of Energy Costs*, 101 Am Econ Rev 98, 102 (2011).

Transportation and EPA proposed in 2010 two alternative labels (see Figure 2) meant to provide consumers with clearer and more accurate information about the effects of fuel economy on fuel expenses and on the environment.¹¹³

After a period of public comment, the Department of Transportation and EPA ultimately chose a label that borrows from both proposals (see Figure 3).¹¹⁴ This approach calls for disclosure of the factual material, including annual fuel costs, in one of its proposals but adds a clear statement about anticipated fuel savings (or costs) over a five-year period.¹¹⁵ The information about annual fuel costs and five-year fuel savings (or costs) should simultaneously help counteract the MPG illusion and inform consumers of the economic effects of fuel economy over a relevant time period.¹¹⁶ The new label includes information about gallons per one-hundred miles. At the same time, the chosen approach does not include letter grades, on the ground (among others) that they might be taken to suggest a governmental evaluation of the overall merits of cars.¹¹⁷

There is a broader lesson. With respect to energy conservation in general, a helpful approach is to enable consumers to know, very concretely, what they might gain as a result of energy-efficient choices (or what they might lose as a result of energy-inefficient choices). Such an approach might help to overcome undue focus on the short-term costs and benefits. See, as one example, Figure 4, which is the Federal Trade Commission's energy efficiency guide, clearly identifying annual costs.

¹¹³ See generally 74 Fed Reg 61537-01 (cited in note 108).

¹¹⁴ Environmental Protection Agency and Department of Transportation, Revisions and Additions to Motor Vehicle Fuel Economy Label, 76 Fed Reg 39478, 39480 figure I-1 (2011) (amending 40 CFR Parts 85, 86, and 600).

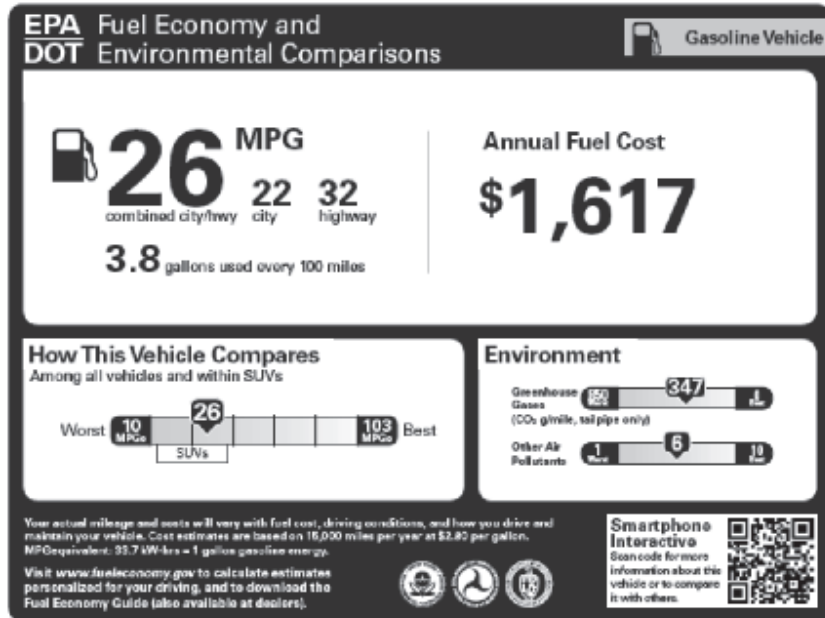
¹¹⁵ *Id.* at 39481.

¹¹⁶ *Id.* at 39485-86, 39494-96.

¹¹⁷ *Id.* at 39489-90.

FIGURE 2. EPA AND DOT PROPOSED ALTERNATIVE FUEL ECONOMY LABELS





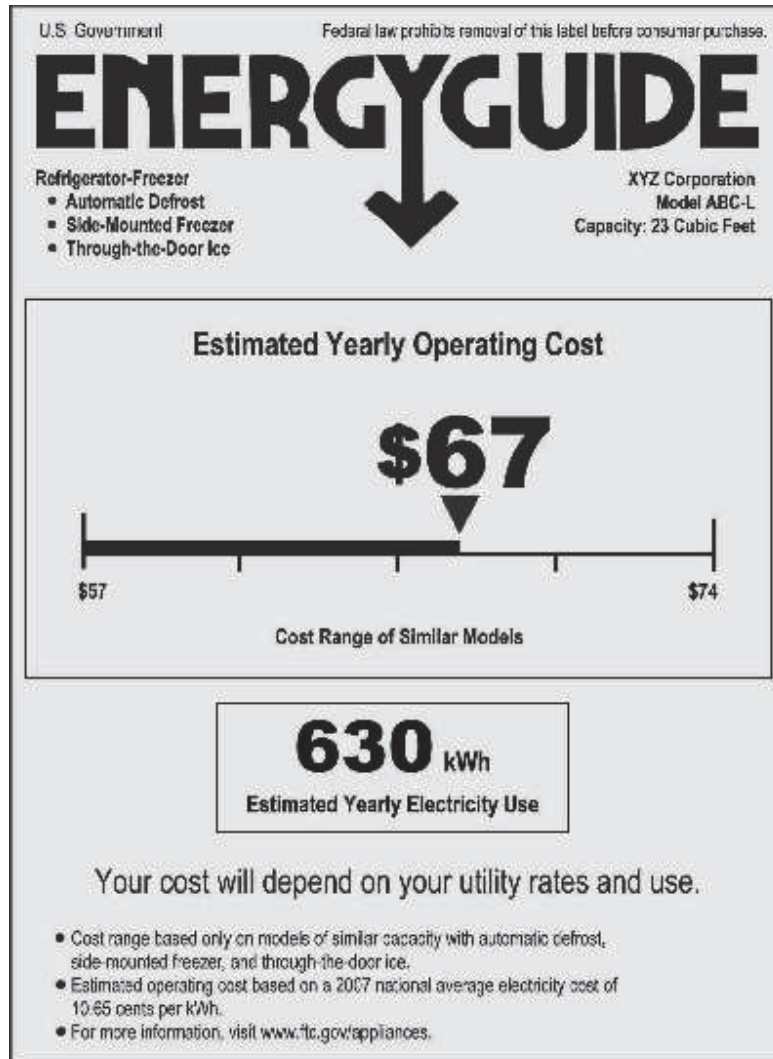
Source: Environmental Protection Agency, Fuel Economy Label, online at <http://www.epa.gov/fueleconomy/label.htm> (visited Sept 6, 2011).

FIGURE 3. EPA AND DOT FUEL ECONOMY AND ENVIRONMENT LABEL



Source: 76 Fed Reg at 39480 figure I-1 (cited in note 114).

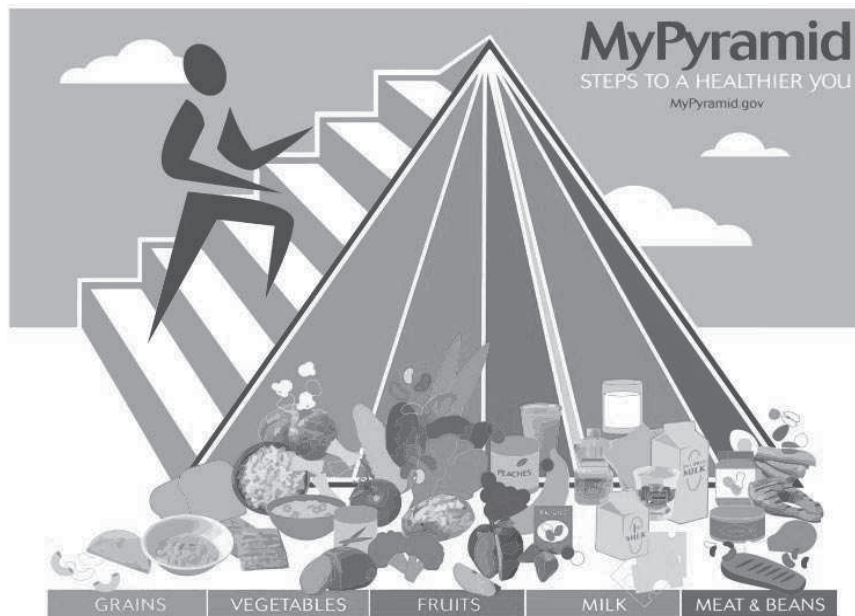
FIGURE 4. FTC ENERGYGUIDE LABEL



Source: FTC, *Concluding Two-Year Rulemaking, FTC Announces New EnergyGuide Label* (Aug 7, 2007), online at <http://www.ftc.gov/opa/2007/08/energy.shtm> (visited Apr 5, 2011).

b) *Plate, not pyramid.* In a related vein, the USDA has abandoned the “Food Pyramid,” used for decades as the central icon to promote healthy eating.

FIGURE 5. USDA FOOD PYRAMID



Source: US Department of Agriculture, <http://www.mypyramid.gov/> (visited Aug 25, 2011).

The Pyramid has long been criticized as insufficiently informative. It does not provide people with any kind of clear “path” with respect to healthy diet. According to one critical account, “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 . . .”¹¹⁸ 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 fruits, vegetables, grains, and proteins.¹¹⁹

¹¹⁸ See Heath and Heath, *Switch* at 61–62 (cited in note 13).

¹¹⁹ See Department of Agriculture, <http://www.choosemyplate.gov/> (visited Aug 25, 2011).

FIGURE 6. USDA FOOD PLATE



Source: US Department of Agriculture, <http://www.choosemyplate.gov/> (Aug 25, 2011).

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.”¹²⁰ This approach has the key advantage of informing people what to do if they seek to have a healthier diet. In many contexts, the idea of “plate, not pyramid” might help to orient helpful disclosure policies.

c) *Plain language summaries of health insurance information.* As noted above, HHS, implementing a provision of the Affordable Care Act, has proposed a rule to require insurance companies to provide clear, plain language summaries of relevant information to prospective customers.¹²¹ The rule calls for disclosure of basic information, such as the annual premium, the annual deductible, a statement of services that are not covered, and a statement of costs for going to an out-of-network provider.¹²² The template offers other information as well, some of which is presented in Figure 7:

¹²⁰ Id.

¹²¹ 76 Fed Reg at 51210 (cited in note 95).

¹²² See id. See also Department of Health and Human Services, *Providing Clear and Consistent Information to Consumers about Their Health Insurance Coverage* (Aug 22, 2011), online at <http://www.healthcare.gov/news/factsheets/labels08172011a.html> (visited Aug 25, 2011); Department of Health and Human Services, *Sample Insurance Coverage Template*, <http://www.healthcare.gov/news/factsheets/labels08172011b.pdf> (visited Aug 25, 2011) (providing policy information templates).

FIGURE 7. SAMPLE INSURANCE COVERAGE TEMPLATE

Policy Period: _____ | Plan Type: _____

Coverage for: _____

Summary of Coverage: What this Plan Covers & What it Costs

This is not a policy. You can get the policy at www.insurancecompany.com/PLAN1500 or by calling 1-800-XXX-XXXX. A policy has more detail about how to use the plan and what you and your insurer must do. It also has more detail about your coverage and costs.

Important Questions	Answers	Why this Matters:
What is the premium?	\$	The premium is the amount paid for health insurance. This is only an estimate based on information you've provided. After the insurer reviews your application, your actual premium may be higher or your application may be denied.
What is the overall deductible?	\$	
Are there other deductibles for specific services?	\$	
Is there an out-of-pocket limit on my expenses?	\$	
What is not included in the out-of-pocket limit?		
Is there an overall annual limit on what the insurer pays?		
Does this plan use a network of providers?		
Do I need a referral to see a specialist?		
Are there services this plan doesn't cover?		

Source: Department of Health and Human Services, *Sample Insurance Coverage Template*, <http://www.healthcare.gov/news/factsheets/labels08172011b.pdf> (visited Aug 25, 2011).

d) Tobacco warnings. 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.¹²³ In such circumstances, disclosure might be designed to make the risks associated with the product less abstract, more vivid, and more salient. For example, the Family Smoking Prevention and Tobacco Control Act of 2009¹²⁴ (Smoking Prevention Act) requires graphic warnings with respect to the risks of smoking tobacco.¹²⁵ The Food and Drug Administration (FDA) has finalized such warnings, including vivid and even disturbing pictures of some of the adverse outcomes associated with smoking.¹²⁶

5. Promoting competition.

If disclosure requirements are straightforward and simple, they should facilitate comparison shopping and hence market competition. Drawing on social science research, the Treasury Department's account of financial regulation emphasizes the value of requiring that "communications with the consumer are reasonable, not merely technically compliant and non-deceptive. Reasonableness includes balance in the presentation of risks and benefits, as well as clarity and conspicuousness in the description of significant product costs and risks."¹²⁷ The department's analysis goes on to say that one goal should be to

harness technology to make disclosures more dynamic and adaptable to the needs of the individual consumer. . . . Disclosures should show consumers the consequences of their financial decisions. . . . [The regulator] should [] mandate or encourage calculator disclosures for mortgages to assist with comparison shopping. For example, a calculator that shows the costs of a mortgage based on the consumer's expectations for how long she will stay in the home may reveal a more significant

¹²³ See Slovic, 47 *Duke L J* at 1136–37 (cited in note 44); Jolls, 51 *Vand L Rev* at 1660 (cited in note 42).

¹²⁴ Pub L No 111-31, 123 Stat 1776, codified at 21 USC § 387.

¹²⁵ See Smoking Prevention Act § 201, 15 USC § 1333(a).

¹²⁶ For the final rule, see Food and Drug Administration, Required Warnings for Cigarette Packages and Advertisements, 76 *Fed Reg* 36628 (2011).

¹²⁷ See Department of the Treasury, *Financial Regulatory Reform: A New Foundation* 64 (2009), online at http://www.treasury.gov/initiatives/wsr/Documents/FinalReport_web.pdf (visited Apr 5, 2011).

difference between two products than appears on standard paper disclosures.¹²⁸

In keeping with this theme, the Consumer Financial Protection Bureau is authorized to ensure that “consumers are provided with timely and understandable information to make responsible decisions about financial transactions.”¹²⁹ The Bureau is also authorized to issue rules that ensure that information is “fully, accurately, and effectively disclosed to consumers in a manner that permits consumers to understand the costs, benefits, and risks associated with the product or service, in light of the facts and circumstances.”¹³⁰

To accomplish this task, the Bureau is authorized to issue model forms with “a clear and conspicuous disclosure that, at a minimum— (A) uses plain language comprehensible to consumers; (B) contains a clear format and design, such as an easily readable type font; and (C) succinctly explains the information that must be communicated to the consumer.”¹³¹ In addition, the director of the Bureau is required to “establish a unit whose functions shall include researching, analyzing, and reporting on . . . consumer awareness, understanding, and use of disclosures and communications regarding consumer financial products or services” and “consumer behavior with respect to consumer financial products or services, including performance on mortgage loans.”¹³² Note that new technologies make it relatively easy to inform consumers about the nature and effects of their own choices and usages, an approach that may be especially important when firms have better information than consumers do about such choices and usages.¹³³

In the same general vein, the Department of Labor issued a final rule requiring disclosure to workers of relevant information in pension plans. The rule is designed to require clear, simple disclosure of information about fees and expenses and to allow meaningful

¹²⁸ Id at 65. On the importance of facilitating comparisons, see generally Jeff Kling, et al, *Comparison Friction: Experimental Evidence from Medicare Drug Plans* (NBER Working Paper No 17410, Sept 2011), online at <http://www.nber.org/papers/w17410.pdf> (visited Nov 5, 2011).

¹²⁹ Dodd-Frank Act § 1021, 12 USC § 5511.

¹³⁰ Dodd-Frank Act § 1032, 12 USC § 5532.

¹³¹ Dodd-Frank Act § 1032, 12 USC § 5532. See also Riis and Ratner, *Simplified Nutrition Guidelines to Fight Obesity* at 334 (cited in note 16) (emphasizing the importance of simplicity).

¹³² Dodd-Frank Act § 1013, 12 USC § 5493 (describing the tasks of the Bureau’s research unit). For a relevant discussion, see John Y. Campbell, et al, *Consumer Financial Protection*, 25 J Econ Persp 91, 92 (2011).

¹³³ See Kamenica, Mullainathan, and Thaler, *Helping Consumers Know Themselves* at *10 (cited in note 80). See also Office of Information and Regulatory Affairs, *Informing Consumers through Smart Disclosure* (cited in note 80) (emphasizing the value of providing disclosure to consumers of comparative information, including information about the effects of their own choices).

comparisons, in part through the use of standard methodologies in the calculation and disclosure of expense and return information.¹³⁴

Yet another example is provided by a final rule of the Department of Education that promotes transparency and consumer choice with respect to for-profit education by requiring institutions to provide clear disclosure of costs, debt levels, graduation rates, and placement rates.¹³⁵ The rule states that relevant institutions must disclose, among other things, the occupations that the program prepares students to enter, the on-time graduation rate for students completing the program, the tuition and fees charged to students for completing the program within a normal time, the placement rate for students completing the program, and the median loan debt incurred by students who completed the program. These disclosures must be included “in promotional materials [the institution] makes available to prospective students” and be “[p]rominently provide[d] . . . in a simple and meaningful manner on the home page of its program Web site.”¹³⁶

B. Summary Disclosure and Full Disclosure

Disclosure requirements of this kind are designed to inform consumers at the point of purchase or decision, 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.¹³⁷ The nutrition facts label is supplemented by a great deal of nutritional information on government websites.¹³⁸ Approaches of this kind provide information that private individuals

¹³⁴ 29 CFR § 2550.404a-5. For a summary of the rule, see Employee Benefits Security Administration, *Fact Sheet: Final Rule to Improve Transparency of Fees and Expenses to Workers in 401(k)-Type Retirement Plans*, online at <http://www.dol.gov/ebsa/newsroom/fsparticipantfee rule.html> (visited May 29, 2011). For a model chart that companies may use to help their employees to compare retirement plan options under the new rule, see Employee Benefits Security Administration, *Model Comparative Chart*, online at <http://www.dol.gov/ebsa/participantfeerulemodelchart.doc> (visited May 29, 2011).

¹³⁵ Department of Education, Program Integrity Issues, 75 Fed Reg 66832, codified in various sections of Title 34 of the CFR.

¹³⁶ 34 CFR § 668.6. For a summary of the rule, see Department of Education, *Department of Education Establishes New Student Aid Rules to Protect Borrowers and Taxpayers* (Oct 28, 2010), online at <http://www.ed.gov/news/press-releases/department-education-establishes-new-student-aid-rules-protect-borrowers-and-tax> (visited Apr 5, 2011).

¹³⁷ See Environmental Protection Agency, Energy Efficiency & Renewable Energy, online at <http://www.fueleconomy.gov> (visited Apr 5, 2011).

¹³⁸ See Department of Agriculture, *Nutrition.gov*, online at <http://www.nutrition.gov> (visited Apr 5, 2011). See also Department of Agriculture, <http://www.choosemyplate.gov> (visited June 13, 2011).

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 to 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 of 1986.¹³⁹ At first, this law seemed to be largely a bookkeeping measure, requiring a “Toxic Release Inventory” (TRI) in which firms reported what pollutants they were using.¹⁴⁰ Available evidence indicates that the TRI has had beneficial effects, helping to spur reductions in toxic releases throughout the United States.¹⁴¹ One reason involves public accountability: public attention can help promote behavior that fits with statutory purposes.¹⁴²

In 2009 and 2010, the Occupational Safety and Health Administration (OSHA) placed a significant subset of its fatality, illness, and injury data online, in a step that should promote both accountability and safer workplaces.¹⁴³ In 2009, the EPA issued a greenhouse gas reporting rule, requiring disclosure by many of the most significant emitters.¹⁴⁴ The data may well help businesses to find innovative ways to track their own emissions, to compare them to similar facilities, and eventually to identify low-cost reductions.

The Department of Justice (DOJ) has similarly published dozens of datasets involving crime, enforcement, and prison,¹⁴⁵ and it is considering others for future release. Similarly, the Department of Labor’s “Searchable Enforcement Database” provides the public with one-stop access to enforcement data across the department (for example, Mines and Chemical Hazards).¹⁴⁶ The EPA has taken a similar

¹³⁹ Pub L No 99-499, 100 Stat 1728, codified at 42 USC § 11001 et seq.

¹⁴⁰ See Archon Fung and Dara O’Rourke, *Reinventing Environmental Regulation from the Grassroots Up: Explaining and Expanding the Success of the Toxics Release Inventory*, 25 *Envir Mgmt* 115, 116 (2000).

¹⁴¹ See James T. Hamilton, *Regulation through Revelation: The Origin, Politics, and Impacts of the Toxics Release Inventory Program* 248 (Cambridge 2005).

¹⁴² See Fung and O’Rourke, 25 *Envir Mgmt* at 120 (cited in note 140).

¹⁴³ See Department of Labor and Occupational Safety and Health Administration, *Workplace Injury, Illness and Fatality Statistics*, online at <http://www.osha.gov/oshstats/work.html> (visited Apr 5, 2011).

¹⁴⁴ See Environmental Protection Agency, *Mandatory Reporting of Greenhouse Gases*, 74 *Fed Reg* 56269-01, codified in various sections of Title 40 of the CFR.

¹⁴⁵ See <http://www.justice.gov/open/data.html> (visited Sept 27, 2011) and <http://www.data.gov> (visited Sept 27, 2011).

¹⁴⁶ See Department of Labor, *Enforcement Data*, online at <http://ogesdw.dol.gov/search.php> (visited Apr 5, 2011).

approach.¹⁴⁷ Generalizing from these practices, President Barack Obama has issued a memorandum requiring agencies “with broad regulatory compliance and administrative enforcement responsibilities” to “develop plans to make public information concerning their regulatory compliance and enforcement activities accessible, downloadable, and searchable online.”¹⁴⁸

These steps fit well with the goals of the Office of Management and Budget’s (OMB) “Open Government Directive,” which is intended in part to ensure that high-value data sets are placed online.¹⁴⁹ Posting such data sets online can promote regulatory goals by virtue of the power of publicity. Indeed, many high-value data sets count as such because their publication helps agencies to further their statutory missions. The OMB directive explicitly emphasizes this point,¹⁵⁰ and numerous agencies have disclosed high-value data sets¹⁵¹ and developed open government plans.¹⁵² Disclosure of many of the

¹⁴⁷ See Environmental Protection Agency, *Enforcement & Compliance History Online (ECHO)*, online at <http://www.epa-echo.gov> (visited Apr 5, 2011).

¹⁴⁸ See Presidential Memorandum, Regulatory Compliance (Jan 18, 2011), online at <http://www.whitehouse.gov/the-press-office/2011/01/18/presidential-memoranda-regulatory-compliance> (visited Apr 5, 2011).

¹⁴⁹ See Peter R. Orszag, Director, OMB, Memorandum for the Heads of Executive Departments and Agencies, Open Government Directive 2, 7 (Dec 8, 2009), online at http://www.whitehouse.gov/omb/assets/memoranda_2010/m10-06.pdf (visited Apr 5, 2011). For the 2011 National Action Plan of the United States Government, developed as part of the international Open Government Partnership, see http://www.whitehouse.gov/sites/default/files/us_national_action_plan_final_2.pdf (visited Oct 23, 2011). For material on the international Open Government Partnership, see <http://www.opengovpartnership.org/> (visited Oct 23, 2011).

¹⁵⁰ See Peter R. Orszag, Director, OMB, Memorandum for the Heads of Executive Departments and Agencies, Open Government Directive 7–8 (cited in note 149).

¹⁵¹ See, for example, Department of Health and Human Services, Centers for Disease Control and Prevention, *Community Health Status Indicators (CHSI) to Combat Obesity, Heart Disease and Cancer* (May 1, 2010), online at <http://www.data.gov/raw/2159> (visited May 31, 2011) (containing data on over 200 measures of health in every county in the United States); Department of the Treasury, *FinancialStability.gov TARP Transactions Data: Asset Guarantee Program* (Dec 4, 2009), online at <http://www.data.gov/raw/1260> (visited Apr 7, 2011) (listing all purchases, trades, or sales of troubled assets under the Emergency Economic Stabilization Act of 2008, Pub L No 110-343, 122 Stat 3765 (2008)); Department of Housing and Urban Development, *Public Housing Physical Inspection Scores*, online at <http://www.data.gov/raw/1258> (visited May 31, 2011) (providing historical data regarding the approximately twenty-thousand physical inspections of public and multifamily assisted housing conducted by HUD every year); Department of Energy, *Residential Energy Consumption Survey (RECS) Files*, online at <http://www.data.gov/raw/10> (visited May 30, 2011) (providing nearly thirty years’ worth of survey data on the use of energy in residential housing units).

¹⁵² See, for example, Environmental Protection Agency, *Open Government Plan 1.1 1* (June 25, 2010), online at http://www.epa.gov/open/EPAOpenGovernmentPlan_1.1.pdf (visited Jan 17, 2011); Department of Transportation, *Open Government Plan Version 1.2 10* (June 25, 2010), online at http://www.dot.gov/open/pdf/DOT_Open_Gov_Plan_V1.2_06252010.pdf (visited Apr 6, 2011); Department of Health and Human Services, *HHS Open Government Plan Version 1.1 12* (June 25, 2010), online at <http://www.hhs.gov/open/plan/opengovernmentplan/openplan>

data sets (for example, in the domain of safety and health) should promote agency missions; the open government plans enlist openness in part for the same reason.

Disclosure is also used as a check on certain increases in health insurance premiums. For plan years beginning in 2010, § 1004 of the Affordable Care Act requires that the secretary of HHS and the states establish a process for the annual review of “unreasonable increases” in premiums for health insurance coverage.¹⁵³ That process shall “require health insurance issuers to submit to the Secretary and the relevant State a justification for an unreasonable premium increase prior to the implementation of the increase.”¹⁵⁴ Moreover, “such issuers shall prominently post such information on their Internet websites,” and the “Secretary shall ensure the public disclosure of information on such increases and justifications for all health insurance issuers.”¹⁵⁵

In addition to making data more accessible, some agencies are attempting to make data more readily usable. An example of this kind of clean, clear, and flexible transparency technology is eXtensible Business Reporting Language (XBRL).¹⁵⁶ XBRL is an open standard for creating electronic reports and exchanging data via the web. Using a standardized series of “tags” for labeling information, XBRL essentially allows anyone to download and analyze large amounts of data using a simple spreadsheet.

The Securities and Exchange Commission has required companies that have a market capitalization over \$5 billion and that use US accounting rules to submit all filings via the XBRL format. The relevant rule, entitled “Interactive Data to Improve Financial Reporting,”¹⁵⁷ requires

companies to provide financial statement information in a form that is intended to improve its usefulness to investors. In this format, financial statement information could be downloaded directly into spreadsheets, analyzed in a variety of ways using commercial off-the-shelf software, and used within investment models in other software formats. . . . The new rules are intended

version1_1.pdf (visited Apr 6, 2011); Department of Labor, *Open Government Plan Version 1.0 3* (Apr 7, 2010), online at <http://www.dol.gov/open/OGDplan.pdf> (visited Apr 6, 2011). Some of the FDA's efforts are described in Afia K. Asamoah and Joshua M. Sharfstein, *Transparency at the Food and Drug Administration*, 362 *New Eng J Med* 2341, 2341–43 (2010).

¹⁵³ Affordable Care Act § 1004, 42 USC § 300gg-94.

¹⁵⁴ Affordable Care Act § 1004, 42 USC § 300gg-94(a)(2).

¹⁵⁵ Affordable Care Act § 1004, 42 USC § 300gg-94(a)(2).

¹⁵⁶ For more information about XBRL, see <http://www.xbrl.org/aboutXBRL> (visited Sept 27, 2011).

¹⁵⁷ Securities and Exchange Commission, *Interactive Data to Improve Financial Reporting*, 74 *Fed Reg* 6776 (2009).

not only to make financial information easier for investors to analyze, but also to assist in automating regulatory filings and business information processing. Interactive data has the potential to increase the speed, accuracy and usability of financial disclosure, and eventually reduce costs.¹⁵⁸

The requirement will be phased in over three years for smaller public companies and mutual funds.¹⁵⁹

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.¹⁶⁰

C. Disclosure and Regulatory Impact Analysis

If regulation is to be empirically informed, it must be preceded by a careful analysis of its rationale and its likely consequences. Is regulation justified by a market failure—as, for example, in the form of an absence of adequate information? What are the benefits of the proposed action, in both qualitative and quantitative terms? What are the costs? What are the alternatives to the proposed action—are they more stringent, less stringent, or perhaps simply different? Do the benefits justify the costs, and if so, has the agency chosen the approach that maximizes net benefits? Do considerations of human dignity or equity bear on the agency’s decision?¹⁶¹

Executive Orders 13563 and 12866 explicitly draw attention to questions of this sort, especially through their identification of “principles of regulation.”¹⁶² Executive Order 13563 incorporates and reaffirms the principles in Executive Order 12866. Stressing the importance of attempting to measure and improve “the actual results of regulatory requirements,” it specifically adds that “each agency is

¹⁵⁸ Id at 6776.

¹⁵⁹ Id (requiring companies with worldwide equity value of over \$5 billion to comply in year one, and smaller companies to comply in subsequent years).

¹⁶⁰ See Greenstone, *Persistent Regulatory Experimentation* at 113 (cited in note 68) (arguing that retrospective review is the only way to determine the “true effect of policies” because “it is generally impossible to assess regulations prospectively”). For a relevant study, see generally Janet Schwartz, et al, *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, 2011) (on file with *The University of Chicago Law Review*). For a discussion of principles and best practices, including consideration of costs and benefits, with respect to such policies, see OIRA, *Disclosure and Simplification as Regulatory Tools* (cited in note 2) and Appendix B.

¹⁶¹ Consider 76 Fed Reg at 3821 (cited in note 1).

¹⁶² See id; Executive Order 12866, 3 CFR § 638.

directed to use the best available techniques to quantify anticipated present and future benefits as accurately as possible”—and that “each agency may consider (and discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts.”¹⁶³

Implementing Executive Order 12866, OMB Circular A-4 provides technical guidance for regulatory impact analyses, required for regulations whose annual impact exceeds \$100 million.¹⁶⁴ Taken as a whole, Executive Order 13563, Executive Order 12866, and OMB Circular A-4 can be seen as (among other things) efforts to use disclosure as a way of policing and disciplining regulations by ensuring that agencies have relied not on intuitions, anecdotes, or guesswork, but on a careful assessment of the likely consequences of proposed courses of action. To the extent feasible, that assessment should be exposed to public scrutiny and review, and it should be corrected, if necessary, in light of what is learned through that process.¹⁶⁵

Note in this regard that Executive Order 13563 requires agencies to provide “timely online access to the rulemaking docket on [regulations.gov](http://www.regulations.gov), including relevant scientific and technical findings,”¹⁶⁶ with an opportunity for public comment “on all pertinent parts of the rulemaking docket.”¹⁶⁷ To be empirically informed, regulatory choices must be based on a careful assessment of relevant facts, and such choices should, to the extent feasible, be subject to public review and comment.

OIRA has posted a simple checklist and also a primer for regulatory impact analyses, as well as answers to frequently asked questions about such analyses.¹⁶⁸ All of these documents are designed

¹⁶³ 76 Fed Reg at 3821 (cited in note 1).

¹⁶⁴ Office of Management and Budget, Circular A-4, Regulatory Analysis 2 (Sept 17, 2003) (available on Westlaw at 2003 WL 24011971).

¹⁶⁵ See Cass R. Sunstein, Administrator, OIRA, Memorandum for the President’s Management Council, Increasing Openness in the Rulemaking Process—Improving Electronic Dockets 2 (May 28, 2010), online at http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/edocket_final_5-28-2010.pdf (visited Apr 6, 2011) (requiring supporting materials for rules, including regulatory impact analyses, to be available to the public on <http://www.regulations.gov>).

¹⁶⁶ 76 Fed Reg at 3822 (cited in note 1).

¹⁶⁷ *Id.*

¹⁶⁸ See generally Office of Information and Regulatory Affairs, Office of Management and Budget, Agency Checklist: Regulatory Impact Analysis (Oct 20, 2010), online at http://www.whitehouse.gov/sites/default/files/omb/inforeg/regpol/RIA_Checklist.pdf (visited Sept 6, 2011). See also Office of Information and Regulatory Affairs, Office of Management and Budget, Regulatory Impact Analysis: A Primer (Aug 15, 2011), online at http://www.whitehouse.gov/sites/default/files/omb/inforeg/regpol/circular-a-4_regulatory-impact-analysis-a-primer.pdf (visited Sept 6, 2011); Office of Information and Regulatory Affairs, Office of Management and Budget, Regulatory Impact Analysis: Frequently Asked Questions (FAQs) (Feb 7, 2011), online at http://www.whitehouse.gov/sites/default/files/omb/circulars/a004/a-4_FAQ.pdf (visited Sept 6, 2011).

to promote simplicity and clarity for agencies and the public alike, and thus to improve disclosure of the anticipated consequences of regulatory choices. The checklist is reproduced as Appendix C.

It is true, of course, that prospective analysis of costs and benefits, even if done carefully and subject to public scrutiny, may rest on speculative assumptions. To be empirically informed, regulations should be revisited and reviewed retrospectively, to ensure that they are promoting their intended functions, and are not producing excessive costs or unintended adverse side effects. Executive Order 13563 expressly recognizes this point in calling for “retrospective analysis” of existing significant rules and in requiring agencies to produce preliminary plans for such analysis.¹⁶⁹

In their preliminary plans for retrospective review, often informed by public input and in some cases by meetings held nationwide,¹⁷⁰ agencies identified numerous reforms, candidate rules for review, and initiatives already underway. In recognition of the emphasis in Executive Order 13563 on public participation in the rulemaking process, agencies made these preliminary plans publicly available and requested public comments and suggestions.¹⁷¹

Agencies’ final plans, released under Executive Order 13563, highlight numerous initiatives, and they promise billions of dollars of savings and millions of hours of reductions in annual paperwork and reporting requirements.¹⁷²

To offer just a few examples:

- HHS plans to remove unnecessary regulatory and reporting requirements now imposed on hospitals and other health care providers, potentially saving an anticipated \$3 billion or more over the next five years.¹⁷³

¹⁶⁹ See 76 Fed Reg at 3821 (cited in note 1).

¹⁷⁰ See, for example, Environmental Protection Agency, *Improving Our Regulations: A Preliminary Plan for Periodic Retrospective Reviews of Existing Regulations 34* (May 24, 2011), online at <http://www.whitehouse.gov/files/documents/2011-regulatory-action-plans/EnvironmentalProtectionAgencyPreliminaryRegulatoryReformPlan.pdf> (visited Sept 6, 2011) (“Verbal comments were solicited at a series of twenty public meetings. . . . Additionally, EPA held nineteen more town halls and listening sessions targeting specific program areas (e.g. solid waste and emergency response) and EPA Regions.”).

¹⁷¹ See Cass R. Sunstein, Administrator, OIRA, Memorandum for the Heads of Executive Departments and Agencies; Retrospective Analysis of Existing Significant Regulations (Apr 25, 2011), online at <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2011/m11-19.pdf> (visited Sept 6, 2011).

¹⁷² The final plans can be viewed on the White House’s website. See The White House, *Regulation Reform*, online at <http://www.whitehouse.gov/21stcenturygov/actions/21st-century-regulatory-system> (visited Sept 6, 2011).

¹⁷³ Department of Health and Human Services, *Plan for Retrospective Review of Existing Rules 3, 8–17* (Aug 22, 2011), online at <http://www.whitehouse.gov/sites/default/files/other/2011->

- The Department of Labor is finalizing a rule to simplify and to improve hazard warnings for workers, likely saving employers over \$2.5 billion over the next five years while increasing safety.¹⁷⁴
- The Department of Transportation proposed a rule that will eliminate unnecessary regulation of the railroad industry, saving up to \$340 million in the near future, and avoiding the risk that regulatory costs will be passed on to consumers.¹⁷⁵
- The EPA plans to propose a rule to reduce burdens on hazardous waste generators by moving from paper-based to electronic reporting, saving up to \$124 million annually.¹⁷⁶
- OSHA issued a final rule that will remove over 1.9 million annual hours of redundant reporting burdens on employers and save more than \$40 million in annual costs.¹⁷⁷
- Since the 1970s, milk has been defined as an “oil” and subject to costly rules designed to prevent oil spills. In response to objections from the agriculture community and the President’s directive, EPA concluded that the rules placed unjustifiable burdens on dairy farmers and exempted them. The projected annual savings are around \$145 million.¹⁷⁸
- The EPA is proposing to eliminate the obligation for many states to require air pollution vapor recovery systems at local gas stations, on the ground that modern vehicles already have effective air pollution control technologies. The anticipated annual savings are about \$87 million.¹⁷⁹

regulatory-action-plans/healthandhumanservicesregulatoryreformplanaugust2011.pdf (visited Sept 6, 2011).

¹⁷⁴ Department of Labor, Plan for Retrospective Analysis of Existing Rules 10–11 (Aug 2011), online at <http://www.whitehouse.gov/files/documents/2011-regulatory-action-plans/DepartmentofLaborPreliminaryRegulatoryReformPlan.pdf> (visited Sept 6, 2011).

¹⁷⁵ The plan to propose this rule is described in Department of Transportation, Plan for Implementation of Executive Order 13563: Retrospective Review and Analysis of Existing Rules 2, 21 (Aug 2011), online at <http://www.whitehouse.gov/sites/default/files/other/2011-regulatory-action-plans/departmentoftransportationregulatoryreformplanaugust2011.pdf> (visited Sept 6, 2011). For the announcement of the proposed rule, with an emphasis on the commitment to regulatory streamlining, see Department of Transportation, Press Release, *Secretary LaHood Announces Proposed Amendments to Federal Regulations for Positive Train Control Systems*, online at http://www.fra.dot.gov/roa/press_releases/fp_FRA%2019-11.shtml (visited Oct 23, 2011).

¹⁷⁶ Environmental Protection Agency, Improving Our Regulations: Final Plan for Periodic Retrospective Reviews of Existing Regulations 35–36 (Aug 2011), online at <http://www.whitehouse.gov/sites/default/files/other/2011-regulatory-action-plans/environmentalprotectionagencyregulatoryreformplanaugust2011.pdf> (visited Sept 6, 2011).

¹⁷⁷ Department of Labor, Plan for Retrospective Analysis of Existing Rules at 9–10 (cited in note 174).

¹⁷⁸ Environmental Protection Agency, Improving Our Regulations at 5, 14 (cited in note 176).

¹⁷⁹ *Id.* at 32–33.

- The Departments of Commerce and State are undertaking a series of steps to eliminate unnecessary barriers to exports, including duplicative and unnecessary regulatory requirements, thus reducing the cumulative burden and uncertainty faced by American companies and their trading partners.¹⁸⁰
- To reduce administrative burdens and increase certainty, the Department of the Interior is reviewing outdated regulations under the Endangered Species Act of 1973¹⁸¹ to streamline the process, to reduce requirements for written descriptions, and to clarify and expedite procedures for approval of conservation agreements.¹⁸²

Retrospective analysis has long been recommended by those interested in empirical assessment of regulations. Consider this suggestion from Michael Greenstone, former chief economist at the Council of Economic Advisers: “The single greatest problem with the current system is that most regulations are subject to a cost–benefit analysis only in advance of their implementation. This is the point when the least is known and any analysis must rest on many unverifiable and potentially controversial assumptions.”¹⁸³

By contrast, retrospective analysis can help show what works and what does not, and in the process can promote the repeal or streamlining of less effective rules and the strengthening or expansion of those that turn out to do more good than harm. Greenstone thus urges a series of reforms designed to “instill a culture of experimentation and evaluation.”¹⁸⁴ These reforms include an effort to ensure that regulations are written and implemented in ways that lend themselves to experimental evaluation and creation of independent review to assess the effectiveness of regulations.

One of Greenstone’s principal themes is the importance of experimentation with respect to the likely effects of regulation. There has been a great deal of recent interest in the use of randomized controlled trials as a means of learning the effects of policy initiatives.¹⁸⁵ In the regulatory area, the use of such trials remains in a preliminary state, but it is easy to imagine projects that would test the

¹⁸⁰ Department of Commerce, Plan for Retrospective Analysis of Existing Rules 3–6 (Aug 18, 2011), online at <http://www.whitehouse.gov/sites/default/files/other/2011-regulatory-action-plans/departmentofcommercereformplanaugust2011a.pdf> (visited Sept 6, 2011).

¹⁸¹ Pub L No 93-205, 87 Stat 884, codified as amended at 16 USC § 1531 et seq.

¹⁸² Department of the Interior, Preliminary Plan for Retrospective Regulatory Review 11–12 (Aug 19, 2011), online at <http://www.whitehouse.gov/sites/default/files/other/2011-regulatory-action-plans/departmentoftheinteriorregulatoryreformplanaugust2011.pdf> (visited Sept 6, 2011).

¹⁸³ Greenstone, *Persistent Regulatory Experimentation* at 113 (cited in note 68).

¹⁸⁴ *Id.* at 14.

¹⁸⁵ See generally Banerjee and Duflo, *Poor Economics* (cited in note 3).

effects of potential rules by examining their consequences in this way. Such projects might, for example, explore the effects of efforts to reduce distracted driving. More generally, experimentation might take the form of advance testing of regulatory alternatives, followed by a study of their consequences, at least if the law authorizes such approaches.¹⁸⁶

Of course there are constraints—involving not merely law but also resources and feasibility—in using randomized controlled trials in the regulatory context, but in some cases, they might be both appropriate and highly useful. The plans released under Executive Order 13563 offer relevant discussion. For example, the Department of Treasury states that it will work to “develop and incorporate experimental designs into retrospective analysis, when appropriate.”¹⁸⁷ The Department of Labor states that it “is contemplating how to incorporate the use of experimental designs to determine the impact of various regulations.”¹⁸⁸ The Department of Interior states that it “will consider” the use of “experimental or quasi-experimental designs, including randomized controlled trials.”¹⁸⁹

III. DEFAULT RULES AND SIMPLIFICATION

Social science research provides strong evidence that starting points, or “default rules,” greatly affect social outcomes.¹⁹⁰ In some contexts, it may be possible to promote statutory goals with sensible default rules that preserve freedom of choice and that might help to avoid the rigidity, cost, and unintended adverse consequences of mandates and bans. In the abstract, of course, there may not be an obviously appropriate default rule; the choice is best made by reference to statutory goals and policy commitments.

¹⁸⁶ See Greenstone, *Persistent Regulatory Experimentation* at 113 (cited in note 68). For applications in other contexts, see generally Banerjee and Duflo, *Poor Economics* (cited in note 3).

¹⁸⁷ Department of the Treasury, Plan for Retrospective Analysis of Existing Rules 20 (Aug 22, 2011), online at <http://www.treasury.gov/about/budget-performance/annual-performance-plan/Documents/lookback%20plan%20final%208%2018%2011%20clean.pdf> (visited Oct 23, 2011).

¹⁸⁸ Department of Labor, Plan for Retrospective Analysis of Existing Rules at 22 (cited in note 174).

¹⁸⁹ Department of the Interior, Plan for Retrospective Regulatory Review at 20 (cited in note 182). See also Department of Agriculture, Final Plan for Retrospective Analysis Pursuant to Executive Order 13563 23 (Aug 18, 2011), online at <http://www.whitehouse.gov/sites/default/files/other/2011-regulatory-action-plans/departmentofagricultureregulatoryreformplanaugust2011.pdf> (visited Sept 8, 2011) (“[The USDA] may consider the use of experimental or quasi-experimental designs, including randomized controlled trials, when promoting the empirical testing of the effects of rules.”).

¹⁹⁰ See Eric J. Johnson, et al, *Framing, Probability Distortions, and Insurance Decisions*, 7 *J Risk & Uncertainty* 35, 48–50 (1993).

Default rules are one way of easing people's choices, and they are used in countless domains by both public and private institutions. There are other ways of easing choices. One example is simplification, as with communications and forms that are shorter, easier, more intuitive, electronic, and in some cases prepopulated with information, thus reducing burdens on those who are asked to fill them out.

A. Automatic Enrollment, Default Rules, and Related Approaches:
Examples

1. 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.¹⁹¹ Recently, a number of 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.¹⁹² 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.¹⁹³

The Pension Protection Act of 2006¹⁹⁴ (PPA) draws directly on these findings by encouraging employers to adopt automatic enrollment plans. The PPA does this by providing nondiscrimination 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.¹⁹⁵ Building on these efforts, President

¹⁹¹ See Madrian and Shea, 116 Q J Econ at 1158–60 (cited in note 5). See also Gale, et al, *Introduction* at 1 (cited in note 75).

¹⁹² See Gale, et al, *Introduction* at 13 (cited in note 75).

¹⁹³ See Peter R. Orszag and Eric Rodriguez, *Retirement Security for Latinos: Bolstering Coverage, Savings, and Adequacy*, in Gale, et al, eds, *Automatic* 173, 182 (cited in note 75); Leslie E. Papke, Lina Walker, and Michael Dworsky, *Retirement Savings for Women: Progress to Date and Policies for Tomorrow*, in Gale, et al, eds, *Automatic* 199, 216 (cited in note 75); Ngina Chiteji and Lina Walker, *Strategies to Increase the Retirement Savings of African American Households*, in Gale, et al, eds, *Automatic* 231, 248–49 (cited in note 75).

¹⁹⁴ Pub L No 109-280, 120 Stat 780, codified in various sections of Titles 26 and 29.

¹⁹⁵ PPA § 902, 26 USC §§ 401, 411, 416.

Obama has asked the IRS and the Treasury Department to undertake initiatives to make it easier for employers to adopt such plans.¹⁹⁶

PPA created two types of new automatic contribution arrangements. The first is a safe-harbor design for automatic enrollment plans called a “qualified automatic contribution arrangement” (QACA).¹⁹⁷ To qualify as a QACA, the arrangement generally must satisfy design-based safe-harbor requirements such as qualified minimum percentage amounts, an annual employee notice, and certain vesting for matching contributions. The second is an “eligible automatic contribution arrangement” (EACA).¹⁹⁸ Plans that meet the EACA requirements may allow employees to elect to withdraw automatic contributions no later than 90 days from the date their contributions start without incurring the 10 percent early withdrawal tax.

In 2009, the Internal Revenue Service (IRS) promulgated final regulations with respect to automatic contribution arrangements (automatic enrollment) in individual account defined contribution plans.¹⁹⁹ To qualify as a QACA, an eligible employee must be enrolled in the plan at a specified automatic contribution rate (that is, qualified percentage), beginning with an initial minimum contribution rate of 3 percent of the employee’s compensation. The default election ends when an automatic enrollee affirmatively elects to opt out or to contribute a different amount. The EACA requirements include uniform default deferral rates and notices to employees that are generally similar to those for a QACA.

2. Health care.

A provision of the Affordable Care Act requires employers with over two hundred employees automatically to enroll employees in health care plans, while also allowing employees to opt out.²⁰⁰ On February 4, 2010, the Center of Medicare and Medicaid Services (CMS) provided guidance to states via a state health official (SHO)

¹⁹⁶ See President Barack Obama, Weekly Address (Sept 5, 2009), online at <http://www.whitehouse.gov/blog/2009/09/05/weekly-address-labor-day-and-fair-rewards-hard-work> (visited Jan 3, 2012) (announcing initiatives to increase participation in IRAs and match retirement savings). For an example of the response by the IRS to this request, see generally Internal Revenue Service, *Retirement & Savings Initiatives: Helping Americans Save for the Future*, (Sep 2009), online at http://www.irs.gov/pub/irs-tege/rne_se0909.pdf (visited May 31, 2011) (discussing four notices and three rulings designed to improve retirement saving programs).

¹⁹⁷ PPA § 902, 26 USC § 401.

¹⁹⁸ PPA § 902, 26 USC § 414.

¹⁹⁹ See 26 CFR §§ 1, 54. On November 8, 2007, the IRS issued proposed regulations relating to the automatic contribution arrangement provisions of PPA. See 26 CFR § 1.

²⁰⁰ See PPA § 1511, 29 USC § 218A.

letter.²⁰¹ The guidance permits states automatically to enroll and renew eligible children in Medicaid or Children’s Health Insurance Program (CHIP). This approach allows states to initiate and determine eligibility for Medicaid or CHIP without a signed Medicaid or CHIP program application, as long as the family or child consents to be enrolled in Medicaid or CHIP.

3. School meals.

The National School Lunch Act²⁰² takes steps to allow “direct certification” of eligibility, thus reducing complexity and introducing what can be seen as 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.²⁰³ 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.²⁰⁴

4. Payroll statements.

The Department of Homeland Security has changed the default setting for payroll statements to electronic from paper, thus reducing costs.²⁰⁵ In general, changes of this kind promise to save significant sums of money for both private and public sectors.

5. Childhood obesity.

A great deal of empirical work identifies accessibility as a noteworthy contributor to the problem of obesity, including childhood obesity. If healthy foods are easily accessible, people are far more likely to choose them, and the same is true for unhealthy foods. Indeed, convenience and accessibility can significantly increase caloric intake.²⁰⁶ Some studies have found that when fast food restaurants are

²⁰¹ Center of Medicare and Medicaid Services, Re: Express Lane Eligibility Option *1 (Feb 4, 2010), online at <http://peerta.acf.hhs.gov/uploadedFiles/Express%20Lane%20Eligibility%20SHO%20final%202-4-10%20508%20ready.pdf> (visited May 31, 2011).

²⁰² Healthy, Hunger-Free Kids Act of 2012, Pub L No 111-296, 124 Stat 3183, codified in various sections of Titles 7 and 42.

²⁰³ Healthy, Hunger-Free Kids Act of 2012 § 101, 42 USC § 1758(b)(4).

²⁰⁴ Department of Agriculture, Direct Certification and Certification of Homeless, Migrant and Runaway Children for Free School Meals, 76 Fed Reg 22785-02, 22793 (2011).

²⁰⁵ Peter Orszag, Director, OMB, *SAVEings* (Mar 29, 2010), online at <http://www.whitehouse.gov/omb/blog/10/03/29/SAVEings/> (visited May 31, 2011).

²⁰⁶ See Rozin, et al, 6 *Judgment & Dec Making* at 324, 329–30 (cited in note 55). For a brief, vivid summary, see Wansink, Just, and McKendry, *Lunch Line Redesign*, NY Times at A35 (cited in note 54).

located near schools or residences, significant weight gain occurs in both children and pregnant women.²⁰⁷

Even small differences can have large effects on food choices and consumption. For example, the sizes of plates and portions have been increasing over time, and they affect how much people eat; and when unhealthy foods are made slightly less accessible, their consumption is reduced.²⁰⁸ These and related issues are discussed in the report of the White House Task Force on Childhood Obesity, which emphasizes the importance of accessibility.²⁰⁹

These and other features of social contexts may not create literal default rules, but they can produce something closely akin to them for food choices. The relevant findings—about the importance of seemingly small features of context²¹⁰—have implications for continuing efforts to reduce childhood obesity and many other problems. One study, for example, finds that if people are prompted to consider whether to “downsize” their meals through a simple question, they will eat significantly less at fast food restaurants.²¹¹ Indeed, the effect of this prompt was found to be greater than that of calorie labeling. The authors suggest that at least some consumers may have difficulty in “determining appropriate portion sizes and knowing when to stop eating” and urge that “a subtle change in the fast-food ordering process can initiate self-control.”²¹²

Their central finding is that many people think that portions are excessively large, and when people are asked, “Would you like to cut more than 200 calories from your meal by taking a half portion of your side dish?” they answer in the affirmative about 35 percent of the

²⁰⁷ See Currie, et al, 2 *Am Econ J: Econ Pol* at 60–61 (cited in note 56).

²⁰⁸ See Rozin, et al, 6 *Judgment & Dec Making* at 324, 329–30 (cited in note 55). For more on the general point, see Wansink, *Mindless Eating* at 58–68, 83–88 (cited in note 59). For a discussion of the importance of convenience and (in a sense) default choices, see Downs, Loewenstein, and Wisdom, 2 *Am Econ J: Applied Econ* at 166 (cited in note 99). For a discussion of the effect of menu positions, see Eran Dayan and Maya Bar-Hillel, *Nudge to Nobesity II: Menu Positions Influence Food Orders*, 6 *Judgment Dec Making* 333, 339–40 (2011) (finding, on the basis of both laboratory and real-world studies, that items placed at the beginning or the end of the list in their category are up to 20 percent as popular as when they are placed in the center of the list).

²⁰⁹ See White House Task Force on Childhood Obesity, Report to the President, Solving the Problem of Childhood Obesity within a Generation 49–55 (May 2010), online at http://www.letsmove.gov/pdf/TaskForce_on_Childhood_Obesity_May2010_FullReport.pdf (visited Apr 6, 2011).

²¹⁰ See *id.* at 37 (“Children’s choices depend on what is most visible and easily accessible; seemingly small differences in the school environment can have large effects on what children eat. The ‘choice architecture’ intentionally or unintentionally designed into the school nutrition environment can make a decisive difference in our children’s behaviors and health.”).

²¹¹ See generally Schwartz, et al, *Would You Like to Downsize That Meal?* (cited in note 160).

²¹² *Id.* at *3.

time. Notably, the “downsize” offer receives about the same number of acceptances (32 percent) when it is accompanied by a 25 cent discount. One of the striking implications here is that the “downsize” question served simultaneously to save costs for restaurants and to reduce calorie consumption. Another implication is that verbal prompts can serve some of the functions of default rules.

This catalogue of illustrations suggests that it would be valuable to identify other contexts in which automatic enrollment, simplification, increased accessibility, or prompts might operate in the service of legal requirements and agreed-upon social goals. Of course it is possible to imagine default rules, or approaches to automatic enrollment, that are harmful or counterproductive; this risk is discussed below.

B. Automatic Enrollment and Default Rules: Mechanisms and Complexities

1. Explanations.

A great deal of research has attempted to explore exactly why default rules have such a large effect on outcomes.²¹³ There appear to be three contributing factors. The first involves *inertia and procrastination*.²¹⁴ To alter the effect of the default rule, people must make an active choice to reject that rule. In view of the power of inertia and the tendency to procrastinate, people may simply continue with the status quo. It follows that self-consciously and well-chosen default rules by individuals, or by private or public institutions, can operate as commitment devices. Consider, for example, a voluntarily chosen default rule in favor of a monthly transfer of money into a savings account, or automatic enrollments in a program to provide savings for retirement.

The second factor involves what might be taken to be an *implicit endorsement* of the default rule. Many people appear to think that the default was chosen for a reason. They believe that they should not

²¹³ See, for example, William G. Gale, J. Mark Iwry, and Spencer Walters, *Retirement Savings for Middle- and Lower-Income Households: The Pension Protection Act of 2006 and the Unfinished Agenda*, in Gale, et al, eds, *Automatic* 11, 13–14 (cited in note 75); Isaac Dinner, et al, *Partitioning Default Effects: Why People Choose Not to Choose* *3 (unpublished manuscript, June 2009), online at <http://ssrn.com/abstract=1352488> (visited Apr 6, 2011); Gabriel D. Carroll, et al, *Optimal Defaults and Active Decisions*, 124 Q J Econ 1639, 1641–43 (2009).

²¹⁴ See Carroll, et al, 124 Q J Econ at 1642 (cited in note 213); Madrian and Shea, 116 Q J Econ at 1176–77 (cited in note 5). This point relates to issues of self-control. See Thaler, *Quasi Rational Economics* at 19 (cited in note 30). For an emphasis on the difference between “planners” and “doers,” see Gharad Bryan, Dean Karlan, and Scott Nelson, *Commitment Devices*, 2 Ann Rev Econ 671, 675–79 (2010).

depart from it unless they have particular information to justify a change.²¹⁵

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.²¹⁶ If, for example, the default rule favors energy-efficient light bulbs, then the loss (in terms of reduced efficiency) may loom large and people will continue to purchase 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 there will be a tendency to favor less efficient light bulbs.²¹⁷

2. Which default rule?

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 by avoiding harmful ones. The initial task, of course, is to identify the requirements of the law. Within the context of such requirements, one approach is to select the default rule that reflects what most people would choose if they were adequately informed.²¹⁸ Suppose, for example, that a particular default rule would place a strong majority of the relevant population in the situation that they would favor if they made an informed choice. If so, there is a legitimate reason to adopt that default rule (with the understanding that those who differ from the majority may opt out).

Of course, it might be necessary to do a great deal of work in order to identify the approach that informed people would choose, and on this count, actual evidence about informed choice is extremely important. The issue is simplified if the law requires a particular set of outcomes. A default rule might well make sense if it promotes automatic compliance with the law. Hence it is important to see that use of default rules may serve either as an independent approach, chosen instead of a mandate or a ban, or as a complementary

²¹⁵ See Craig R.M. McKenzie, Michael J. Liersch, and Stacey R. Finkelstein, *Recommendations Implicit in Policy Defaults*, 17 *Psych Sci* 414, 418–19 (2006); Madrian and Shea, 116 *Q J Econ* at 1182 (cited in note 5). Of course it is not true that all defaults are chosen because they produce the best outcomes for people. See note 219 and accompanying text.

²¹⁶ See Dinner, et al, *Partitioning Default Effects* at *5–6 (cited in note 213).

²¹⁷ See id at *12–14.

²¹⁸ See N. Craig Smith, Daniel G. Goldstein, and Eric J. Johnson, *Smart Defaults: From Hidden Persuaders to Adaptive Helpers* *15–16 (INSEAD Working Paper No 2009/03/ISIC, 2009), online at <http://ssrn.com/abstract=1116650> (visited May 31, 2011).

approach, operating to facilitate compliance with statutory or regulatory requirements.

3. Risks.

It is also important to see that default rules can be badly chosen or misused by private and public institutions alike, and that some such rules can be harmful. The FTC has expressed serious concerns about “negative option marketing,” which occurs when those who accept a “free” product are automatically enrolled in a plan or program that carries a monthly fee (unless they explicitly opt out).²¹⁹ In some cases, negative option marketing has the unfortunate effect of using a default rule to exploit the tendency toward inertia in a potentially harmful manner. It is easy to imagine both private and public analogues. Consider, for example, an automatic enrollment policy that puts an unreasonably large amount of salary into savings.

To evaluate the use of automatic enrollment, the particular circumstances certainly matter. If automatic enrollment is not made transparent to those who are enrolled, it can be considered a form of manipulation, and the problem is worse if it is not in their long-term interest.

4. Personalized default rules.

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, and potentially even each individual, 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 and fine-grained than “mass” default rules. As technology evolves, it should be increasingly possible to produce personalized defaults, based on people’s own choices and situations. For this reason, there will be promising opportunities to use default rules to promote people’s welfare. To be sure, any such rules must respect the applicable laws, policies, and regulations involving personal privacy and should avoid unduly crude proxies.

²¹⁹ See 16 CFR § 425; Federal Trade Commission, *Negative Options: A Report by the Staff of the FTC’s Division of Enforcement 5* (Jan 2009), online at <http://www.ftc.gov/os/2009/02/P064202negativeoptionreport.pdf> (visited May 31, 2011).

5. Nonsticky default rules.

It is important to note that default rules may not “stick” when the relevant population has strong contrary preferences. For example, a study in the United Kingdom found that most people rejected a savings plan with an unusually high default contribution rate (12 percent of before-tax income).²²⁰ Only about 25 percent of employees remained at that rate after a year, whereas about sixty of employees remained at a lower default contribution rate. One implication is that “extreme” defaults are less likely to stick. Another implication, based on the lower incomes of those who stayed with the default, is that default rules may be more influential for low-income workers than for their higher-earning counterparts.²²¹

A related finding is that workers were not much affected by a default allocation of a fraction of their tax refund to US savings bonds, apparently because such workers had definite plans to spend their refunds.²²² A general lesson is that default rules will have a weaker effect, and potentially no effect, when the relevant population has a strong preference for a certain outcome.

C. Active Choices

An alternative approach, sometimes worth serious consideration, is to avoid any default rule and *to require active choices*.²²³ Under this approach, people are required to make an actual choice among the various options; they are not defaulted into any particular alternative. With respect to savings, for example, an employer might reject both opt-out and opt-in and simply require employees to indicate their preferences. Evidence suggests that active choices result in far higher levels of savings than default rules that require people explicitly to opt in.²²⁴

If inertia and procrastination are playing a significant role, active choosing may be better than opt-in, in which some people end up with outcomes that they would not prefer if they were to make a choice. In

²²⁰ See John Beshears, et al, *The Limitations of Defaults* *8 (unpublished manuscript, 2010), online at <http://www.nber.org/programs/ag/rrc/NB10-02,%20Beshears,%20Choi,%20Laibson,%20Madrian.pdf> (visited May 31, 2011).

²²¹ See id at *11–12.

²²² See Erin Todd Bronchetti, et al, *When a Nudge Isn't Enough: Defaults and Saving among Low-Income Tax Filers* *4 (NBER Working Paper Series 16887, March 2011), online at <http://www.nber.org/papers/w16887> (visited May 31, 2011). Note, however, that the “default” in this study consisted of a mere statement on a form. Id at *11. The line between the use of such a “default” and active choosing is relatively thin.

²²³ See Carroll, et al, 124 Q J Econ at 1639–40 (cited in note 213).

²²⁴ See id at 1670.

such circumstances, active choosing increases the likelihood that people will end up with their preferred outcomes.

Active choosing might also be preferred when public officials lack relevant information, so that the chosen default rule might be harmful to some or many. This is an especially important point. If officials are inadequately informed, and if the default rule is no better than a guess, that rule might lead people in the wrong direction. The same point argues against a default rule when self-interested private groups are calling for it even though it is not in the interest of those on whom it is imposed. Active choosing is much less risky on these counts.

As compared with either opt-in or opt-out, active choosing can have significant advantages when the relevant group has a great deal of diversity so that a single approach is unlikely to fit variable circumstances.²²⁵ In such contexts, a default rule may also be harmful, because the power of inertia, or the force of suggestion, may mean that many people will end up in a situation that is not in their interest. For this reason, active choosing may be better.

On the other hand, active choosing can have significant disadvantages. One disadvantage is that in situations of unfamiliarity or great complexity, in which people lack information or experience, active choosing may be unhelpful and may impose unjustified or excessive burdens. These burdens include the resources required to enforce the requirement to choose and the time required for people to obtain relevant information and to decide what choice to make. As compared with a default rule, active choosing increases the costs of decisions, possibly significantly; it might also increase errors, possibly significantly, if the area is unfamiliar and confusing. In such situations, opt-in or opt-out might produce better outcomes for people.

In the private sector, default rules are often in people's interests, and active choosing could impose unnecessary burdens. When public officials have good reason to believe that a particular default rule will fit with the informed preferences of the relevant group, and thus promote its interests, it may be preferable to select that default rule rather than to require active choosing.²²⁶ Personalized default rules, by virtue of their accuracy, have particular virtues on this count.

²²⁵ See *id.* at 1672.

²²⁶ For a discussion of principles and best practices with respect to default rules, see OIRA, *Disclosure and Simplification as Regulatory Tools* (cited in note 2). That memorandum is Appendix B to this Essay.

D. Simplification

Where it is not possible or best to change the default, significant benefits might be obtained merely by simplifying and easing 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.

With respect to rules in general, Executive Order 13563 directs agencies to promote "coordination, simplification, and harmonization."²²⁷ With respect to forms in particular, undue complexity can severely discourage applications, thus compromising important programs, and simplification can have surprisingly large benefits. For some public programs, take-up rates are relatively low even though the cost of participation is small. Behavioral factors, including inertia, are contributing factors, and some form of simplification or automatic enrollment might help.²²⁸

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.²²⁹ Use of a simpler and shorter form is accompanied by a pilot initiative to permit online users to transfer data previously supplied electronically on relevant tax forms directly into their FAFSA applications.²³⁰

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 when they previously could not do so. Similar steps might be taken in many other domains. Considerable thought should be given to the

²²⁷ 76 Fed Reg at 3821 (cited in note 1).

²²⁸ See Congdon, Kling, and Mullainathan, *Policy and Choice* at 97–98 (cited in note 2); Devoto, et al, *Happiness on Tap* at *2–3 (cited in note 6); Tufano, *Just Keep My Money!* at *26 (cited in note 6) (finding that savings products, in particular US savings bonds, are significantly more likely to be chosen if the process for choosing them is eased and simplified).

²²⁹ See Office of Information and Regulatory Affairs, Office of Management and Budget, Information Collection Budget of the United States Government 22, 32–33 (2010), online at http://www.whitehouse.gov/sites/default/files/omb/inforeg/icb/icb_2010.pdf (visited May 31, 2011).

²³⁰ For discussion of the importance of such steps, see Eric P. Bettinger, et al, *The Role of Simplification and Information in College Decisions: Results from the H&R Block FAFSA Experiment* *26–29 (NBER Working Paper No 15361, Sept 2009), online at <http://www.nber.org/papers/w15361> (visited May 31, 2011); Council of Economic Advisers, National Economic Council, *Simplifying Student Aid: The Case for a Easier, Faster, and More Accurate FAFSA* (Sept 2009), online at http://www.whitehouse.gov/assets/documents/FAFSA_Report.pdf (visited Oct 23, 2011).

question whether complexity is having unintended adverse effects and undermining regulatory programs.

The Department of Treasury has also launched an important initiative in the domain of Social Security and Supplemental Security Income: the “Direct Express” card program.²³¹ Many people are now automatically receiving their money via a prepaid debit card. This measure increases, at the same time, both convenience and accuracy, thus reducing paperwork and costs. It provides particular help for those who lack bank accounts. Other programs might build on this approach by considering the choice between an opt-in and opt-out design and simplifying people’s choices. Some such programs might be designed to help those without bank accounts, by giving them such accounts or the functional equivalent.²³²

In 2010, the Treasury Department took several steps to increase simplicity by moving to electronic systems. Perhaps most importantly, the department finalized a rule to provide electronic payments to people receiving Social Security, Supplemental Security Income, Veterans, Railroad Retirement, and Office of Personnel Management benefits.²³³

It is estimated that these steps will save over \$400 million in the first five years.²³⁴ The initiatives from the Treasury Department are in line with a 2010 request from OMB asking agencies for initiatives that would promote electronic reporting through “fillable fileable” forms, substitute electronic for paper signatures, increase administrative simplification, and reduce burdens on small business.²³⁵ That request in turn produced seventy-two initiatives from various agencies, all designed to reduce burdens and to increase simplification.²³⁶ In total,

²³¹ See 31 CFR § 208.6; *Direct Express*, online at <http://www.usdirectexpress.com/> (visited Jan 17, 2011).

²³² See Michael S. Barr, *Financial Services, Saving, and Borrowing among Low- and Moderate-Income Households: Evidence from the Detroit Area Household Financial Services Survey*, in Blank and Barr, eds, *Insufficient Funds* 66, 76–77 (cited in note 76).

²³³ 29 CFR § 1926.

²³⁴ See 31 CFR § 208; Department of Treasury, Press Release, *Treasury Goes Green, Saves Green: Broad New Initiative Will Increase Electronic Transactions, Save More Than \$400 Million, 12 Million Pounds of Paper in First Five Years Alone* (Apr 19, 2010), online at <http://www.treasury.gov/press-center/press-releases/Pages/tg644.aspx> (visited Apr 7, 2011).

²³⁵ See Cass R. Sunstein, Administrator, OIRA, Memorandum for Chief Information Officers, Data Call for the 2010 Information Collection Budget 1–2 (Apr 20, 2010), online at http://www.whitehouse.gov/omb/assets/inforeg/2010_icb_datacall.pdf (visited Jan 17, 2011).

²³⁶ For a list of these initiatives, see Office of Information and Regulatory Affairs, Information Collection Budget at 23–123 (cited in 229). For a subsequent list in the 2011 report, including reduced burdens on small businesses and simplification efforts for federal benefits programs, see Office of Information and Regulatory Affairs, Office of Management and Budget, Information Collection Budget of the United States Government 16–79 (2011), online at http://www.whitehouse.gov/sites/default/files/omb/inforeg/icb/2011_icb.pdf (visited Oct 23, 2011).

those initiatives are expected to eliminate millions of hours of paperwork and reporting burdens each year.

In 2011, OMB followed the 2010 request with a new one, also emphasizing simplification and focusing on small business and benefit programs.²³⁷ The request drew particular attention to the potential harms of complexity, noting that

the process of renewing or applying for benefits can be time-consuming, confusing, and unnecessarily complex, thus discouraging participation and undermining program goals. Sometimes agencies collect data that are unchanged from prior applications; in such circumstances, they might be able to use, or to give people the option to use, pre-populated electronic forms.²³⁸

As noted above, 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.²³⁹ It follows that efforts to increase simplicity, including automatic enrollment, may have substantial benefits.²⁴⁰

E. Structuring Choices

Complexity can also create problems through a phenomenon known as *choice overload*. In the traditional view, having more choices helps and never harms consumers or program participants. This view is based on the reasonable judgment that if an additional option is not better than existing options, people will simply not choose it. In general, more choices are indeed desirable, but an increasing body of research offers certain potential qualifications, especially in unusually complex situations.²⁴¹ For example, there is some evidence that enrollment may decline,²⁴² and asset allocations may worsen,²⁴³ as the menu of investment options in a 401(k) plan expands.

²³⁷ See Cass R. Sunstein, Administrator, OIRA, Memorandum for Chief Information Officers, *Minimizing Paperwork and Reporting Burdens 1* (Feb 23, 2011), online at http://www.whitehouse.gov/sites/default/files/omb/inforeg/icb/2011_ICB_Data_Call.pdf (visited Apr 7, 2011). For the results of this request, see generally Office of Information and Regulatory Affairs, *Information Collection Budget* (cited in 229).

²³⁸ Office of Information and Regulatory Affairs, *Minimizing Paperwork* at 5 (cited in note 237).

²³⁹ See Congdon, Kling, and Mullainathan, *Policy and Choice* at 157–61 (cited in note 2).

²⁴⁰ *Id.* at 160 (“[M]aking it easier for individuals to qualify for and perceive the terms of benefits may have high returns in terms of take-up rates. Simplifying the application process—requiring fewer forms, using automatic or default enrollment, and so on—could have large effects on take-up.”).

²⁴¹ See Sheena Sethi-Iyengar, Gur Huberman, and Wei Jiang, *How Much Choice Is Too Much? Contributions to 401(k) Retirement Plans*, in Olivia S. Mitchell and Stephen P. Utkus, eds., *Pension Design and Structure: New Lessons from Behavioral Finance* 83, 84–87 (Oxford 2004).

²⁴² See *id.* at 88–91.

Responding to this general problem in the context of prescription drug plans, CMS has taken steps to maintain freedom of choice while also reducing unhelpful and unnecessary complexity.²⁴⁴ The CMS Medicare Part D program rules require sponsors to ensure that when they provide multiple plan offerings, those offerings have meaningful differences. The rules also eliminate plans with persistently low enrollments, on the ground that those plans increase the complexity of choices without adding value.²⁴⁵

IV. INCREASING SALIENCE

It is often possible to promote regulatory goals by making certain features of a product or a situation more *salient* to consumers. As a simple example of salience effects, consider alcohol taxes. There is evidence that when such taxes are specifically identified in the posted price, increases in such taxes have a larger negative effect on alcohol consumption than when taxes are applied at the register.²⁴⁶ Incentives matter, but in order to matter, they must be salient.²⁴⁷ Sensible regulatory policies, especially those that involve disclosure, are attentive to the importance of salience.

People's attention is limited, and regulatory goals are not always served merely by altering policy or disclosing information. The relevant policy or information must also be salient. In the context of fiscal policy, consider the question whether to provide payments in the form of a one-time check or instead in the form of reduced withholding. Would one or another approach lead to increased spending?

In the abstract, it might be predicted that there would be no difference as a result of delivery method. But evidence suggests that a one-time stimulus payment has significantly greater effects in increasing spending than does an economically equivalent reduction

²⁴³ See Sheena S. Iyengar and Emir Kamenica, *Choice Proliferation, Simplicity Seeking, and Asset Allocation*, 94 J Pub Econ 530, 536–38 (2010).

²⁴⁴ For a discussion of the underlying problem, see Jason Abaluck and Jonathan Gruber, *Choice Inconsistencies among the Elderly: Evidence from Plan Choice in the Medicare Part D Program*, 101 Am Econ Rev 1180, 1206–08 (2011).

²⁴⁵ See 42 CFR § 422.506(b)(1)(iv). For a related discussion, with particular emphasis on the abilities of those who create menus, see David Goldreich and Hanna Halaburda, *Rational Preference for Smaller Menus: Variability in Menu-Setting Ability and 401(k) Plans* *3 (2011), online at <http://www.hbs.edu/research/pdf/11-086.pdf> (visited Apr 7, 2011).

²⁴⁶ See Raj Chetty, Adam Looney, and Kory Kroft, *Salience and Taxation: Theory and Evidence*, 99 Am Econ Rev 1145, 1163 (2009). For a discussion in a similar vein, see Amy Finkelstein, E-ZTAX: *Tax Salience and Tax Rates*, 124 Q J Econ 969, 1008–09 (2009).

²⁴⁷ See Congdon, Kling, and Mullainathan, *Policy and Choice* at 126–27 (cited in note 2).

in withholding.²⁴⁸ A potential explanation, with support in the evidence, involves the importance of salience or visibility. In a relevant study, a majority of households did not notice the withholding changes, and households who found “a small but repeated boost to their paychecks” appear to be less likely to use the money for significant purchases.²⁴⁹

There are many potential applications. With respect to smoking prevention, for example, increased salience is a central purpose of disclosure requirements. The Smoking Prevention Act recognizes this point in calling for new and more graphic warnings; the chosen images are vivid and will be highly salient.²⁵⁰ Similarly, OSHA has proposed a regulation that would require chemical manufacturers and importers to prepare labels for hazardous chemicals that include pictograms and signal words that can be easily understood by workers.²⁵¹ Well-designed labels make relevant factors salient to those who will see them. The significant consequences of easy accessibility and convenience (return to the issue of obesity) can be seen as close cousins of salience effects.²⁵²

A similar point applies in the domain of energy efficiency. For many consumers, the potential savings of energy-efficient products may not be salient at the time of purchase, even if those savings are significant. The “Energy Paradox” refers to the fact that some consumers do not purchase energy-efficient products even when it is clearly in their economic interest to do so. Empirical work suggests that nonprice interventions, by making the effects of energy use more salient, can alter decisions and significantly reduce electricity use.²⁵³ There is evidence that such interventions can lead to private as well as public savings.²⁵⁴ Consider, for example, the fact that energy costs are

²⁴⁸ See Claudia R. Sahm, Matthew D. Shapiro, and Joel Slemrod, *Check in the Mail or More in the Paycheck: Does the Effectiveness of Fiscal Stimulus Depend on How It Is Delivered?* *20–22 (Finance and Economics Discussion Series 2010-40, Feb 2011), online at <http://www.federalreserve.gov/pubs/feds/2010/201040/201040pap.pdf> (visited Apr 7, 2011).

²⁴⁹ *Id.* at *20–21.

²⁵⁰ See text accompanying note 125.

²⁵¹ See 29 CFR §§ 1910, 1915, 1926.

²⁵² See notes 206–12 and accompanying text.

²⁵³ See Allcott and Mullainathan, 327 *Sci* at 1204 (cited in note 75); Paul J. Ferraro and Michael K. Price, *Using Non-pecuniary Strategies to Influence Behavior: Evidence from a Large Scale Field Experiment* *20–22 (NBER Working Paper No 17189, July 2011), online at <http://www.nber.org/papers/w17189.pdf> (visited Aug 28, 2011) (finding that social comparison information significantly decreased water consumption). For a discussion of the importance of reminders in increasing savings, with particular emphasis on salience, see Karlan, et al, *Getting to the Top of Mind* at *23–24 (cited in note 8). For a discussion of the policy implications of consumer inattention in the context of energy savings, see Allcott, Mullainathan, and Taubinsky, *Externalizing the Internality* at *5–7 (cited in note 28).

²⁵⁴ See Richard B. Howarth, Brent M. Haddad, and Bruce Paton, *The Economics of Energy Efficiency: Insights from Voluntary Participation Programs*, 28 *Energy Pol* 477, 484–85 (2000).

generally salient only once a month, when people are presented with the bill. Efforts to increase the salience of such costs, by displaying them in real time, can produce real savings.²⁵⁵

Executive Order 13514 is an effort to cut costs and reduce greenhouse gas emissions by setting energy and environmental goals and by imposing a series of requirements on federal agencies.²⁵⁶ One of the central goals of this executive order is to make certain costs more visible and salient than they have been within the federal government. Recent efforts to respond to the problem of childhood obesity similarly attempt to increase the salience of the health risks and of numerous small choices that, in the aggregate, contribute to that problem.²⁵⁷ Consider, in a similar vein, the suggestion that pediatricians calculate the body mass index (BMI) of young children and inform parents of the results;²⁵⁸ this suggestion is an effort to increase the salience of important health-related information.

A related approach attempts to identify and consider the frame through which people interpret information. There is evidence that some consumers may not seriously consider annuities in retirement to insure against longevity risk (the risk that they will outlive their assets) because they do not fully appreciate the potential advantages of annuities.²⁵⁹ One hypothesis is that some people evaluate annuities in an *investment frame* that focuses narrowly on risk and return.²⁶⁰ Looking through such a frame, consumers focus on the risk that they could die soon after annuity purchase and lose all of their money. Some evidence suggests that efforts to shift consumers into a *consumption frame*, which focuses on the end result of what they can consume over time, help consumers to appreciate the potential benefits of annuities.²⁶¹ The goal here is emphatically not to suggest a view on any particular approach to retirement; it is merely to emphasize that the relevant frame can increase salience.

²⁵⁵ See Congdon, Kling, and Mullainathan, *Policy and Choice* at 113 (cited in note 2).

²⁵⁶ See Executive Order 13514, 74 Fed Reg 52117 (2009).

²⁵⁷ See White House Task Force on Childhood Obesity, Report to the President: Solving the Problem of Childhood Obesity within a Generation 26–27, 32, 35 (2010), online at http://www.letsmove.gov/sites/letsmove.gov/files/TaskForce_on_Childhood_Obesity_May2010_FullReport.pdf (visited June 7, 2010).

²⁵⁸ See id at 33–34.

²⁵⁹ See Jeffrey R. Brown, *Rational and Behavioral Perspectives on the Role of Annuities in Retirement Planning* *21 (NBER Working Paper No 13537, Oct 2007), online at <http://www.nber.org/papers/w13537> (visited Jan 17, 2011).

²⁶⁰ See Jeffrey R. Brown, et al, *Why Don't People Insure Late-Life Consumption? A Framing Explanation of the Under-Annuitization Puzzle*, 98 Am Econ Rev 304, 305 (2008).

²⁶¹ See id at 307.

V. SOCIAL NORMS

Social scientists have emphasized the importance of social practices and norms, which have a significant influence on individual decisions.²⁶² If people learn that they are using more energy than similarly situated others, their energy use may decline—saving money while also reducing pollution.²⁶³ The same point applies to health-related behavior. It has long been understood that people are more likely to engage in healthy behavior if they live or work with others who engage in such behavior.²⁶⁴ And if people are in a social network with other people who are obese, they are more likely to become obese themselves.²⁶⁵ The behavior of relevant others can provide valuable information about sensible or appropriate courses of action. As noted above, informational cascades are a possible consequence, as people rely on, and thus amplify, the informational signals produced by the actions of their predecessors. Similarly, those actions can provide information about what others will approve and disapprove.²⁶⁶

These points have implications for regulatory policy. For example, smoking and seat belt regulations appear to have worked hand in hand with emerging social norms, helping to reduce deaths and injuries. In the context of seat belt usage, there has been a dramatic change in behavior, with an increase in a few decades from usage rates

²⁶² For overviews, see generally Christakis and Fowler, *Connected* (cited in note 32); Sushil Bikhchandani, David Hirshleifer, and Ivo Welch, *Learning from the Behavior of Others: Conformity, Fads, and Informational Cascades*, 12 J Econ Persp 151 (1998). For relevant discussions, see also P. Wesley Schultz, et al, *The Constructive, Destructive, and Reconstructive Power of Social Norms*, 18 Psych Sci 429, 432–33 (2007); Robert B. Cialdini, et al, *Managing Social Norms for Persuasive Impact*, 1 Soc Influence 3, 10–12 (2006). Note in particular the finding in *Managing Social Norms* that drawing public attention to the existence or pervasiveness of undesirable behavior can actually increase such behavior:

It is worthy of note that our most ineffective persuasive message simulated the sort of negatively worded, descriptive norm message that . . . is regularly sent by public health and community service officials regarding a wide variety of social problems. Our results indicate that appeals of this type should be avoided by communicators in their persuasive undertakings. Unfortunately, this is not always the case. . . . For instance, after we reported the outcomes of the present study [showing the ineffectiveness of park signs containing negatively worded, descriptive normative messages] to park administrators, they decided not to change the relevant aspects of their signage. . . . We were disappointed—but, truth be told, not surprised—that park officials weighted visitors' subjective responses more than our empirical evidence in their signage decision.

Cialdini, et al, *Managing Social Norms* at 12 (cited in note 262).

²⁶³ See Allcott, *Social Norms and Energy Conservation* at *16–17 (cited in note 32). See also generally Ferraro and Michael, *Using Non-pecuniary Strategies to Influence Behavior* (cited in note 253).

²⁶⁴ See Jean K. Langlie, *Social Networks, Health Beliefs, and Preventive Health Behavior*, 18 J Health & Soc Behav 244, 244–45 (1977).

²⁶⁵ Christakis and Fowler, *Connected* at 105–12 (cited in note 262).

²⁶⁶ For a relevant discussion, see Kuran, *Private Truths, Public Lies* at 61 (cited in note 38).

under 15 percent to usage rates well over 70 percent,²⁶⁷ in significant part as a result of social norms that operated in concert with regulatory changes. In some domains, social norms have helped to promote compliance with law even without active enforcement.²⁶⁸ Public-private partnerships can be especially important in this domain, as those in the private sector emphasize norms that increase compliance with law and promote safer choices.

Consider as well the problem of distracted driving. On October 1, 2009, the President issued an Executive Order that bans federal employees from texting while driving.²⁶⁹ Such steps can help promote a social norm against texting while driving, thus reducing risks. This same approach—emphasizing social norms—might be applied in many domains. In the domain of childhood obesity, for example, a social norm in favor of healthy eating and proper exercise²⁷⁰ could produce significant health benefits. Here, as elsewhere, public-private partnerships can play a key role, with those in the private sector helping to spur emerging norms that promote better choices by and for children.

In particular, the “Let’s Move” initiative has emphasized such partnerships. First Lady Michelle Obama has collaborated with Walmart to promote healthier choices.²⁷¹ As part of that initiative, Walmart has committed to reformulating thousands of everyday packaged food items by 2015 by reducing sodium 25 percent and added sugars 10 percent, and by removing all remaining industrially produced trans fats. Walmart has also committed to reduce the costs of healthier options, thus making those costs comparable to the costs of less healthy choices, and at the same time to reduce the costs of fruits

²⁶⁷ See Dinh-Zarr, et al, 21 Am J Prev Med at 48 (cited in note 39) (documenting an increase in safety belt use from 14 percent in 1983 to 71 percent in 2000).

²⁶⁸ See Kagan and Skolnick, *Banning Smoking* at 72 (cited in note 39).

²⁶⁹ Executive Order 13513, Federal Leadership on Reducing Text Messaging while Driving, 74 Fed Reg 51225, 51225 (2009) (“Federal employees shall not engage in text messaging (a) when driving [government owned vehicles], or when driving [privately owned vehicles] while on official Government business, or (b) when using electronic equipment supplied by the Government while driving.”).

²⁷⁰ See Carrell, Hoekstra, and West, *Is Poor Fitness Contagious?* at *18 (cited in note 32). See Department of Agriculture and Department of Health and Human Services, *Dietary Guidelines for Americans 2010* at 56 (cited in note 36) (pointing to the relevance of social and cultural norms and values).

²⁷¹ See Jamie Mulligan, *First Lady Michelle Obama Announces Collaboration with Walmart in Support of Let’s Move Campaign* (Jan 26, 2011), online at <http://www.letsmove.gov/blog/2011/01/25/first-lady-michelle-obama-announces-collaboration-walmart-support-lets-move-campaign> (visited Apr 7, 2011).

and vegetables.²⁷² Finally, Walmart has agreed to develop a “healthy seal” to help consumers to identify healthy choices.²⁷³

In a similar vein, a number of companies, including Kraft Foods, General Mills, Coca-Cola, Pepsi, and Kellogg, have pledged to remove 1.5 trillion calories from their products by 2015, in an effort to combat childhood obesity.²⁷⁴ The relevant steps include reduction of product sizes and introduction of lower calorie foods.²⁷⁵ Finally, the Food Marketing Institute and the Grocery Manufacturers Association have agreed to promote informed choices through a “Nutrition Keys” label, designed in part to combat childhood obesity.²⁷⁶

CONCLUSION

The goal of this Essay has been to outline some of the key findings in recent empirical research and to sketch potential implications for regulatory policy. A general conclusion is that while material incentives (including price and anticipated health effects) greatly matter, outcomes are independently influenced by (1) the social environment and (2) prevailing social norms.²⁷⁷ When some people do well and others less so, it is often because the former, and not the latter, are able to benefit from aspects of the social environment, and from prevailing norms, that enable them to take for granted, and perhaps not even to think much about, a set of practices that serve them well.

²⁷² Press Release, *Walmart Launches Major Initiative to Make Food Healthier and Healthier Food More Affordable* (Walmart, Jan 20, 2011), online at <http://walmartstores.com/pressroom/news/10514.aspx> (visited Sept 27, 2011).

²⁷³ See *id.* See also Sheryl Gay Stohlberg, *Wal-Mart Shifts Strategy to Promote Healthy Foods*, *NY Times* B1 (Jan 20, 2011).

²⁷⁴ See *Food Giants Pledge to Cut 1.5 Trillion Calories out of Products* (USA Today, May 21, 2010), online at http://www.usatoday.com/money/industries/food/2010-05-17-cutting-calories_N.htm (visited Apr 7, 2011).

²⁷⁵ *Id.*

²⁷⁶ See Food Market Institute, Press Release, *Food & Beverage Industry Launches Nutrition Keys Front-of-Pack Nutrition Labeling Initiative to Inform Consumers and Combat Obesity: Nutrition Icon to Be Supported by \$50 Million Industry-Funded Consumer Education Campaign* (Jan 25, 2011), online at http://www.fmi.org/news_releases/index.cfm?fuseaction=mediatext&id=1207 (visited Apr 7, 2011).

²⁷⁷ A possible concern about some of the approaches discussed here is that they may be unacceptably paternalistic. Note, however, that they typically do not take the form of mandates or bans on private conduct; they retain freedom of choice. Simplification, designed to avoid some of the unintended adverse effects of complexity, should be used to improve program performance; such improvements are hardly paternalistic. Consider, for example, a reduction in the number of questions on forms, and easier or automatic qualification for participation in programs when relevant requirements are met. Disclosure policies, mandated or authorized by law, should be designed sensibly, so as to inform people rather than to be unduly complex or unintelligible; there is nothing objectionably paternalistic about efforts to provide consumers with clear, accurate information. On the contrary, such efforts promote freedom of choice.

While disclosure of information is an important regulatory tool, steps must be taken to ensure that disclosure will be not merely technically accurate but also meaningful and helpful. Such steps require careful attention to how people process and use information. It is important to distinguish between summary disclosure, typically provided at the point of purchase, and full disclosure, typically provided on the Internet. Summary disclosure should be clear, simple, and salient, and it should emphasize factors that actually matter to people (such as the annual dollar value of fuel economy or energy-efficient choices).

Full disclosure should provide information that can be used in multiple ways, thus improving the operation of markets. Often the most important uses come from the private sector, which may promote comparison shopping among multiple options. Some noteworthy recent efforts allow people to see the nature and effects of their own past choices and to understand the likely effects of different choices in the future. In all cases, disclosure is most useful if it informs people of what, precisely, they might do in order to avoid significant risks or obtain significant benefits.

Default rules can greatly affect social outcomes, and in some circumstances, sensible defaults can serve as a complement or alternative to mandates and bans. One of the advantages of well-chosen default rules is that they can simplify and ease choices—for example, by producing automatic enrollment in programs that are generally beneficial while also allowing people to opt out. A potential problem is that those who design default rules may not know which rule is best and one size may not fit all. At least when the relevant group is diverse and the domain is familiar, active choosing is likely to be preferable to default rules.

Because complexity can often have undesirable or unintended side effects—including high costs, noncompliance with law, and reduced participation in useful programs—simplification may well help to 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. It may also be desirable to ease participation in both private and public programs by increasing convenience and by giving people clearer signals about what, exactly, they are required to do.

People are far more likely to respond when certain facts, risks, or possibilities are salient; effective warnings take account of this fact. Finally, regulation can work in concert with social norms, helping to promote agreed-upon public goals and to increase compliance with legal requirements. Public-private partnerships, enlisting the initiative

and the creativity of the private sector, can be especially helpful in this regard.

APPENDIX A²⁷⁸Executive Order 13563 of January 18, 2011
Improving Regulation and Regulatory Review

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to improve regulation and regulatory review, it is hereby ordered as follows:

SECTION 1. *General Principles of Regulation.* (a) Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation. It must be based on the best available science. It must allow for public participation and an open exchange of ideas. It must promote predictability and reduce uncertainty. It must identify and use the best, most innovative, and least burdensome tools for achieving regulatory ends. It must take into account benefits and costs, both quantitative and qualitative. It must ensure that regulations are accessible, consistent, written in plain language, and easy to understand. It must measure, and seek to improve, the actual results of regulatory requirements.

(b) This order is supplemental to and reaffirms the principles, structures, and definitions governing contemporary regulatory review that were established in Executive Order 12866 of September 30, 1993. As stated in that Executive Order and to the extent permitted by law, each agency must, among other things: (1) propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify); (2) tailor its regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations; (3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity); (4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (5) identify and assess available alternatives to direct regulation, including providing economic *incentives* to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public.

²⁷⁸ Executive Order 13563, 76 Fed Reg 3821 (2011).

(c) In applying these principles, each agency is directed to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible. Where appropriate and permitted by law, each agency may consider (and discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts.

SEC. 2. *Public Participation.* (a) Regulations shall be adopted through a process that involves public participation. To that end, regulations shall be based, to the extent feasible and consistent with law, on the open exchange of information and perspectives among State, local, and tribal officials, experts in relevant disciplines, affected stakeholders in the private sector, and the public as a whole.

(b) To promote that open exchange, each agency, consistent with Executive Order 12866 and other applicable legal requirements, shall endeavor to provide the public with an opportunity to participate in the regulatory process. To the extent feasible and permitted by law, each agency shall afford the public a meaningful opportunity to comment through the Internet on any proposed regulation, with a comment period that should generally be at least 60 days. To the extent feasible and permitted by law, each agency shall also provide, for both proposed and final rules, timely online access to the rulemaking docket on regulations.gov, including relevant scientific and technical findings, in an open format that can be easily searched and downloaded. For proposed rules, such access shall include, to the extent feasible and permitted by law, an opportunity for public comment on all pertinent parts of the rulemaking docket, including relevant scientific and technical findings.

(c) Before issuing a notice of proposed rulemaking, each agency, where feasible and appropriate, shall seek the views of those who are likely to be affected, including those who are likely to benefit from and those who are potentially subject to such rulemaking.

SEC. 3. *Integration and Innovation.* Some sectors and *industries* face a significant number of regulatory requirements, some of which may be redundant, inconsistent, or overlapping. Greater coordination across agencies could reduce these requirements, thus reducing costs and simplifying and harmonizing rules. In *developing* regulatory actions and identifying appropriate approaches, each agency shall attempt to promote such coordination, simplification, and harmonization. Each agency shall also seek to identify, as appropriate, means to achieve regulatory goals that are designed to promote innovation.

SEC. 4. *Flexible Approaches.* Where relevant, feasible, and consistent with regulatory objectives, and to the extent permitted by law, each agency shall identify and consider regulatory approaches

that reduce burdens and maintain flexibility and freedom of choice for the public. These approaches include warnings, appropriate default rules, and disclosure requirements as well as provision of information to the public in a form that is clear and intelligible.

SEC. 5. *Science*. Consistent with the President's Memorandum for the Heads of Executive Departments and Agencies, "Scientific Integrity" (March 9, 2009), and its implementing guidance, each agency shall ensure the objectivity of any scientific and technological information and processes used to support the agency's regulatory actions.

SEC. 6. *Retrospective Analyses of Existing Rules*. (a) To facilitate the periodic review of existing significant regulations, agencies shall consider how best to promote retrospective analysis of rules that may be outmoded, ineffective, insufficient, or excessively burdensome, and to modify, streamline, expand, or repeal them in accordance with what has been learned. Such retrospective analyses, including supporting data, should be released online whenever possible.

(b) Within 120 days of the date of this order, each agency shall develop and submit to the Office of Information and Regulatory Affairs a preliminary *plan*, consistent with law and its resources and regulatory priorities, under which the agency will periodically review its existing significant regulations to determine whether any such regulations should be modified, streamlined, expanded, or repealed so as to make the agency's regulatory program more effective or less burdensome in achieving the regulatory objectives.

SEC. 7. *General Provisions*. (a) For purposes of this order, "agency" shall have the meaning set forth in section 3(b) of Executive Order 12866.

(b) Nothing in this order shall be construed to impair or otherwise affect:

(i) authority granted by law to a department or agency, or the head thereof; or

(ii) functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(c) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(d) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

APPENDIX B²⁷⁹

In the Memorandum on Transparency and Open Government, issued on January 21, 2009, the President called for the establishment of “a system of transparency, public participation, and collaboration.”

The Memorandum required the Office of Management and Budget (OMB) to issue an Open Government Directive “that instructs executive departments and agencies to take specific actions implementing the principles set forth in this memorandum.”

Following the President’s Memorandum, OMB’s Open Government Directive requires a series of concrete measures to implement the commitments to transparency, participation, and collaboration. Section 4 of the Directive specifically instructs the Administrator of the Office of Information and Regulatory Affairs to “review existing OMB policies . . . to identify impediments to open government and to the use of new technologies and, where necessary, issue clarifying guidance and/or propose revisions to such policies, to promote greater openness in government.”

Executive Order 12866 directs agencies “to foster the development of effective, innovative, and least burdensome regulations” (Section 6(a)(2)), and to “identify and assess available alternatives to direct regulation, including . . . providing information upon which choices can be made by the public” (Section 1(b)(3)). Executive Order 12866 also directs agencies to analyze “potentially effective and reasonably feasible alternatives to the planned regulation, identified by the agencies or the public (including improving the current regulation and reasonably viable nonregulatory actions)” (Section 6(a)(3)(C)(iii)).

The purpose of the following documents is to set out guidance to inform the use of disclosure and simplification in the regulatory process. To the extent permitted by law, and where appropriate in light of the problem to which they are attempting to respond, agencies should follow the relevant principles.

²⁷⁹ Cass R. Sunstein, Administrator, OIRA, Memorandum for the Heads of Executive Departments and Agencies, Disclosure and Simplification as Regulatory Tools (June 18, 2010), online at http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/disclosure_principles.pdf (visited Jan 15, 2011). Footnotes are omitted from this Appendix.

DISCLOSURE AS A REGULATORY TOOL

PURPOSE. In many statutes, Congress requires or permits agencies to use disclosure as a regulatory tool. Executive Order 12866 provides, “Each agency shall identify and assess available alternatives to direct regulation, including . . . providing information upon which choices can be made by the public.” The Open Government Directive of the Office of Management and Budget calls for disclosures that will “further the core mission of the agency.” The purpose of this guidance is to set forth principles designed to assist agencies in their efforts to use information disclosure to achieve their regulatory objectives. Agencies should follow the principles outlined here in accordance with their own authorities, judgments, and goals, to the extent permitted by law.

DISCLOSURE AS A REGULATORY TOOL. Sometimes Congress requires or authorizes agencies to impose disclosure requirements instead of, or in addition to, mandates, subsidies, or bans. For example, automobile companies are required by law to disclose miles per gallon (MPG) ratings for new vehicles, and a standardized Nutrition Facts panel must be included on most food packages. The goal of disclosing such information is to provide members of the public with relevant information at the right moment in time, usually when a decision is made. Often that decision is whether to purchase a particular product.

Well-designed disclosure policies attempt to convey information clearly and at the time when it is needed. People have limited time, attention, and resources for seeking out new information, and it is important to ensure that relevant information is salient and easy to find and to understand. There is a difference between making a merely technical disclosure—that is, making information available somewhere and in some form, regardless of its usefulness—and actually informing choices. Well-designed disclosure policies are preceded by a careful analysis of their likely effects.

There are two general types of release that Congress may require or permit: summary disclosure and full disclosure. With summary disclosure, often required at the point of purchase, agencies highlight the most relevant information in order to increase the likelihood that people will see it, understand it, and act in accordance with what they have learned. Full disclosure is more comprehensive; it occurs when agencies release, or require others to release, all relevant information (often including underlying data).

SUMMARY DISCLOSURE. With summary disclosure, agencies attempt to provide people with clear, salient information at or near the time that relevant decisions are made. Examples include nutritional labeling, energy efficiency labeling, tobacco warnings, and

government provision of information (e.g., fact sheets, telephone hotlines, and public interest announcements).

Principle One: In order to select which information to highlight and how to present that information, agencies should explicitly identify their goals. Explicit identification of goals will have important implications for the nature of disclosure. If the goal is to discourage behavior by informing people that certain activities or products impose certain risks (for example, tobacco smoking), agencies should decide whether they seek to use vivid descriptions and persuasive images or merely to disclose relevant facts. If the goal is to present a warning, then graphic messages might be justified; the same is not true when the aim is simply to inform. And if the goal is to present a warning, it will often be useful to inform users of the precise steps that they might take, or the plans that they might formulate, to avoid the risk in question. Warnings (and disclosures in general) are most effective when people have a clear and specific sense of an appropriate course of action. They are likely to be less effective when the appropriate course of action is abstract, vague, or ambiguous.

Principle Two: Summary disclosure should generally be simple and specific, and should avoid undue detail or excessive complexity. Summary disclosure should focus on the central issues and should be presented in a manner that is straightforward and easy to understand. Simple, specific disclosure is generally preferable. People have limited time and attention, and their reactions to new information are not always predictable. If information is unduly complex and detailed, there is a risk that it will not be carefully read or processed, especially if the relevant area is technical or new and unfamiliar. Agencies should be aware of the importance of how information is presented; if a potential outcome is presented as a loss, for example, people may pay more attention than if it is presented as a gain. Effective disclosure also avoids abstraction and ambiguity. Summary disclosure should be designed so as to be relevant to the affected population, enabling people to know why and how the information is pertinent to their own choices.

Principle Three: Summary disclosure should be accurate and in plain language. By its very nature, summary disclosure can be misleading; a summary of complex material might give undue prominence to isolated aspects of a product or a context, and might divert attention from what most matters. Summary disclosure should be designed to be as fair and accurate as possible. Summary disclosure should also avoid jargon, technical language, or extraneous information. Each of these is distracting and threatens to turn away or to confuse users.

Principle Four: Disclosed information should be properly placed and timed. Careful thought should be given to the time and location of summary disclosure. Agencies should attempt to offer the information that users need when they need it. To this end, they should take steps to provide people with relevant information when they are actually making the decision or taking the action in question. For example, information about fuel economy is most useful if it is present and visible when people are shopping for motor vehicles. Similarly, summary disclosure should be provided in a prominent place, so that it will actually come to people's attention.

Principle Five: Summary disclosure through ratings or scales should be meaningful. Summary disclosure may involve numerical ratings or scales, because these are convenient ways to simplify and display complicated information. For nutrition, percent daily values are a common example of this sort of summary disclosure. When users understand what such scales mean, they can be among the most effective ways to communicate information. But if the scales are unclear or poorly designed, people may have a difficult time knowing what to make of the information; they might fail to incorporate it into their choices or draw the wrong conclusions. Agencies should select numbers and scales that are meaningful to users. For example, the Energy Guide label provides an estimate of annual operating cost, along with a cost range for similar models. Annual savings or benefits, measured in terms of dollars, provide a metric that is both meaningful and easy to understand. When monetary values are at stake, agencies should give careful consideration to disclosure of savings or benefits in terms of dollars.

Principle Six: To the extent feasible, agencies should test, in advance, the likely effects of summary disclosure, and should also monitor the effects of such disclosure over time. For all significant summary disclosure, it is important to observe whether and how people react to a given piece of information. To the extent feasible, and when existing knowledge is inadequate, agencies should consider several alternative methods of disclosure and test them before imposing a disclosure requirement. Scientifically valid experiments are generally preferable to focus group testing, and randomized experiments can be especially valuable. When focus groups are used, they should attempt to elicit information about actual choices and behavior (rather than simply reactions to or preferences for labels and formats). Consultation with experts can also be a valuable supplement to focus group testing.

Consistent with available resources, an agency requiring or making a disclosure should also consider performing market surveys or research to determine whether the desired effect is being achieved.

These studies should determine whether users are aware of the disclosure, whether they understand the disclosure, whether they remember the relevant information when they need it, whether they have changed their behavior because of the disclosure, and, if so, how. Agencies should be aware that users might not report their behavior accurately; self-reports may be misleading. To the extent possible, agencies should attempt to verify whether reported changes are actually occurring (for example, through empirical study of practices or through surveys that reliably measure behavior).

With respect to summary disclosure, agencies will often be able to learn more over time. A disclosure requirement that seems promising at one stage may turn out to be less effective than anticipated. A disclosure requirement that was effective at an early stage may turn out to have less or little impact as time passes. New strategies will often emerge as experience accumulates and circumstances change. Agencies should be open to fresh evidence and consider new approaches to the extent feasible and as the evidence warrants.

Principle Seven: Where feasible and appropriate, agencies should identify and consider the likely costs and benefits of disclosure requirements. Executive Order 12866 requires agencies, to the extent permitted by law, “to assess both the costs and the benefits of the intended regulation” and “recognizing that some costs and benefits are difficult to quantify,” to proceed only “upon a reasoned determination that the benefits of the intended regulation justify the costs.” In accordance with this requirement, and where feasible and appropriate in the circumstances, agencies should adopt disclosure requirements only after considering both qualitative and quantitative benefits and costs. That assessment should, in turn, help agencies to decide which requirements to select.

It is important to acknowledge that in some contexts, the costs and benefits of disclosure may be difficult or even impossible to specify, and a formal analysis may not be feasible or appropriate. Quantitative assessment of benefits may involve a high degree of speculation, and a qualitative discussion, based on available evidence, may be all that is feasible. In assessing benefits, agencies should consider the fact that improvements in welfare are a central goal of disclosure requirements, but should also note that informed choice is a value in itself (even if it is difficult to quantify that value).

It is also important to recognize that people may react differently to disclosure requirements. While some consumers might use calorie information to reduce their overall calorie intake, others might not. Heterogeneity can have potentially significant effects; those who have the most to gain or to lose may or may not be benefiting from the relevant disclosure. Agencies should attempt to take divergent

behavior and preferences into account when formulating disclosure policies and assessing their likely consequences.

FULL DISCLOSURE. Sometimes Congress requires or authorizes agencies to promote regulatory goals by disclosing, or by requiring others to disclose, a wide range of information about existing practices and their effects. Full disclosure will include far more detail than is available in a summary. It may well include multiple variables, supporting data, and materials that extend over long periods of time. For example, agencies use the Internet to provide detailed information about fuel economy and nutrition; such information is far more comprehensive than what is provided through summary disclosure.

Full disclosure can often promote the purposes of open government, including transparency, participation, and collaboration. The central goals of full disclosure are to allow individuals and organizations to view the data and to analyze, use, and repackage it in multiple ways, typically taking advantage of emerging technological capacities (perhaps including social media). To promote those goals, agencies should consider the following principles.

Principle One: Disclosed information should be as accessible as possible. For that reason, the Internet should ordinarily be used as a means of disclosing information, to the extent feasible and consistent with law. Transparency is generally good practice, and agencies cannot always know which information will be most useful and in what format it will prove most valuable. Engaging in full disclosure (to the extent feasible, subject to valid restrictions, and to the extent permitted by law) is often both desirable and important.

Full disclosure will frequently involve large amounts of complicated data, and most people may not find it worth their time to seek out and analyze all or most of it. In such cases, the data may be most directly useful to groups and organizations with technical capabilities and with an interest in obtaining, analyzing, and repackaging relevant information. Such groups and organizations may reorganize and disseminate the information in ways that turn out to be highly beneficial to the general public (sometimes by improving the operation of markets). At the same time, agencies should strive to make full disclosure as useful as possible, and should therefore promote clarity and accessibility.

Principle Two: Disclosed information should be as usable as possible. For that reason, information should usually be released in an electronic format that does not require specialized software. Consistent with the goals of open government, it is important to make information not merely available but also usable. If information is made available electronically, it will be easier for people to sift

through it and to analyze or repackage it in various ways. Agencies should select an electronic format that is suitable to achieving that goal. The best method should be chosen in light of existing technology. At the present time, a structured XML format is conducive to this purpose.

Principle Three: Agencies should consider making periodic assessments of whether full disclosure is as accurate and useful as possible. Where feasible and to the extent consistent with relevant laws, regulations, and policies (including protection of privacy), agencies should consider steps to investigate whether current disclosure policies are fulfilling their intended purposes. They might explore, for example, what information is being frequently used by the public and how those in the private sector are adapting and presenting information. By so doing, agencies can improve their disclosure policies and practices after learning about the value of particular information to the public. Similar forms of continuing assessment might prove useful for summary disclosure as well.

Agencies should also consider whether it might be useful to seek public comment on significant disclosures. As appropriate, agencies might use the Federal Register to obtain such comment. The public comment period associated with the Paperwork Reduction Act of 1995, 44 U.S.C. 3501 et seq., might also be used for this purpose. Agencies might consider requesting public comment on the following:

- 1) The quality of the information;
- 2) The usefulness of the information;
- 3) Other related information the agency should collect and/or disclose; and
- 4) Means of improving disclosure, such as more effective methods for collecting, organizing, analyzing, and disseminating information.

Principle Four: Where feasible and appropriate, agencies should consider the costs and benefits of full disclosure. As noted above, Executive Order 12866 requires agencies, to the extent permitted by law, “to assess both the costs and the benefits of the intended regulation” and to proceed only upon “a reasoned determination that the benefits of the intended regulation justify the costs.” In addition, the Paperwork Reduction Act of 1995 imposes a series of requirements on efforts to collect information; these requirements are designed (among other things) to increase the practical utility of information collections and to minimize burdens on the private sector. In accordance with these requirements, and to the extent feasible and appropriate, agencies should evaluate full disclosure in terms of both qualitative and quantitative benefits and costs.

Here, as with summary disclosure, quantitative assessment of benefits may involve a degree of speculation, and a qualitative discussion, based on available evidence, may be all that is feasible. In assessing benefits, agencies should consider the fact that improvements in welfare are a central goal of disclosure requirements, that informed choice is also a value in itself (even if it is difficult to quantify that value), and that full disclosure may effectively complement and improve on summary disclosure. It is also important to recognize that significant benefits may be associated with recombining information in new and different ways, even if quantification of those benefits is difficult.

SUMMARY DISCLOSURE AND FULL DISCLOSURE. Congress may require or authorize agencies to require summary disclosure but not full disclosure; alternatively, Congress may require or authorize agencies to require full disclosure but not summary disclosure. When Congress grants agencies discretion, and to the extent feasible, they should consider the likely effects—including the qualitative and quantitative costs and benefits—of both approaches.

Summary disclosure is the best method for informing consumers at the point of decision. Full disclosure is the best method of allowing groups and individuals access to a broad range of information, allowing them to analyze and disseminate that information in creative ways, and to use it to inform private and public decisions or otherwise to promote statutory goals. The two approaches may well be complementary. For example, it may be desirable to use summary disclosure at the point of purchase while also making full information available on the Internet.

SIMPLIFICATION AS A REGULATORY TOOL

PURPOSE. In some statutes, Congress requires or permits agencies to simplify regulatory requirements. In other statutes, Congress requires or permits agencies to use default rules, such as automatic enrollment, to simplify people's decisions and to promote regulatory objectives. Executive Order 12866 provides, "Each agency shall identify and assess available alternatives to direct regulation." It also provides, "Each agency shall draft its regulations to be simple and easy to understand, with the goal of minimizing the potential for uncertainty and litigation arising from such uncertainty." It adds, "When an agency determines that a regulation is the best available method of achieving the regulatory objective, it shall design its regulations in the most cost-effective manner to achieve the regulatory objective."

The purpose of this guidance is to set forth principles designed to assist agencies in using simplification to achieve their regulatory goals.

Agencies should follow the principles outlined here in accordance with their own authorities, judgments, and goals, to the extent permitted by law.

SIMPLIFICATION AND DEFAULT RULES. In recent years, significant attention has been given to the possibility of improving outcomes by easing and simplifying people's choices. Sometimes this goal can be achieved by reducing complexity, ambiguity, and paperwork burdens; sometimes it can be achieved by selecting appropriate starting points or "default rules." A default rule (such as automatic enrollment) specifies the outcome in a given situation if people make no choice at all.

In the domain of savings for retirement, for example, private and public employers might create an "opt in" system, in which employees do not reserve any of their salary for savings unless they affirmatively elect to do so (and hence opt in). Alternatively, employers might create an "opt out" system, in which a certain amount of salary is placed in a retirement plan unless employees affirmatively elect not to participate in the plan. Default rules play a large role in many domains. Both private and public institutions make numerous choices between opt-in and opt-out design.

Considerable evidence suggests that the choice of the default rule can have a significant effect on behavior and outcomes, even if it is simple and essentially costless to opt in or opt out. A typical finding is that under an opt-in system, fewer people are likely to participate than in an opt-out system. One reason is that inertia can be a powerful force; people may procrastinate or decline to make the effort to rethink the default option. Another reason is that the default rule might be taken to carry an implied endorsement by those who have chosen it; people may not depart from the default rule on the ground that it might have been selected because it is helpful or appropriate. Whatever the reason, it is clear that in some contexts, the chosen default rule can have significant effects, perhaps more significant than alternative possibilities, including disclosure of relevant information and even monetary incentives. It follows that if, for example, the relevant goal is to enable people to increase savings, an opt-out regime could be helpful for achieving that goal (as many private employers have found).

Instead of choosing opt in or opt out, private or public institutions might select a distinctive approach, which is to require "active choosing." Under this approach, no default rule is put in place. People are asked to make an explicit statement of their preference among the alternatives. Compared to opt in, active choosing has been found to increase participation rates substantially. Agencies may wish to consider whether active choosing is preferable to a default rule as a

means of promoting their objectives. If, for example, agencies are uncertain about which default rule will be best for the public, or if any default rule creates risks, requiring active choices may be an attractive alternative.

More generally, people may not participate in important programs simply because the required steps for participation are complex and daunting; agencies can often improve outcomes by reducing unnecessary paperwork burdens and by simplifying choices. For example, many agencies have taken active steps to dispense with paper and to allow people to use electronic forms (“fillable fileable,” including electronic signatures). Others have reduced burdens by eliminating unnecessary questions, using skip patterns, allowing “prepopulation” of forms, authorizing less frequent reporting, and eliminating redundancy.

In making choices among possible approaches, agencies should consider the following principles, to the extent permitted by law.

Principle One: To promote regulatory goals, agencies should consider whether it is appropriate to use default rules (such as automatic enrollment) as a substitute for, or as a supplement to, mandates or bans. In some contexts, appropriate default rules have advantages over mandates and bans, because they preserve freedom of choice. Sometimes people’s situations are diverse and a mandate is poorly suited to individual circumstances; a default rule has the virtue of permitting people to adjust as they see fit. And when the statutory goal is to improve outcomes without imposing firm mandates, a default rule may be simpler, more effective, and less costly than other possibilities.

Sometimes, of course, the law requires certain behavior (often to prevent harms to third parties), and in such cases, a default rule may not be sufficient. But in such contexts, default rules may be useful and complementary. If, for example, people are required by law to engage in certain behavior, it may be both useful and appropriate to select the default rule that promotes compliance and best achieves the regulatory objective. Such an approach can increase ease and simplicity for those who are asked to comply with the law.

Principle Two: When choosing among potential default rules, agencies should attempt to specify their likely effects, and should identify the rule that would most benefit the relevant population. According to standard economic theory, a default rule should generally have little or no effect, at least if it is not burdensome or costly for people to depart from it. But empirical evidence suggests that in many contexts, outcomes are significantly affected by the choice of default rules. Many people will not opt in to a certain program or situation, even if they would also not opt out.

When choosing the appropriate default rule, agencies should attempt to specify and assess the likely effects of the alternative possibilities (including, to the extent feasible and permitted by law, both qualitative and quantitative costs and benefits, in accordance with Executive Order 12866). An important question is whether most people in the relevant population would benefit from participation in the pertinent program or activity. This question will not always be easy. It should ordinarily be answered by asking what most people would choose if they had adequate information. And if one set of outcomes is required by law, agencies should consider selecting a default rule that would simplify and promote compliance.

One approach to the choice of default rule is to choose a general rule that will apply to all of the relevant population, subject of course to opt in or opt out. An alternative approach is more personalized, in the sense that it attempts to distinguish among, and to suit the diverse situations of, members of the affected group. For example, geographic or demographic information (such as age) might be taken into account if it helps to increase the likelihood that the default rule will be suited to the situations of those to whom it applies. Agencies might consider a personalized approach if they have good reason to believe that such an approach would more accurately reflect the informed judgments of members of the affected population. On the other hand, agencies should avoid a personalized approach if the underlying categories would be too crude or inconsistent with relevant laws, regulations, or policies, such as those involving privacy.

Principle Three: Agencies should consider active choosing as an alternative to a specified default rule, especially when the relevant group is diverse and appropriately informed. In some cases, it may be difficult for agencies to be confident about which default rule will be best for the public or the relevant population; they may lack adequate information. In such cases, active choosing might well be preferable. This approach avoids a specified default rule. Instead, active choosing asks people to make an explicit selection of the option that they prefer.

Active choosing has particular advantages over a default rule when preferences and situations are diverse and heterogeneous, so that a single approach does not fit all. To that extent, active choosing can be preferable to either an opt-in or an opt-out regime. And when preferences and circumstances are diverse, a default rule may have the disadvantage of giving uniform treatment to differently situated people. More personalized default rules may avoid some of the problems of a uniform default rule, but when agencies lack full information, active choosing might well be the best approach.

These points also suggest the circumstances in which a default rule might be preferred to active choosing. Where agencies have reason to be confident about the appropriate default rule, and when preferences and situations are not relevantly diverse, active choosing may not be the best approach; a default rule might be best. Where the situation is unfamiliar, highly technical, and complex, a default rule might be preferred to active choosing, to the extent that the latter approach requires people to make decisions for which they lack experience and expertise. Provision of information might, of course, help to reduce the latter problem. Agencies should consider whether existing evidence provides a basis for deciding between a specified default rule and active choosing, or whether it is appropriate to attempt to obtain such evidence. Assessment of likely effects, including both qualitative and quantitative costs and benefits, will prove useful in making that decision.

Principle Four: Agencies should consider how best to eliminate unnecessary complexity and to simplify people's choices. In some cases, a default rule will not fit with the relevant law or help solve the problem with which agencies are concerned. In such cases, agencies should nonetheless take steps to eliminate undue complexity and should attempt, where appropriate and consistent with law, to simplify and ease people's decisions.

For example, burdensome paperwork requirements can impose large costs on the private and public sectors, have unintended adverse effects, reduce compliance, and prevent significant numbers of people from participating in relevant programs. Consistent with the Paperwork Reduction Act of 1995, 44 U.S.C. 3501 et seq., and the Government Paperwork Elimination Act, 44 U.S.C. 3504, and to the extent permitted by law, agencies should attempt to reduce such requirements by eliminating unnecessary, ambiguous, excessive, and redundant questions; by permitting electronic filing (including electronic signatures); by allowing "prepopulation" of forms, where appropriate and feasible by sharing information across offices or agencies; and by promoting administrative simplification by coordinating and reducing requirements from multiple offices and agencies.

APPENDIX C²⁸⁰

AGENCY CHECKLIST: REGULATORY IMPACT ANALYSIS

With this document, the Office of Information and Regulatory Affairs is providing a checklist to assist agencies in producing regulatory impact analyses (RIAs), as required for economically significant rules by Executive Order 12866 and OMB Circular A-4.

Nothing herein alters, adds to, or reformulates existing requirements in any way. Moreover, this checklist is limited to the requirements of Executive Order 12866 (available at: http://www.reginfo.gov/public/jsp/Utilities/EO_12866.pdf) and Circular A-4 (available at: <http://www.whitehouse.gov/OMB/circulars/a004/a-4.pdf>); it does not address requirements imposed by other authorities, such as the National Environmental Policy Act, the Regulatory Flexibility Act, the Unfunded Mandates Reform Act, the Paperwork Reduction Act, and various Executive Orders that require analysis. Executive Order 12866 and Circular A-4, as well as those other authorities, should be consulted for further information.

Checklist for Regulatory Impact Analysis:

- Does the RIA include a reasonably detailed description of the *need for the regulatory action*?
- Does the RIA include an explanation of how the regulatory action will *meet that need*?
- Does the RIA use an appropriate *baseline* (i.e., best assessment of how the world would look in the absence of the proposed action)?
- Is the information in the RIA based on *the best reasonably obtainable scientific, technical, and economic information* and is it presented in an *accurate, clear, complete, and unbiased manner*?
- Are the data, sources, and methods used in the RIA provided to the public *on the Internet* so that a qualified person can reproduce the analysis?
- To the extent feasible, does the RIA quantify and monetize the anticipated *benefits* from the regulatory action?

²⁸⁰ Office of Information and Regulatory Affairs, Office of Management and Budget, Agency Checklist: Regulatory Impact Analysis (Oct 20, 2010), online at http://www.whitehouse.gov/sites/default/files/omb/inforeg/regpol/RIA_Checklist.pdf (visited Sept 6, 2011). Footnotes are omitted from this Appendix.

- To the extent feasible, does the RIA quantify and monetize the anticipated *costs*?
- Does the RIA explain and support a *reasoned determination that the benefits of the intended regulation justify its costs* (recognizing that some benefits and costs are difficult to quantify)?
- Does the RIA assess the *potentially effective and reasonably feasible alternatives*?
 - Does the RIA assess the benefits and costs of different regulatory provisions separately if the rule includes a number of distinct provisions?
 - Does the RIA assess at least one alternative that is less stringent and at least one alternative that is more stringent?
 - Does the RIA consider setting different requirements for large and small firms?
- Does the preferred option have the highest *net benefits* (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires a different approach?
- Does the RIA include an explanation of why the planned regulatory action is *preferable* to the identified potential alternatives?
- Does the RIA use appropriate *discount rates* for benefits and costs that are expected to occur in the future?
- Does the RIA include, if and where relevant, an appropriate *uncertainty analysis*?
- Does the RIA include, if and where relevant, a separate description of *distributive impacts* and *equity*?
 - Does the RIA provide a description/accounting of transfer payments?
 - Does the RIA analyze relevant effects on disadvantaged or vulnerable populations (e.g., disabled or poor)?
- Does the analysis include a clear, plain-language *executive summary*, including an *accounting statement* that summarizes the benefit and cost estimates for the regulatory action under consideration, including the qualitative and non-monetized benefits and costs?
- Does the analysis include a clear and transparent *table* presenting (to the extent feasible) anticipated benefits and costs (quantitative and qualitative)?

