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TMI? WHY THE OPTIMAL ARCHITECTURE OF DISCLOSURE REMAINS TBD

Ryan Bubb*

MORE THAN YOU WANTED TO KNOW: THE FAILURE OF MANDATED DISCLOSURE. By *Omri Ben-Shahar* and *Carl E. Schneider*. Princeton and Oxford: Princeton University Press. 2014. Pp. x, 195. \$29.95.

INTRODUCTION

We are inundated with disclosures in our daily lives. In one of the more evocative passages in their stimulating new book, *More Than You Wanted to Know*, Omri Ben-Shahar¹ and Carl E. Schneider² imagine a day in the life of someone who actually *reads* all those disclosures (pp. 95–100). During a commercial on the morning news, the protagonist hits pause on the TiVo to catch the fine print that would otherwise fly by. Breakfast is a slog, requiring close reading of the toaster’s ominous label and the disheartening nutrition facts on the butter and jam. More of the same awaits at the office, where the pop-up announcing a critical software update is accompanied by a lengthy and perplexing end-user license agreement. And so on. The parable vividly illustrates the fanciful nature of the hope that many disclosures will be digested and used in the way their designers intend. Truly reading and trying to comprehend even a modicum of the disclosures we face “would mean a life-time educational project like the worst of high school—boring subjects and nasty tests going on your permanent record” (p. 70).

Ben-Shahar and Schneider provide both a compelling account of how we arrived at the current state of ubiquitous ineffective disclosure and a sweeping critique of disclosure as a regulatory technique. Disclosure is seductive to lawmakers because it seems so plausible that more information is always better and essentially costless to furnish. But the authors survey the evidence and find that disclosure has failed time and again. Its failure is due at root to a misunderstanding of psychology. Disclosure rests on the false assumption that people actually *want* to make all of the significant decisions in their lives (not to mention the insignificant ones) and to make them with care. In fact most of us are decision averse. And when we do struggle

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through complex decisions, disclosures typically offer little useful simplification. These problems with disclosure are compounded by its rampant use. Each additional disclosure reduces the attention paid to those that have gone before, leading to overgrazing on the disclosure commons. As a regulatory technique, mandatory “disclosure is a fundamental failure that cannot be fundamentally fixed,” and “what fails should be abandoned” (p. 12).

More Than You Wanted to Know is timely, arriving amid a surge in enthusiasm for light-touch regulatory tools like disclosure that attempt to move choices in the right direction. One influential approach—popularized by the best seller *Nudge*³—dons the mantle of libertarianism, eschewing regulations that would limit freedom of choice in favor of simply redesigning the “choice architecture” through interventions like disclosure to achieve regulatory goals at little cost. The ascendancy of this approach has served to delegitimize choice-limiting policies. If we can achieve so much for so little through harmless tweaks to choice architecture like disclosure, then why ever resort to tools like product regulation that might prohibit someone’s preferred option? What sort of Neanderthal would continue with such outmoded forms of regulation? Ben-Shahar and Schneider provide a refreshing counterpoint to the shift toward “nudging.” Mandating disclosure to improve choice architecture in fact has a long history and a poor track record; the authors explain why.

But while the book provides an important critique of the traditional approach to mandatory disclosure, it does not fully engage with the burgeoning behavioral literature on disclosure that advocates alternative approaches. To explain the limits of the book’s critique, I begin by reframing the core thesis of the book as an application of dual-process theory from cognitive psychology. Ben-Shahar and Schneider analyze a particular—and undoubtedly prevalent—rationale for disclosure regulation: providing information to improve deliberate decisionmaking. They convincingly show that this model of disclosure often gets the psychology wrong. Our effortful deliberate processes are not so easily improved and are often not even engaged as our more intuitive processes predominate.

This is not, however, disclosure’s only *modus operandi*. I examine an alternative mode that aims simply to influence rather than instruct. This mode of disclosure harnesses our more intuitive processes to move beliefs or behavior in a specific direction. To this approach Ben-Shahar and Schneider’s main critique does not apply. But other critiques do, and I offer several.

Finally, I turn to their normative bottom line. While debunking excessive faith in mandatory disclosure—what they term *disclosurism*—Ben-Shahar and Schneider develop an ism of their own—what we might call *antidisclosurism*—by arguing for total abandonment of, or at least a presumptive bar against, mandatory disclosure. But their approach risks making a mistake symmetric to that of the nudge advocates who adopt strong

3. RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* (Penguin Books rev. ed. 2009) (2008).

presumptions against any limitation of choice. We are better off avoiding all of these isms in our regulatory thinking. The right response to the important critiques of mandatory disclosure that Ben-Shahar and Schneider raise is not a presumption against disclosure but rather rigorous empirical assessment of which disclosures work and which do not, with an eye toward the pitfalls the authors document. About disclosure, there is still a great deal more to know.

I. THE FAILURE OF MANDATORY DISCLOSURE

The typical problem for which mandatory disclosure is prescribed involves a relatively inexperienced person making an unfamiliar and complex decision, usually in dealing with a sophisticated specialist (p. 3). Think of a first-time home buyer working with a mortgage broker to choose a home loan. The worry is that the nonspecialist will choose poorly, a concern that is amplified when the specialist has an incentive to take advantage of the nonspecialist. An opportunistic mortgage broker, for example, might steer a naive borrower into a relatively high-cost form of credit. In response, the law often requires the specialist to make intensive disclosures of certain information to equip the nonspecialist to make a good decision. Ben-Shahar and Schneider count a total of forty-nine distinct disclosure documents included at a typical mortgage closing (p. 22). This is not unusual. Across diverse areas from contract law to criminal procedure, from health law to securities regulation, mandatory disclosure is astonishingly ubiquitous, an observation the authors credit for getting them started on the intellectual project that became the book (p. ix).

The goal of disclosure, as conventionally understood, is to provide “information that equips disclosees to understand their choice well enough that they analyze it and make a well-informed, well-considered decision” (p. 34). The authors use this rationale, which they refer to as *full disclosure*, as the benchmark by which to evaluate mandatory disclosure (p. 35). It is this goal that leads to intensive disclosures, like the avalanche of mortgage documents, in response to complex decisions (p. 39).

The ubiquity of disclosure, on the authors’ account, is due in part to an ideological belief among “disclosurites” that its benefits exceed its costs—and that any problems with it can be fixed by simply fine-tuning the mandate—regardless of the evidence to the contrary (p. 6). Such disclosurism is Ben-Shahar and Schneider’s main target.

Surveying the evidence, the authors find that, contrary to the disclosurite faith, “in field after field there is good evidence that mandated disclosure does not achieve disclosurites’ goals” (p. 47). To provide concrete examples, Ben-Shahar and Schneider focus on disclosures for consumer credit, informed consent to medical treatments, and privacy policies (pp. 43–46). While they allow that there are studies that show disclosures leading to some improvement in disclosees’ understanding, they argue that disclosures “do not bring [disclosees] near the level of understanding needed to make good decisions” (p. 47).

The continuous revision of mandatory disclosure in response to dissatisfaction with it serves as further confirmation of disclosure's irredeemable failure. For example, in 1980 Congress passed the Truth in Lending Simplification and Reform Act in response to the concern that the disclosures under the original 1968 Truth in Lending Act were obtuse (p. 50). But the same basic concerns about consumer-credit disclosures were reiterated in the latest round of reforms following the recent financial crisis—an indicator that “lawmakers repeatedly recogniz[e] that laboriously built mandates ha[ve] failed” (p. 51).

II. A DUAL-PROCESS ACCOUNT OF THE FAILURE OF FULL DISCLOSURE

The authors argue that “not only does the empirical evidence show that mandated disclosure regularly fails, failure is inherent in it” (p. 12). To convey their explanation for the frequent failure of existing mandates—and to show the limits of their critique—it is useful to reframe their analysis as an application of dual-process theory from cognitive psychology.

A. *System 1 and System 2*

Dual-process theory models judgment and decisionmaking as involving two types of mental processes.⁴ System 1 refers to cognitive processes that are fast, automatic, and unconscious.⁵ System 2, in contrast, is slow, deliberate, and conscious.⁶ System 2 is who we think we are. But a large body of evidence shows that System 1 in fact governs much of what we think and do. The two systems are not unrelated; even when we engage System 2 to make a judgment or choice, our System 1 has often already provided a starting point, even if we are not wholly aware of this. System 2 often endorses intuitive assessments and ideas generated by System 1.

For a classic example illustrating the operation of these two types of mental processes, consider the following question:

A bat and ball cost \$1.10. The bat costs one dollar more than the ball. How much does the ball cost?

An obvious answer—10 cents—leaps immediately to mind. And that is the answer many respondents give.⁷ But it is incorrect. A little (effortful!) reflection reveals that the correct answer is 5 cents. While people do poorly

4. Jonathan St. B.T. Evans, *Dual-Processing Accounts of Reasoning, Judgment, and Social Cognition*, 59 ANN. REV. PSYCHOL. 255, 256 (2008).

5. *Id.* at 257.

6. The title of Daniel Kahneman's *Thinking, Fast and Slow*, which masterfully synthesizes the body of social science that is commonly (if inaccurately) referred to as “behavioral economics,” is a reference to these two systems. DANIEL KAHNEMAN, *THINKING, FAST AND SLOW* (2011).

7. See Shane Frederick, *Cognitive Reflection and Decision Making*, J. ECON. PERSP., Fall 2005, at 25, 26–27.

on the “bat-and-ball” problem, they do much better on the “banana-and-bagel” problem:

*A banana and a bagel cost 37 cents. The banana costs 13 cents more than the bagel. How much does the bagel cost?*⁸

Dual-process theory provides a model of what is going on. Our System 1 is constantly monitoring our surroundings and generating intuitive unconscious judgments and assessments. It produces an intuitive judgment about the bat-and-ball problem. System 2, by contrast, is normally on autopilot and, unless it deliberately engages, generally endorses the judgments of System 1. So in the bat-and-ball problem, System 1 feeds us an answer and we adopt it without reflection. In contrast, System 1 does not have a ready answer to the banana-and-bagel problem, and, lacking an immediate intuitive answer, we slow down, and System 2 kicks in.

B. *Improving Deliberate Decisionmaking Through System 2 Disclosure*

So what does this have to do with mandatory disclosure? Ben-Shahar and Schneider characterize the “full-disclosure” logic of mandatory disclosure as essentially giving System 2 the information it needs to make careful, deliberate decisions. We might call this approach *System 2 disclosure*.

Consider, for example, the first-time home buyer shopping for a mortgage. Mortgages are complex. An assiduous decision requires considering the loan’s initial interest rate, the initial required monthly payment, any up-front payment of “points” to buy down the interest rate, how the interest rate might change over the term of the loan, how the required monthly payments might change over the term of the loan, payment options and their consequences, the property insurance that the borrower must buy, the required and optional forms of title insurance and their costs and benefits, how the lender appraised the value of the home, cancellation rights, prepayment penalties, closing costs, and more. Because mandatory disclosure is designed to give System 2 all the information it needs to decide well, hundreds of pages of disclosures about the mortgage are required. Ben-Shahar and Schneider term the model of behavior underlying this approach as *homo arbiter*. “*Homo arbiter* cherishes decisions, embraces them, makes them meticulously” (p. 60).

But “mandated disclosure seems plausible only on logically reasonable but humanly false assumptions” (p. 10). Although Ben-Shahar and Schneider do not frame their argument in terms of dual-process theory, their point is that System 2 does not work in the way the *homo-arbiter* model assumes. Real people are decision averse. First, people avoid making decisions to begin with (p. 61). The authors report one study’s finding that half of patients wanted their doctor to make treatment decisions for them (p. 64). People are also averse to decisions about saving for retirement, commonly delaying

8. *Id.* at 28.

enrollment in company-sponsored retirement-savings plans for years and thereby forgoing substantial employer contributions (pp. 63–64).

Second, when people do make decisions, they make them with “incomplete information and inconsiderable effort” (p. 61). One study found that employees typically spend less than an hour designing their portfolio in their retirement plan, and many simply accept the plan’s default investment allocation (p. 65). Many weighty medical decisions are made “‘in a split-second,’ ‘instantaneously’” (p. 65).

What the authors call *decision aversion* is consistent with many of the lessons of the dual-process theory literature. As Professor Kahneman puts it, “The defining feature of System 2 . . . is that its operations are effortful, and one of its main characteristics is laziness, a reluctance to invest more effort than is strictly necessary.”⁹ Presumably many, if not most, people who answer “10 cents” to the bat-and-ball problem could calculate the correct answer. But their System 2 does not engage—mental effort is aversive, and they prefer to adopt System 1’s intuitive answer rather than exert energy to check that answer and compute the correct one. For many decisions, System 1 is in charge, and disclosures designed for a deliberate System 2 mental process are worthless.

Accordingly, as a result of our decision aversion, disclosures often simply go unread. We can all relate to mindlessly clicking “I agree” without reading lengthy disclosures online. But even disclosures about more significant, less routine decisions are ignored. No less an intellect than Judge Posner recounts that, faced with lengthy disclosures for a home loan, “I didn’t read, I just signed” (p. 70; internal quotation marks omitted).

As Ben-Shahar and Schneider stress, skimming and skipping disclosures, and making intuitive choices based on incomplete information, is a sensible way to live your life. For one thing, many people lack the literacy and numeracy skills needed to make good use of disclosures anyway (pp. 79–80). More fundamentally, actually reading all of those disclosures and working through each decision carefully—the “disclosurite lifelong-learning program”—would “interfere[] with things people *like* doing” (p. 71). People “go on cruises and rent cars to enjoy the beach, not to read disclaimers or insurance terms” (p. 72). Moreover, the length of individual disclosures and the accumulation of disclosures in so many areas mean that “people cannot hope to attend to more than a trickle of the flood” (p. 95), as the parable from the book I began with nicely illustrates.

III. NUDGING SYSTEM 1 THROUGH DISCLOSURE

The authors do more than argue just that mandatory disclosure has routinely failed in the past. They assert further that “the reasons [disclosure] fails are so basic and so many that it is irreparable” (p. 55). This is a strong claim. It rests on two main moves.

9. KAHNEMAN, *supra* note 6, at 31.

First, the authors focus on simplification as the primary disclosure-reform movement. An increasingly popular response to the problems with disclosure, particularly among behavioral law-and-economics scholars, is to urge that disclosures be simplified. The idea is that, if we can reduce these complex disclosures to something easily comprehensible, then they would actually be compatible with the limited attention of disclosees.¹⁰ The most promising form of simplified disclosure might be what the authors refer to as *scores*: a single number, rating, or grade that conveys important information (p. 131).

The authors' basic rejoinder is that "simplifying fails because the complex isn't simple and can't easily be made so" (p. 123). Recall that mandatory disclosure is usually employed for complicated decisions, not easy ones. Consider the most important example of a score in current use: the annual percentage rate ("APR") for consumer loans. The many considerations in choosing a mortgage listed above mean that the APR is an insufficient basis for decision.¹¹ This is an important limit to the simplification approach, at least as a way to achieve the goal of "full disclosure." As I discuss below, however, scores might nonetheless provide useful information in some contexts.¹²

Second, the authors argue that, even if simplification could work, the politics of disclosure would inevitably cause disclosure to expand, on both the extensive and intensive margins (Chapter Nine). This is driven in part by the popular misconception that disclosures are, at worst, harmless, so that whenever a social problem arises for which disclosure might offer a benefit, it is soon mandated. This inevitable disclosure ratchet means that simplification can achieve at best only fleeting success.

But while the book persuasively explains the problems with (and the political economy of) what I have called System 2 disclosure, dual-process theory suggests a different mechanism by which disclosure could operate: nudging System 1. A growing literature in behavioral law and economics advocates using disclosures that exploit the various biases and heuristics that

10. See, e.g., OREN BAR-GILL, *SEDUCTION BY CONTRACT: LAW, ECONOMICS, AND PSYCHOLOGY IN CONSUMER MARKETS* 36–37 (2012).

11. They explain as follows:

[W]hile this APR lets you compare, say, several thirty-year fixed-rate loans, it does not help with some crucial dilemmas. A few examples: long-term loans have higher interest rates but lower monthly payments than shorter loans. So, do you care more about a low APR (paying less interest) or a low monthly payment? If interest rates fall and you refinance, you may owe a prepayment penalty. Do you want a cheaper loan with that penalty or a costlier loan without it? How much costlier? You can lower your monthly payments by buying points (a kind of prepaid interest). Their value turns on your likelihood of paying off the loan early or refinancing, which turns on things like interest rates and your income. The adjustable-rate mortgage ["ARM"] presents similar problems. Its interest rate fluctuates, so you cannot anticipate your payments. Moreover, ARMs sometimes offer tasty teaser rates and negative amortization, which make a house more affordable now but can increase the total you pay.

Pp. 16–17.

12. See *infra* notes 49–50, 63–67 and accompanying text.

System 1 produces in order to improve choices. We might call this alternative *System 1 disclosure*.

The authors discuss this behavioral literature only briefly (pp. 112–17). Given the enthusiasm for this model of disclosure at the highest levels of government in recent years,¹³ I consider the book's lack of a more in-depth treatment of it a major missed opportunity. The authors' limited discussion focuses on a type of disclosure that promotes "active choosing" (p. 113). The two examples they give involve summary disclosures that simply provide statistics about product use (pp. 113–14), which is better understood as a form of System 2 disclosure than System 1 disclosure. And the brief criticisms the authors lodge simply recapitulate their main critique of other forms of System 2 disclosure: it is too hard to fix System 2, and people do not want this additional summary information in the first place (pp. 115–17).

In this Part, I try to fill this lacuna, at least partially, by analyzing two distinct approaches to System 1 disclosure and their prospects and limits. I begin by introducing a running example of System 1 disclosure: the use of vivid images for health warnings on cigarette packages. I then analyze one conceptual model of System 1 disclosure that attempts to correct disclosees' factual misperceptions. After raising a number of problems with this "debiasing" model, I discuss a more plausible approach: manipulating behavior through System 1 disclosure.

A. *An Example: Cigarette Packaging Labels*

To make the discussion that follows more concrete, consider health warnings on cigarette packages. These have traditionally taken the form of System 2 disclosures, as the congressional statement of purpose for the Comprehensive Smoking Education Act of 1984 reflects: "It is the purpose of this Act to provide a new strategy for making Americans more aware of any adverse health effects of smoking, to assure the timely and widespread dissemination of research findings and to enable individuals to make informed decisions about smoking."¹⁴ Accordingly, the Act mandated warning labels for cigarette packages such as the following: "SURGEON GENERAL'S WARNING: Smoking Causes Lung Cancer, Heart Disease, Emphysema, And May Complicate Pregnancy."¹⁵ Armed with this summary of the health risks, *homo arbiters* can decide for themselves whether the costs of smoking outweigh the benefits. These FYIs from the surgeon general have been widely regarded as a failure, however, for the simple reason that many consumers

13. See, e.g., Memorandum from Cass R. Sunstein, Adm'r, Office of Info. & Regulatory Affairs, to the Heads of Exec. Dep'ts & Agencies, Disclosure and Simplification as Regulatory Tools (June 18, 2010), available at http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/disclosure_principles.pdf.

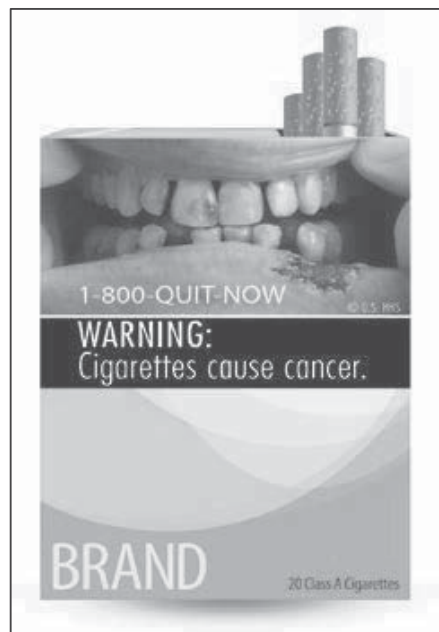
14. Comprehensive Smoking Education Act, Pub. L. No. 98-474, § 2, 98 Stat. 2200, 2200 (1984) (codified at 15 U.S.C. § 1331 note).

15. *Id.* § 4, 98 Stat. at 2201.

ignore the labels.¹⁶ This is of course one of Ben-Shahar and Schneider's main criticisms of System 2 disclosure.

Congress recently took a more aggressive tack in the Family Smoking Prevention and Tobacco Control Act of 2009¹⁷ ("FSPTCA") by mandating that the Food and Drug Administration ("FDA") require that "color graphics depicting the negative health consequences of smoking" accompany a new set of health warning statements on cigarette packaging.¹⁸ The FDA implemented this requirement in 2011 by specifying a set of graphic depictions of lung disease and the like for the warning labels.¹⁹ Figure 1 below provides an example of one of the new labels.²⁰

FIGURE 1.
FDA CIGARETTE WARNING LABEL



16. COMM. ON PREVENTING NICOTINE ADDICTION IN CHILDREN & YOUTHS, INST. OF MED., *GROWING UP TOBACCO FREE: PREVENTING NICOTINE ADDICTION IN CHILDREN AND YOUTHS* 240 (Barbara S. Lynch & Richard J. Bonnie eds., 1994) [hereinafter *GROWING UP TOBACCO FREE*].

17. Family Smoking Prevention and Tobacco Control Act, Pub. L. No. 111-31, 123 Stat. 1776 (2009) (codified as amended in scattered sections of 15 U.S.C. and 21 U.S.C.).

18. 15 U.S.C. § 1333 (2012).

19. Required Warnings for Cigarette Packages and Advertisements, 76 Fed. Reg. 36,628 (June 22, 2011).

20. The labels are available for download at *Overview: Cigarette Health Warnings*, FDA, <http://www.fda.gov/TobaccoProducts/Labeling/ucm259214.htm> (last updated May 15, 2013).

These new labels are best understood as System 1, not System 2, disclosures. That is, they are designed to harness how our System 1 forms intuitive assessments and judgments rather than simply to provide relevant data for a deliberate System 2 decision process. There are a few different ways of thinking about how these types of disclosures might exploit System 1 to affect consumer decisions.

B. *Debiasing Through System 1 Disclosure*

One model is what Professors Jolls and Sunstein call *debiasing through law*.²¹ The basic idea is that when individuals' judgments are systematically biased—when they make mistakes in assessing probabilities, for example—then a potentially useful response is to devise legal rules that reduce or eliminate their mistakes.²² An important application that Jolls and Sunstein discuss involves product-safety disclosures. To stick with our cigarette-label example, there is evidence that many people underestimate the risks of smoking. Jolls and Sunstein argue that requiring manufacturers to provide disclosures with a specific account of someone who was harmed by smoking might correct smokers' overoptimism bias and lead to better consumer decisions.²³ Such a disclosure would operate through the "availability heuristic."²⁴

Dual-process theory provides a way of understanding how the availability heuristic works. When we are asked to answer a hard question, our System 1 often responds by substituting the answer to an easier question.²⁵ For example, when asked to make a difficult judgment of the probability of an event—like "What is the probability that smoking can lead to terminal illness?"—System 1 sometimes substitutes an assessment of how easy it is to bring to mind instances of the occurrence of the event.²⁶ Reading a concrete story about someone who suffered from a smoking-related illness can make the harmful health effects of smoking more "available" to System 1, thereby increasing the reader's assessment of the probability that she will get sick from smoking.

The FDA's graphic depictions of smoking-related disease might have a similar effect. The pictures convey a specific instance of illness caused by smoking in a very concrete manner. In fact, Jolls has recently investigated the debiasing potential of the FDA's new cigarette warning labels, and she concludes that the evidence suggests that the labels tend to reduce factual

21. Christine Jolls & Cass R. Sunstein, *Debiasing Through Law*, 35 J. LEGAL STUD. 199 (2006).

22. *Id.* at 202–03.

23. *Id.* at 212.

24. *Id.*

25. KAHNEMAN, *supra* note 6, at 97.

26. *Id.* at 129.

misperceptions among consumers about the risks of smoking.²⁷ I discuss this study in some detail below.

Note that the debiasing approach to System 1 disclosure remains within the “informed-choice” paradigm. In that sense, it is a close cousin to traditional System 2 disclosure. The goal is not to discourage smoking per se. Rather, it is to improve individual decisionmaking about smoking by exploiting the quirks of System 1 to debias those who misperceive its risks. By focusing on correcting factual misperceptions, this approach avoids making paternalistic assessments of what is actually in the best interests of others. Indeed, Jolls and Sunstein emphasize that a major advantage of debiasing through law over heavier-handed strategies is that it “aim[s] to correct errors while still preserving as much opportunity as possible for people to make their own choices,” thereby improving outcomes for the biased while “avoiding the imposition of significant costs on those who do not exhibit bounded rationality.”²⁸ The ideal form of this type of System 1 disclosure would thus improve the perceptions of the biased while leaving unaffected *homo economicus* (the rational actors who populate economics textbooks).

While its ability to accommodate different preferences is thus typically viewed as a strength of the debiasing approach, heterogeneity nonetheless poses a significant challenge. Consider again the FDA’s new cigarette warning labels. Jolls analyzes data from a study that randomly assigned subjects either to one of thirty-six different text–image pairs based on the nine FSPTCA textual warnings and a set of images that illustrates each warning (including the nine images that the FDA ultimately selected for the new labels) or to a text-only control condition.²⁹ The outcomes of interest are subjects’ responses to various questions about the risks of smoking, including four questions that asked for a probability assessment: “How likely do you think it is that a regular smoker would get cancer?” (and similarly for “fatal lung disease,” “heart disease,” and “a stroke”).

Jolls finds that five of the images significantly increased respondents’ assessment of these likelihoods for at least one of the diseases. Only a single image reduced respondents’ assessments of one of these likelihoods.³⁰ Jolls summarizes the study’s findings as supporting the conclusion that “FSPTCA-type warnings tend to reduce individuals’ factual misperceptions” about the risks of smoking.³¹

Crucial to this interpretation is the claim that many individuals systematically underestimate smoking risks overall—this explains why the images’

27. Christine Jolls, *Product Warnings, Debiasing, and Free Speech: The Case of Tobacco Regulation*, 169 J. INSTITUTIONAL & THEORETICAL ECON. 53 (2013) (Ger.).

28. Jolls & Sunstein, *supra* note 21, at 202.

29. Jolls, *supra* note 27, at 59–68. But the labels used in the study omitted the “1-800-QUIT-NOW” phone number that the FDA included in the final labels it adopted. *Id.* at 68 n.7.

30. *Id.* at 60, 65 (showing that an image of a man in an oxygen mask, when added to the warning statement “Cigarettes cause strokes and heart disease,” reduced respondents’ assessment of the likelihood of fatal lung disease, perhaps because dying of a stroke or heart disease would preempt fatal lung disease).

31. *Id.* at 67.

tendency to *increase* subjects' assessments of the likelihood of smoking-related illness is viewed as *reducing* misperceptions.³² Table 1 below summarizes Jolls's evidence regarding smokers' perceptions of the number of smokers who will die from a smoking-related illness out of every 100 smokers.³³ The correct answer is 50.³⁴ By this breakdown of the data, a slightly greater percentage of smokers appears to underestimate the risk of death rather than overestimate it (34% versus 30%).³⁵ Jolls argues that this comparison (and regression-based analogs to this comparison³⁶) "supports the view that, indeed, the average consumer significantly underestimates the risk of smoking-related mortality."³⁷

TABLE 1.
FACTUAL PERCEPTIONS OF SMOKERS

Perceived frequency of death from smoking-related illness	Percentage of Smokers
Underestimation: 0 – 33 deaths among 100 smokers	34%
Accurate range: 34 – 45 deaths	8%
46 – 55 deaths	21%
56 – 67 deaths	8%
Overestimation: 68 – 100 deaths	30%

The average consumer, however, is not a sufficient construct for evaluating whether a warning label that uses the availability heuristic actually reduces misperceptions of risk in a meaningful sense.³⁸ The availability heuristic will tend to increase the assessed probabilities not only of the underestimators but also of those with accurate perceptions and of the overestimators. A better way to evaluate the labels' debiasing potential is to ask the following: For what percentage of smokers would a small increase in

32. See *id.* at 66–67.

33. The data presented in Table 1 appears in Jolls, *supra* note 27, at 69 tbl.4.

34. *Id.* at 68 ("Epidemiological evidence places this figure at about fifty out of 100 smokers.").

35. *Id.* at 69.

36. Jolls presents results from multinomial logit regressions of respondents' category of risk perception (overestimator, underestimator, or in the accurate range) on a set of controls and an indicator for whether the respondent is a smoker. *Id.* at 68–71. She finds that being a smoker has a positive marginal effect on being an underestimator. These results, under her interpretation, "suggest that smokers' perceived frequency of death from a smoking-related illness tends to be too low (as aggregate perceptions of smokers and nonsmokers together do not exhibit a discernible tendency toward underestimation, yet smokers' estimates are lower than nonsmokers' estimates by a statistically significant margin)." *Id.* at 71.

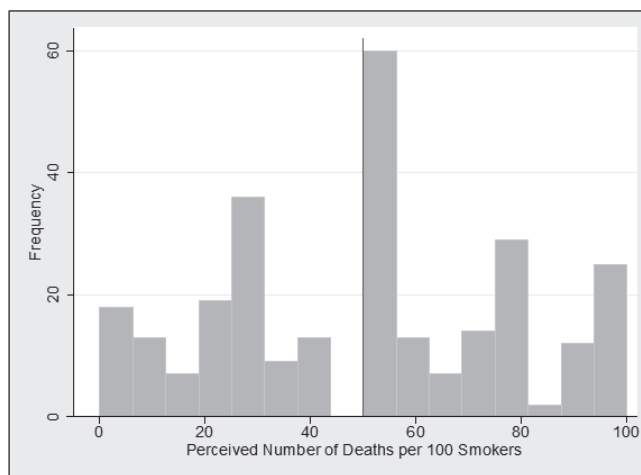
37. *Id.* at 68.

38. Moreover, it also turns out that the average response among smokers to this question in the study that Jolls relies on is in fact almost spot-on, at 49.5. This figure is based on the

perceived risk result in more accurate perceptions? By definition, this is the percentage that perceives a risk that is strictly less than the true risk. From this perspective, the *median* risk perception, rather than the average, is the key to evaluating the labels.

To explore this further, Figure 2 below provides a histogram of survey responses to this question using data from the same underlying study used by Jolls.³⁹ The vertical line at fifty marks the correct answer.

FIGURE 2.
HISTOGRAM OF SMOKERS' RISK PERCEPTIONS



As you can eyeball from the histogram, only a minority of smokers—41.5%, to be exact—underestimates the risks of smoking. The FDA's new cigarette labels will tend to reduce the misperceptions of these smokers. But the labels will tend to *increase* the misperceptions of the other 58.5%, who either estimate the risks accurately or overestimate them.⁴⁰ The labels should thus be considered a failure under the debiasing-through-law framework; the intervention is biasing more than it is debiasing.

In contrast, note that System 2 disclosure, whatever its other failings, handles heterogeneity well. Disclosing the correct statistics on smoking-related illness should in theory weakly reduce the factual misperceptions of

author's calculations from data provided in KATHLEEN JAMIESON & PATRICK JAMIESON, ANNENBERG TOBACCO RISK STUDY (1999) [hereinafter ANNENBERG TOBACCO RISK STUDY], available at <http://www.icpsr.umich.edu/icpsrweb/HMCA/studies/3049>.

39. This figure is based on the author's calculations from data provided in ANNENBERG TOBACCO RISK STUDY, *supra* note 38.

40. Jolls and Sunstein recognize this general problem, writing that, "[f]or those who previously had an accurate understanding of the situation, such strategies for debiasing through law could produce a kind of unrealistic pessimism." Jolls & Sunstein, *supra* note 21, at 229. But when Jolls analyzes the cigarette warning labels, she focuses on average perceptions and fails to engage effectively with the problems posed by heterogeneity. See Jolls, *supra* note 27, at 71.

both underestimators and overestimators without disturbing those with accurate perceptions.

A more fundamental problem with the debiasing model of System 1 disclosure is that it does not take the behavioral social science seriously enough. It is based on studies that entail exposing people to some disclosure and then immediately asking them for their beliefs about the relevant risk. It views individuals as basically rational maximizers who just lack correct beliefs about some risk and who, once treated with an appropriate blast of System 1 disclosure, will go about as deliberate deciders with a constantly engaged System 2 running the show. But as I have discussed, for many decisions, System 2 is decidedly *not* running the show, and not just for choices about addictive products like tobacco.⁴¹

Finally, these labels operate through channels other than simply manipulating beliefs about risks. For one, they can elicit strong emotional responses.⁴² As one literature review puts it, “Fear based messages have a high level of ‘cut-through’ and produce an emotional response from smokers, and, in so doing, help to establish unfavourable associations with smoking.”⁴³ It is also noteworthy that the FDA chose the final warning images based on their impact on emotional and cognitive measures of salience, in part because “warnings that generate an immediate emotional response from viewers can result in viewers attaching a negative affect to smoking (*i.e.*, feel bad about smoking), thus undermining the appeal and attractiveness of smoking.”⁴⁴ Moreover, in order to move the needle on beliefs, you will often also need to move the needle on these other channels. For example, the original study of the efficacy of the FDA’s new warning labels notes that “[e]liciting strong emotional and cognitive reactions to the graphic cigarette warning label enhances recall and processing of the health warning, which helps ensure that the warning is better processed, understood, and remembered.”⁴⁵

Because of these problems, pursuit of the debiasing approach to System 1 disclosure in practice will typically devolve into the behavioral-manipulation approach that I turn to next.

41. See *supra* text accompanying notes 4–8.

42. Jolls, *supra* note 27, at 68.

43. PATRICK SHANAHAN & DAVID ELLIOT, DEP’T OF HEALTH & AGEING, AUSTRALIAN GOV’T, EVALUATION OF THE EFFECTIVENESS OF THE GRAPHIC HEALTH WARNINGS ON TOBACCO PRODUCT PACKAGING 43 (2008), available at [http://www.health.gov.au/internet/main/publishing.nsf/Content/8BBDECAFF43D134CCA257BF0001D7450/\\$File/hw-eval-full-report.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/8BBDECAFF43D134CCA257BF0001D7450/$File/hw-eval-full-report.pdf).

44. Required Warnings for Cigarette Packages and Advertisements, 76 Fed. Reg. 36,628, 36,639 (June 22, 2011).

45. JAMES NONNEMAKER ET AL., EXPERIMENTAL STUDY OF GRAPHIC CIGARETTE WARNING LABELS 1–2 (2010).

C. Behavioral Manipulation Through System 1 Disclosure

A quite different approach to System 1 disclosure departs from the “informed-choice” paradigm of debiasing through law and instead designs disclosures to move *behavior* in a specific direction. This approach is the more plausible model of System 1 disclosure, but it is hardly costless, nor does it generally advance autonomy values.

Behavioral manipulation, in my view, is the best way to understand the goals of the FDA’s new cigarette labels. The Institute of Medicine explicitly calls for this approach to cigarette warning labels in a 1994 report:

It is time to state, unequivocally, that the primary objective of tobacco regulation is *not to promote informed choice, but rather to discourage consumption of tobacco products*, especially by children and youths, as a means of reducing tobacco-related death and disease. . . . The warnings must be designed to promote this objective.⁴⁶

This is the approach that the FDA pursued in designing these labels. As the D.C. Circuit found when it struck down the FDA’s rule on First Amendment grounds, the disclosures “cannot rationally be viewed as pure attempts to convey information to consumers. They are unabashed attempts to evoke emotion (and perhaps embarrassment) and browbeat consumers into quitting.”⁴⁷ If the image in Figure 1 alone does not unequivocally convey the shift from informing choice to discouraging use, the phone number on the label resolves any ambiguity: 1-800-QUIT-NOW.

Viewed in this way, the FDA’s new labels would likely have been effective. Similar graphic labels for cigarette packaging have been adopted in other countries, and there is evidence that they have substantially reduced smoking.⁴⁸

Many other disclosures that are typically thought of as System 2 disclosures might function primarily as System 1 behavioral manipulations. Consider, for example, the requirement that certain restaurants post the calories of menu items, a form of summary disclosure. One study found that calorie disclosures reduced the average calories per transaction at Starbucks by 6%.⁴⁹ This disclosure might function through System 2 by providing calorie information to inform choice. It could also function through System 1 by making calories a more salient aspect of the decision. Interestingly, survey

46. GROWING UP TOBACCO FREE, *supra* note 16, at 236–37 (emphasis added).

47. R.J. Reynolds Tobacco Co. v. FDA, 696 F.3d 1205, 1216–17 (D.C. Cir. 2012), *overruled by* Am. Meat Inst. v. U.S. Dep’t of Agric., 760 F.3d 18 (D.C. Cir. 2014) (en banc).

48. One recent study of the adoption of similar graphic warning labels in Canada in 2000 used a differences-in-differences methodology to estimate that the labels reduced smoking prevalence in Canada by between 12.1% and 19.6%. Jidong Huang et al., *Cigarette Graphic Warning Labels and Smoking Prevalence in Canada: A Critical Examination and Reformulation of the FDA Regulatory Impact Analysis*, 23 TOBACCO CONTROL (SUPP. 1) i7 (2014).

49. Bryan Bollinger et al., *Calorie Posting in Chain Restaurants*, AM. ECON. J.: ECON. POL’Y, Feb. 2011, at 91, 91.

data revealed no statistically significant improvement in consumers' knowledge of calorie counts from the disclosure, but the data did show a significant increase in the number of consumers who used the words "calorie," "health," or "nutrition" in describing the most important factors in their purchase decision.⁵⁰ This at least suggests that System 1 is an important mechanism through which these calorie disclosures operate.

From a welfarist perspective, for this approach to System 1 disclosure to be sensible, one needs a model of "normative preferences" independent of the preferences revealed through individual choice. This is because the approach's entire premise is that individual choice in the absence of the disclosure is not a reliable indicator of what is truly in the relevant individuals' (or, in some cases, the social) interest. Indeed, this is exactly why the policymaker is trying to harness System 1 to manipulate choices. Note as well that heterogeneous beliefs, which pose such problems for the debiasing approach to System 1 disclosure, are much less problematic for the behavioral-manipulation approach. But developing the essential model of normative preferences raises thorny epistemological challenges.

Tobacco policy might be a good example of an area in which we have sufficient confidence in a model of normative preferences to usefully apply behavioral manipulation through System 1 disclosure. Smoking kills some 443,000 Americans each year, most of whom took up smoking as minors.⁵¹ And tobacco, of course, is addictive. This harsh reality is what motivated the Institute of Medicine to advocate a clear policy of discouraging smoking rather than informing choice.⁵²

Portfolio design for retirement savings might be another area in which we have sufficient information about normative preferences to pursue a behavioral-manipulation strategy. We know that people do not diversify enough and do not place enough emphasis on fees in choosing among investment options. Heterogeneity of preferences in this area is relatively modest—hardly anyone really prefers to pay extra fees for no improvement in performance or to bear uncompensated risks. System 2 disclosure here seems pretty hopeless—we are not going to be able to turn most people into reliable practitioners of modern portfolio theory through disclosure (or otherwise). One could imagine instead using some set of disclosures that harnesses System 1 to move people toward choosing more diversified and

50. *Id.* at 117–18. Additionally, the authors find that consumers exposed to the calorie disclosures also reduced their calorie consumption even when making subsequent purchases at non-calorie-posting stores. *Id.* at 119–20. This could be due to a learning effect, as the authors suggest, or it could be a lasting consequence of a pure salience effect, for example through habit formation.

51. Required Warnings for Cigarette Packages and Advertisements, 75 Fed. Reg. 69,523, 69,525 (Nov. 12, 2010).

52. GROWING UP TOBACCO FREE, *supra* note 16, at 237.

lower-cost portfolios.⁵³ But how would we know that those effects on behavior are welfare improving? We would know it because we have a well-developed understanding of the economics of investment management and portfolio design that gives experts reasonable confidence that they can improve on the retirement portfolios chosen by the vast majority of people.

But since a well-developed model of normative preferences is one of the preconditions for successfully applying this approach to System 1 disclosure, when that precondition is met we will also often have other regulatory tools at our disposal that are even more effective. In particular, if we know what the right choices are for most people, then straightforward regulatory mandates and bans like product regulation will often work better than disclosure.⁵⁴ To continue with the portfolio-choice example, simply banning high-cost, actively managed funds from retirement plans under ERISA would probably be much more effective than some elaborate disclosure regime that attempts to achieve the same goal.⁵⁵

One particular weakness of System 1 disclosure relative to such choice-limiting tools is that it is often hard to know *ex ante* the consequences of disclosure regulation. Will a particular label ultimately lead to the sought-after behavior change? Tests in the laboratory are not reliable predictors of the performance of disclosures in the real world. And our regulatory institutions generally do not have a robust practice of field testing disclosures or reviewing new disclosures retrospectively and revising them. By comparison, the behavioral effects of mandates are relatively straightforward to predict.

As a concrete example of this advantage of mandates over System 1 disclosure, consider fuel-economy policy. In order to increase the fuel economy of cars, the federal government recently both revised the fuel-economy labels on cars and increased fuel-economy performance standards under the Corporate Average Fuel Economy (“CAFE”) program. The effectiveness of the CAFE fuel-economy standards is relatively easy to predict, as the government’s cost–benefit analysis of the program explains.⁵⁶ But the Environmental Protection Agency (“EPA”) did no field testing of the fuel-economy labels, and, in a euphemistic circumlocution, the agency admits that “[u]ntil the newly revised labels enter the marketplace . . . [the EPA] may not be able

53. See, e.g., THALER & SUNSTEIN, *supra* note 3, at 148–50 (advocating the use of a mixture of default rules and disclosure to improve retirement-portfolio choices).

54. For an analysis of the choice between mandates and nudges like disclosure, see Ryan Bubb & Richard H. Pildes, *How Behavioral Economics Trims Its Sails and Why*, 127 HARV. L. REV. 1593 (2014).

55. For a proposal for addressing this issue that relies instead on default rules, see Ian Ayres & Quinn Curtis, *Beyond Diversification: The Pervasive Problem of Excessive Fees and “Dominated Funds” in 401(k) Plans* (John M. Olin Ctr. for Studies in Law, Econ., and Pub. Policy, Research Paper No. 493, 2014), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2399531. A straightforward ban would also likely outperform such a default rule-based approach.

56. See 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, 76 Fed. Reg. 74,853, 75,115 (Dec. 1, 2011).

to determine how vehicle purchase decisions are likely to change as a result of the new labels.”⁵⁷

In some cases, manipulating behavior through System 1 disclosure might perform better than a direct mandate or ban. One obvious example would be a case where the mandate would be impracticable or ineffective—think of Prohibition. Or consider the fact that so many minors take up smoking, despite the ban on selling cigarettes to minors. Another example would be a case in which a System 1 disclosure could effectively target a specific group while avoiding costs on others, whereas the direct mandate could not. This is the aspiration of the debiasing approach to System 1 disclosure. While that approach is implausible for the reasons given above, the behavioral-manipulation approach in some cases might accommodate heterogeneity better than a mandate could. This would require a specific form of heterogeneity in order to be successful, but it is certainly conceivable. In sum, behavioral manipulation through System 1 disclosure is a potentially useful tool that should be evaluated among a set of other policy options.

Existing work in behavioral law and economics, though, characterizes mandatory disclosures as either simply informing deliberate decisionmaking (what I call System 2 disclosure) or in terms of debiasing through System 1, even when the disclosures advocated are better understood as behavioral manipulation through System 1. For example, a recent article by leading figures in the field that emphasizes psychological aspects of disclosure—its title is *Disclosure: Psychology Changes Everything*—nonetheless describes disclosure’s effects in terms of increased information for deliberate decisions.⁵⁸ The authors emphasize that “[d]isclosure does not interfere with, and should even promote, the autonomy (and quality) of individual decision making.”⁵⁹ The authors do acknowledge that, “in some cases, [there are] emotional costs of dealing with the information.”⁶⁰ But their analysis of the issue is narrow. They explain as follows:

Graphic cigarette warning labels, for example, might seem to be low cost, but they may well reduce the utility of people who continue to smoke, and at least in principle, that loss should be taken into account. The same is true of requirements to disclose the caloric content of food, which will have negative hedonic consequences for those who continue to eat high-calorie foods.⁶¹

Nowhere do the authors engage with the possibility that these types of disclosures might influence decisionmaking in a way that does not respect individuals’ autonomy or might lead to suboptimal choices. Nor do they

57. *Id.*

58. George Loewenstein, Cass R. Sunstein & Russell Golman, *Disclosure: Psychology Changes Everything*, 6 ANN. REV. ECON. 391, 392 (2014).

59. *Id.*

60. *Id.*

61. *Id.* at 392–93 (citation omitted).

discuss any of the other issues with behavioral manipulation through System 1 disclosure that are raised here.

Characterizing disclosures as operating just through providing information and correcting factual misperceptions gives the impression that mandating disclosure is basically innocuous, and it seems to preclude any need for paternalistic judgments about what is in others' true interests. But as is hopefully clear from the preceding analysis, disclosure that operates by manipulating behavior through System 1 is better viewed as coercive and should be subjected to cost–benefit analysis in much the same way as are more transparently coercive tools like product regulation.

IV. ANTIDISCLOSURISM

Ben-Shahar and Schneider conclude by urging that mandatory disclosure be abandoned posthaste, without waiting for suitable substitutes to be developed:

For two thousand years, bloodletting was physicians' panacea. When its failures (and worse) became clear, most of the ailments it was used to treat could not be cured. That was, however, no argument for persisting in bloodletting. So it is with mandated disclosure. (p. 184)

They express some optimism about the possibility that “[s]ystematic ideas about protecting consumers . . . can address a spectrum of problems” but conclude that “disclosure cannot be the key to such new designs” (p. 191). In more measured prose elsewhere, Ben-Shahar and Schneider allow that disclosure mandates “may sometimes help” but argue that “mandated disclosure is so indiscriminately used with such unrealistic expectations and such unhappy results that it should be presumptively barred” (p. 183).

In arguing against “disclosurism,” Ben-Shahar and Schneider seem to have developed an ism of their own, what we might call *antidisclosurism*: a bias *against* the use of disclosure. Their sense that the political economy of disclosure pushes so strongly for its overuse leads to what I take is their view that a simple evidence-based technocratic response—how I conceive of my own approach to these sorts of regulatory issues—will be insufficient to rein disclosure in. Their understandable inclination is to fight fire with fire.

But their proposed presumptive bar against disclosure and their bias against its use are unnecessary and counterproductive. In a sense, the authors are falling into a mistake analogous to that of the nudge advocates who adopt strong presumptions in favor of choice-preserving tools like disclosure and against choice-limiting tools like product regulation, an approach that Rick Pildes and I criticize elsewhere.⁶² General presumptions for or against entire categories of regulation are generally unhelpful. They cut short analysis, leading to ineffective approaches to policy.

To see the problems to which the authors' antidisclosurism leads, consider their discussion of the requirement that restaurants post sanitation

62. Bubb & Pildes, *supra* note 54, at 1604–07.

grades, a summary form of System 2 disclosure (pp. 155–56). The idea behind this type of disclosure is to provide consumers with information about a restaurant’s cleanliness in a simple, easily digestible form (typically a letter grade like A, B, or C) in order to improve health both by driving consumers away from relatively unsafe restaurants and by giving restaurants powerful incentives to clean up. The authors note that a landmark study showed that introducing such a requirement in Los Angeles led to a 20% decline in food-borne illness.⁶³ But then they cite a more recent study of restaurant grades in San Diego and New York City, which found that similar disclosures had no health benefits.⁶⁴ That study found rampant “grade inflation” in San Diego (nearly all restaurants received As) and a lack of consistency in sanitation scoring in New York City (a restaurant’s score in one year had little correlation with scores in subsequent inspections).⁶⁵

My reaction to these findings is to ask why the program in Los Angeles was more successful. Are there design features that enabled it to avoid some of the problems that plague the programs in New York and San Diego? Could these cases provide useful lessons to help reform restaurant-sanitation disclosures? The problems with the restaurant-inspection scores documented in the study of the latter two cities suggest that the underlying inspection systems in those cities were poorly designed. Indeed, that was the conclusion of the study, which provided a set of specific recommendations for reforming the inspection systems.⁶⁶ We should of course also consider regulatory tools other than disclosure for ensuring restaurant food safety.⁶⁷ We might also ask whether the expected benefits of instituting a sanitation-grade disclosure requirement exceed the expected costs, given that the evidence suggests some positive probability of benefits.

But Ben-Shahar and Schneider do not delve into any of this. Instead, they simply conclude that the evidence on restaurant grading shows that consistency and accuracy in summary disclosure are hard to achieve (p. 156). Elsewhere they criticize those who, like I have here, respond to failed

63. P. 155; see also Ginger Zhe Jin & Phillip Leslie, *The Effect of Information on Product Quality: Evidence from Restaurant Hygiene Grade Cards*, 118 Q.J. ECON. 409, 439–50 (2003).

64. P. 155; see also Daniel E. Ho, *Fudging the Nudge: Information Disclosure and Restaurant Grading*, 122 YALE L.J. 574, 643–45 (2012).

65. Ho, *supra* note 64, at 586–87.

66. *Id.* at 650–54.

67. We could instead simply fine or shut down restaurants that receive bad inspections. One possible rationale for using disclosure is that it may better accommodate heterogeneity, a possibility mentioned above. For example, there may be certain restaurants that are able safely to use techniques that would be unsafe at other restaurants, and disclosure—rather than fines or shutdowns—lets the market sort that out. For example, Per Se, one of the most expensive restaurants in New York City, was recently stripped of its A rating by the Department of Health for a range of infractions, including “hot food held below 140 degrees” and “cold food held over 41 degrees.” Steve Cuzzo, *Per Se Shakedown: Ridiculous Downgrade of One of NYC’s Finest Restaurants Shows City Is All About Fines – Not Health*, N.Y. POST, Mar. 9, 2014, at 25, available at <http://nypost.com/2014/03/08/citys-restaurant-grades-all-about-fines-not-health/>. As a *New York Post* columnist puts it, “The temperature rules are inimical to first-class cuisine.” *Id.*

disclosure systems by asking how they might be fixed. In their view, this is the response of disclosurites, who believe that “[m]andated disclosure is the god that cannot fail” (p. 139). Does that make me a disclosurite? As I hope this Review reflects, I am no disclosurite.

A more productive takeaway from Ben-Shahar and Schneider’s analysis is that consumers’ behavioral limitations are difficult to overcome by disclosure, and so we should use evidence to determine what disclosures to require—if any—in addressing a given policy problem. Indeed, their analysis strongly suggests that presumptionless cost–benefit analysis of disclosure and its alternatives would lead to substantial repeal of existing disclosure mandates. But it may also lead to useful new approaches to mandatory disclosure, including through forms of summary disclosure and System 1 disclosure that are based on realistic models of discloser psychology.

The antidisclosurism in Ben-Shahar and Schneider’s treatment of mandatory disclosure becomes particularly stark when contrasted with the analysis of Professors Fung, Graham, and Weil in their 2007 book, *Full Disclosure: The Perils and Promise of Transparency*.⁶⁸ Drawing on eighteen case studies of mandated disclosure, that book distills some of the same problems with disclosure identified by Ben-Shahar and Schneider. The book’s authors write that, “[b]ecause information disclosers and users have limited time and energy, they are likely to act on new information only if it has value to them, is compatible with the way they make choices, and is easily comprehensible.”⁶⁹ But they reach a very different conclusion: “Nonetheless, we find that some transparency policies prove highly effective and others moderately so.”⁷⁰ Their analysis yields a detailed set of recommendations for how to craft effective disclosure policies in which discloser psychology is front and center.⁷¹ The authors’ overall assessment of mandatory disclosure is arguably a bit overoptimistic.⁷² But their general approach to reforming disclosure policy, if leavened with consideration of a wide range of alternative nondisclosure policy tools, is a better way forward than wholesale abandonment.

68. ARCHON FUNG ET AL., *FULL DISCLOSURE: THE PERILS AND PROMISE OF TRANSPARENCY* (2007).

69. *Id.* at 16.

70. *Id.*

71. *Id.* at 50–126.

72. For example, they select just eight disclosure case studies for a detailed examination of effectiveness and conclude that six of the eight were moderately or highly effective, with only two ineffective. *Id.* at 78–81. I doubt that three-quarters of mandatory disclosure policies are effective. The authors also provide little comparative analysis of alternatives to mandatory disclosure. The book thus displays some of the features of disclosurism that Ben-Shahar and Schneider rightly criticize. In this sense, reading *both* books provides a more balanced assessment of the prospects and limits of mandatory disclosure than reading only one or the other. This underscores an important contribution of Ben-Shahar and Schneider’s book.

CONCLUSION

Imagine a laissez-faire world with *no* mandatory disclosure. What would that world look like? As Ben-Shahar and Schneider argue, the absence of disclosure mandates does not imply the absence of disclosure (pp. 184–85). Markets provide private incentives for disclosure in many settings. For example, rational-choice models of disclosure predict that, given certain assumptions, buyers would interpret silence as sending a strong negative signal about the product, leading most sellers to disclose information to distinguish their product from the worst product on the market.⁷³

But there are good reasons to think that this market incentive to disclose would be insufficient. In particular, there is evidence that buyers fail to infer poor quality when sellers choose not to disclose—a failure that perhaps stems from behavioral limitations.⁷⁴ A world without disclosure mandates would therefore mean a world with less useful information for choice. In the most convincing empirical study on this issue, Professor Mathios examines the impact of the requirement imposed by the Nutrition Labeling and Education Act of 1990 that food products include a nutrition label.⁷⁵ Prior to the Act, producers typically provided a nutrition label for low-fat salad dressing but not for high-fat salad dressing. Considerable variation in fat content existed among the nonlabeled dressings.⁷⁶ With the advent of mandated labels, sales of the salad dressings with the highest fat content fell significantly.

We should thus not exaggerate the problems with disclosure that Ben-Shahar and Schneider identify. Their emphasis on the failures of disclosure should not blind us to its successes. Mandatory disclosure should not go the way of the leech.

My criticism of Ben-Shahar and Schneider's ultimate normative stance on disclosure should not detract from the book's achievements. Their important work has sharpened our understanding of how disclosure works (and how it does not) while providing keen insights into the political economy that leads to the imposition of ineffective disclosure mandates. But their analysis does not close the book on disclosure. Its optimal architecture and ultimate utility remain very much TBD.

73. See Sanford J. Grossman, *The Informational Role of Warranties and Private Disclosure About Product Quality*, 24 J.L. & ECON. 461, 469–70 (1981).

74. See Alexander L. Brown et al., *To Review or Not to Review? Limited Strategic Thinking at the Movie Box Office*, 4 AM. ECON. J.: MICROECON., May 2012, at 1 (discussing the phenomenon of the “cold-opening premium” in which consumers overestimate the quality of a movie that is withheld until after the initial release).

75. Alan D. Mathios, *The Impact of Mandatory Disclosure Laws on Product Choices: An Analysis of the Salad Dressing Market*, 43 J.L. & ECON. 651 (2000).

76. *Id.* at 657.