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Consumer Contracts: Behavioral Economics vs. Neoclassical Economics

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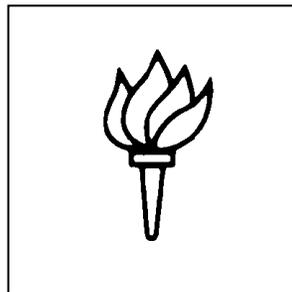
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NEW YORK UNIVERSITY SCHOOL OF LAW

NYU Center for Law and Economics



Consumer Contracts: Behavioral Economics vs. Neoclassical Economics

An Exchange between

Oren Bar-Gill and Richard A. Epstein

April 2007

EXCHANGE

CONSUMER CONTRACTS:

BEHAVIORAL ECONOMICS VS. NEOCLASSICAL ECONOMICS

ABSTRACT

In the past decade behavioral economics has established itself as a contender to the throne of neoclassical economics in the economic analysis of law. The pros and cons of behavioral as compared to neoclassical economics have been vigorously debated at the general, methodology level. But the success or failure of the behavioral challenge will be judged by its ability to improve upon neoclassical economics—both descriptively and prescriptively—in specific legal applications. Consumer contracts provide an important test case for behavioral economics. In this Exchange we offer the first comprehensive debate between the behavioral and neoclassical perspectives as applied to the law and economics of consumer contracts.

THE BEHAVIORAL ECONOMICS OF CONSUMER CONTRACTS

OREN BAR-GILL*

INTRODUCTION

Individuals make mistakes. They suffer from imperfect information and imperfect rationality, and consequently might fail to make choices that maximize their preferences. Few people question the truth of this proposition. Even the most insistent critics of behavioral economics acknowledge that individuals “often make serious mistakes in deciding important matters.”¹ The question is not whether individuals make mistakes. Sure they do. The question is whether these mistakes merit legal intervention.

Focusing on consumer contracts, the answer follows from a four-step analysis that identifies four sub-questions. The first two steps are descriptive. Do consumers suffer from systematic misperception of the costs and benefits associated with certain products? And, do sophisticated sellers respond strategically to consumer misperception? In particular, do sellers design their products, contracts, and pricing schemes in response to consumer misperception? The third step is normative: Is consumer misperception and, specifically, sellers’ strategic response to consumer misperception welfare-reducing? The fourth and final step is prescriptive: Is legal intervention warranted and, if so, what type of legal intervention is desirable?

In this Essay I perform the required four-step analysis, elaborating on and extending my previous work on the behavioral economics of consumer contracts.² I conclude that, in certain markets, consumer mistakes and sellers’ strategic response to these mistakes are responsible for a substantial welfare loss, potentially justifying legal intervention. Critics of behavioral economics challenge my arguments in each step of the analysis and thus conclude, sometimes categorically, that legal intervention is not warranted.

* Assistant Professor of Law, New York University School of Law. I wish to thank Lucian Bebchuk, Ehud Kamar, Ronald Mann, Yoram Margalot, Ariel Porat, and Elizabeth Warren for helpful comments.

¹ Richard A. Epstein, Behavioral Economics: Human Error and Market Corrections, Symposium: Homo Economicus, Homo Myopicus, and the Law and Economics of Consumer Choice, 73 *U. Chi. L. Rev.* 111 (2006).

² See Oren Bar-Gill, Seduction by Plastic, 98 *Northwestern University Law Review* 1373 (2004) (henceforth: “Seduction by Plastic”); Oren Bar-Gill, Bundling and Consumer Misperception, Symposium: Homo Economicus, Homo Myopicus, and the Law and Economics of Consumer Choice, 73 *U. Chi. L. Rev.* 33 (2006) (henceforth: “Bundling and Consumer Misperception”).

I confront these challenges, focusing on the recent, thoughtful critique by Professor Richard Epstein.³

In Part I, I argue that systematic misperception persists in some consumer markets. Critics, like Professor Epstein, maintain that mistakes do not survive in markets thanks to two mistake-correcting forces: consumer learning and education efforts by sellers. I begin by arguing that these mistake-correcting forces not as powerful as the critics suggest. With respect to consumer learning, Professor Epstein argues that mistakes about a standardized product are not sustainable. This is probably correct. The problem is that many products are not standardized. In particular, when heterogeneity in use patterns is accounted for, even a product that seems standardized may be subject to individualized use. With respect to education efforts by sellers, I agree with Professor Epstein that sellers in a competitive market may find it profitable to educate consumers about unnoticed flaws in a competitor's product. But when a flaw is pervasive in the industry, each seller must choose between correcting the flaw and educating consumers, or just going with the flow. It is not at all clear that the former, correction strategy will always prevail.

Theory leaves room for both outcomes: disappearing mistakes and persistent mistakes. The answer, therefore, must come from an empirical analysis. Moreover, this analysis must be market-specific, because while learning and competition may well alleviate mistakes in one market, this might not happen in another market. As an example, I summarize evidence from the credit cards market suggesting that, in this market, consumers continue to make systematic mistakes. One major piece of evidence suggesting that systematic mistakes persist in the credit cards market comes from specific design features of the credit card product. These features, I argue, respond to consumer misperception. If sellers choose to design their products in ways that respond to consumer misperception, then they must believe that misperception is systematic and robust.

This brings me to Part II, where I shift focus from consumer mistakes to sellers' response to these mistakes. I argue that sellers strategically respond to consumer misperception by redesigning their products, contracts, and

³ Epstein, *supra* note 1. See also Richard A. Epstein, Second-Order Rationality, in Edward J. McCaffery and Joel Slemrod, eds., *Behavioral Public Finance*, 355 (2006). Some of the challenges and some of the responses discussed below echo elements of the general debate over the role of behavioral economics in legal policymaking. See, e.g., Christine M. Jolls, Cass R. Sunstein, and Richard Thaler, "A Behavioral Approach to Law and Economics," 50 *Stanford Law Review* 1471 (1998); Richard A. Posner, "Rational Choice, Behavioral Economics, and the Law," 50 *Stanford Law Review* 1551 (1998); Mark G. Kelman, "Behavioral Economics as Part of a Rhetorical Duet: A Response to Jolls, Sunstein, and Thaler", 50 *Stanford Law Review* 1577 (1998); Christine M. Jolls, Cass R. Sunstein, and Richard Thaler, "Theories and Tropes: A Reply to Posner and Kelman," 50 *Stanford Law Review* 1593 (1998). This Essay, and more broadly, this Exchange—between Professor Epstein and myself—is unique in its focus on the application of behavioral law and economics to consumer contracts.

pricing schemes. Professor Epstein rejects this argument. His counter-argument is that with one-dimensional, standardized products, sellers operating in a competitive market will set a price equal to cost, regardless of consumer misperception. I agree. But many products are not one-dimensional. Moreover, I argue that sellers have a strong incentive to offer multi-dimensional products, and to adopt multi-dimensional pricing schemes.

Professor Epstein also argues that consumer mistakes, if they persist, are not systematic. For example, while some consumers overestimate the benefits associated with a product other consumers underestimate these same benefits. And, if consumer mistakes are not systematic in one, identifiable direction, then they cannot induce a strategic response from sellers. It may well be the case that some consumers overestimate while others underestimate. But this does not mean that the average mistake is zero. It is an empirical question. And the evidence suggests that at least in some markets the average mistake is not zero. In particular, if sellers design their products and pricing schemes in response to consumer misperception, we can safely assume that the average mistake is not zero.⁴ Moreover, the product design itself can often tell us whether the average mistake is an overestimation or an underestimation.

Part III addresses the welfare question: does consumer misperception entail a welfare cost? Is product design that responds to consumer misperception welfare reducing? Here Professor Epstein considers a specific market, the credit cards market, and concludes that credit card products, as currently designed, are not welfare-reducing. Professor Epstein uses two arguments to support this conclusion. First, he persuasively argues that high bankruptcy rates, even if driven by increased credit card lending, do not prove that credit cards are welfare-reducing. But there are other reasons to believe that the credit card product is unsafe—reasons that Professor Epstein does not challenge. Second, Professor Epstein argues that issuers have no incentive to offer dangerous, bankruptcy-inducing credit card products. This assumes one specific business model that some issuers follow. But there is another business model—the “sweatbox model”—that other issuers follow. Under this model, issuer revenues come largely from high interest and fees paid by consumers at the pre-bankruptcy stage, and thus issuers profit even if significant portions of the debt is discharged in bankruptcy (or is otherwise written off). Part III goes beyond these responses to Professor Epstein’s arguments, and presents a more systematic account of the welfare costs associated with credit card products, as currently designed.

⁴ Unless sellers can segment the market and offer one product (and one pricing scheme) to overestimators and another product (and another pricing scheme) to underestimators.

Finally, in Part IV I turn to the prescriptive question: Should consumer contracts be regulated and, if so, how? Professor Epstein and other critics conclude that regulation, other than perhaps disclosure mandates, is not warranted. Obviously, this conclusion is based in part on the assessment that mistakes are rare and unsystematic, and that they entail little or no welfare costs. But Professor Epstein does more than merely dismiss any potential benefit from regulation. He argues that regulation is both not feasible and would likely do more harm than good. On feasibility, Professor Epstein argues that if the direction of the error cannot be predicted, then effective regulation cannot be designed. But, as indicated above, the direction of the error can sometimes be deduced. And some forms of regulation, specifically disclosure mandates, do not depend on an a-priori identification of the direction of the error. Professor Epstein also argues that given consumer heterogeneity any regulation designed to help one group of consumers will necessarily hurt another group of consumers. This observation, even if accurate, does not mean that no regulation is better than regulation. If regulation helps group A and hurts group B, then no regulation helps group B and hurts group A. But it is not necessarily the case that regulation will hurt group B. Here I rely on recent work that identifies forms of regulation designed to help group A while minimizing the harm to group B.

Before I proceed it is important to emphasize that at the end of the day the conclusions reached by Professor Epstein and myself are not as far apart as would initially appear. Like Professor Epstein I recognize the costs and risks of legal intervention, and I recognize that in certain cases, perhaps in most cases, these costs and risks outweigh the benefit from regulation. Unlike Professor Epstein, however, I do not believe that the cost-benefit calculus is so loaded on the cost side to justify a strong, perhaps irrefutable, anti-regulation presumption. Rather, I think that a market-by-market analysis of the costs and benefits is desirable. Drawing analogy from the related field of antitrust law, while Professor Epstein supports a per-se no regulation rule, I argue for a rule of reason analysis.

In addition, Professor Epstein does recognize a possible exception to his no regulation rule. He supports disclosure mandates (even if he deems them generally superfluous). I too believe that disclosure mandates should be one of the main regulatory responses to the problem of consumer misperception. The kind of disclosure that I advocate is, however, conceptually different from the traditional disclosure mandates that Professor Epstein endorses. Traditional disclosure rules target imperfect information and misperception with respect to product attributes. Research in psychology and behavioral economics has taught us that consumers misperceive not only objective product attributes but also their own

individual uses of the product.⁵ Disclosure regulation should be reconceptualized to address this qualitatively different category of missing information and misperception.⁶

I. THE PERSISTENCE OF CONSUMER MISTAKES

Professor Epstein, while recognizing that “people often make serious mistakes in deciding important matters,”⁷ concludes that such mistakes are “[unlikely] to survive in any public setting.”⁸ In support of this conclusion Professor Epstein offers two arguments. First, consumer learning will in time eliminate mistakes. Second, sellers will educate consumers and correct any misperception. I take up each of these arguments in turn. Before I do so, however, a clarification is in order. I do not deny that consumers learn. Sure they do. Similarly, I do not deny that sellers in a competitive market sometimes invest in correcting consumer misperception. My only goal, on the theory front, is to show that the mistake-correcting forces—consumer learning and education efforts by sellers—that Professor Epstein invokes are not as powerful as he suggests. The conclusion will be that the persistence of consumer mistakes in any given market is an empirical question.⁹ And I will present evidence from the credit cards market suggesting that in this market mistakes in fact persist.

A. Learning by Consumers

Professor Epstein argues that consumers learn from their own mistakes and from the mistakes of others, and learn not to repeat these mistakes.¹⁰ How quickly will consumers learn? The answer is context dependent. Context affects the efficacy of both intrapersonal and interpersonal learning. Starting with intrapersonal learning, the speed with which a consumer will learn about a latent risk associated with a product will depend on how frequently she uses the product and on how frequently the risk materializes.

⁵ I define ‘use’ broadly to include the payment of different price components, redeeming rebates, etc’.

⁶ This theme is further developed in a companion piece: Oren Bar-Gill, “The Law, Economics, and Psychology of Consumer Contracts” (unpublished manuscript, on file with author).

⁷ Epstein, *supra* note 1, at 111.

⁸ *Id.* at 118.

⁹ See Amos Tversky and Daniel Kahneman, “Rational Choice and the Framing of Decisions,” in Robin M. Hogarth and Melvin W. Reder (eds.), *Rational Choice: The Contrast Between Economics and Psychology* 91 (1987) (“The claim that the market can be trusted to correct the effect of individual irrationalities cannot be made without supporting evidence.”)

¹⁰ Epstein, *supra* note 1, at 120. In this Exchange Professor Epstein cites findings from a recent study by Agarwal et al. showing that consumers do learn. Sumit Agarwal, et al., “The Age of Reason: Financial Decisions Over the Lifecycle,” MIT Working Paper series, Working Paper 07-11, March 15, 2007. I am not arguing that consumers do not learn. I am only arguing that learning is imperfect. Indeed, the Agarwal et al. study reveals that a significant number of consumers make mistakes.

For example, if a consumer makes toast only once a month and there is a 1/100 chance that the toaster will explode when used, it can take the consumer several years before she learns about the risk of toaster explosion.¹¹

This is why interpersonal learning is so important. For each consumer it might take a few years before the toaster explodes. But if a million consumers purchase the same toaster, then most likely one of those toasters will explode in the first week. The efficacy of interpersonal learning is also context dependent. And in arguing that interpersonal learning is quick and effective Professor Epstein chooses a learning-friendly context—the standardized product. He forcefully argues that mistakes with respect to the value of a standardized product are unlikely to persist in the marketplace.¹²

But not all products are standardized. And when the product is not standardized interpersonal learning becomes slower.¹³ With a standardized good, when a consumer reveals, through use, a certain hidden feature of the product, he can share this information with his family and friends. Since the information pertains to a standardized good it is relevant to others. But if the good is not a standardized good such interpersonal learning will be less effective. With a non-standardized good the information obtained by one consumer might not be relevant to another consumer who purchased a different version of the non-standard good.¹⁴

Moreover, when the nature of the product is more broadly defined to include the potential uses of the product, then the group of standardized products shrinks. The value of a product does not depend only on the product's intrinsic features. It depends also on the potential uses of the product. And if different consumers use the product differently, then an otherwise standardized product becomes functionally non-standardized. And this can inhibit learning. If one consumer uses the product one way and through this use learns some information about the product, there is less

¹¹ On the conditions for effective learning and on the limits of learning, see Tversky and Kahneman, supra note 9, at 90-91; Howard Latin, "'Good' Warnings, Bad Products, and Cognitive Limitations," 41 UCLA L. Rev. 1193, 1252-55 (1994).

¹² Id. (criticizing "the hopeless artificiality of any example that presupposes universal ignorance of the value of any standard commodity"; and arguing that "there is no sustainable equilibrium when the mistake in information is about a standardized product that everyone can test and use.")

¹³ On the limits of learning, even by sophisticated decisionmakers in "real world" high-stakes environments – see Cade Massey and Richard H. Thaler, "The Loser's Curse: Overconfidence vs. Market Efficiency in the National Football League Draft," Working Paper (available on SSRN) (documenting persistent bias in NFL draft picks).

¹⁴ Even non-standardized products may share standardized features. Interpersonal learning about these features can be effective.

reason to believe that another consumer who uses the product in a different way will find this information relevant.¹⁵

In addition, many people, when thinking about consumer mistakes, think about mistakes regarding some intrinsic feature of the product, including mistakes that are relevant if the product is used one way but not if it is used another way. But there is another important category of consumer mistakes—mistakes about the consumer’s use patterns. A consumer might underestimate the amount of printing that she will do on her home printer. And, a consumer might underestimate how much money he will borrow on his credit card. Even with an otherwise standardized product use patterns vary from one consumer to the other. Such variation makes interpersonal learning more difficult.

Another form of learning is based on expert advice. Professor Epstein argues that consumers, recognizing their imperfect rationality, take steps to limit the mistakes that they make. In particular, Professor Epstein argues that consumers seek advice and consult experts before entering the market.¹⁶ Most consumers are probably aware that they are fallible. This does not mean, however, that they are necessarily aware of all the potential mistakes that they might make. Consumers surely seek advice before making certain purchase or use decisions. They do not seek advice before each and every purchase or use decision. When faced with a big decision consumers are more likely to take the time and incur the cost of seeking expert advice. They are less likely to do so when faced with a smaller decision. For example, consumers are more likely to seek third-party assistance before taking-on a substantial home-equity loan. They are less likely to engage in substantial consultations before deciding to buy sneakers with their credit card. In many markets consumers make many small decisions, rather than a few large decisions. In these markets reliance on expert advice is probably rare.¹⁷

B. Correction by Sellers

In addition to learning by consumers, sellers may invest in correcting consumer misperceptions.¹⁸ Consider the following, arguably common, scenario. Seller A offers a product that is better and costs more to produce than the product offered by seller B. Consumers, however, underestimate

¹⁵ Compare: Latin, *supra* note 11, at 1253 (“Product risks and accident scenarios are very diverse; feedback from one mode of use or product application consequently may not be very useful in minimizing other kinds of harms.”)

¹⁶ Epstein, *supra* note 3, at 361-62.

¹⁷ Many small mistakes can be as harmful as a few large mistakes. Credit card borrowing provides an example. See Bar-Gill, *Seduction by Plastic*, *supra* note ????. Consumers make mistakes even when the decision is a big one. For example, many consumers take on subprime mortgage loans that they cannot repay.

¹⁸ Epstein, *supra* note 1, at 120.

the added value from seller A's product and thus refuse to pay the higher price that seller A charges. In this scenario, seller A has a powerful incentive to educate consumers about her product—to correct their underestimation of the product's value.

But what if both seller A and seller B and many other sellers offer identical products, or offer different products that share a certain product risk. If seller A reduces this risk and invests in educating consumers about the benefits of her superior product, then seller A will attract a lot of business and make a supra-competitive profit. But this is not an equilibrium. After seller A invests in consumer education, all the other sellers will free ride on seller A's efforts. They will similarly reduce the product risk and compete away profit that seller A would have made. Anticipating such a response, seller A will realize that if she invests in consumer education she will not be able to recoup her investment. She will thus choose not to improve the safety of her product, and instead will continue to offer a higher-risk product. This collective action problem can lead to the persistence of consumer misperception.¹⁹

Professor Epstein recognizes that a collective action problem can prevent sellers from correcting consumer mistakes.²⁰ He argues, however, that this collective action problem can be overcome by branding and product differentiation that will allow the seller to “capture the gains of correction.”²¹ To evaluate this argument it is useful to distinguish between two pieces of information that the seller of a branded product would have to convey to consumers. First, the seller will have to correct consumers' underestimation of a certain product risk. Second, the seller will have to convince consumers that her product does a better job in reducing this risk. For example, suppose General Electric wants to sell better toasters—toasters that do not short-circuit as often. To do so GE would have to correct consumers' underestimation of the likelihood that toasters might short-circuit, and then convince consumers that its toaster is less likely to short-circuit than the competing toaster.

¹⁹ See Howard Beales, Richard Craswell & Steven Salop, *The Efficient Regulation of Consumer Information*, 24 J. L. & Econ. 491, 527 (1981) (explaining why sellers might not disclose both positive and negative information). See also R. Ted Cruz and Jeffrey J. Hinck, “Not My Brother's Keeper: The Inability of the Informed Minority to Correct for Imperfect Information,” 47 *Hastings L.J.* 635, 659 (1996). In some markets the first-mover advantage will be large enough to overcome the collective action problem. For a general discussion of information failures in consumer markets – see Beales, Craswell & Salop, *id.*, at 503-509. On the limits of advertising as a mistake-correction mechanism, see also Xavier Gabaix and David Laibson, “Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets,” 121 *Quar. J. Econ.* 505 (2006); Russell Korobkin, “Bounded Rationality, Standard Form Contracts, and Unconscionability,” 70 *U. Chi. L. Rev.* 1203, 1242-43 (2003).

²⁰ Epstein, *supra* note 1, at 120.

²¹ *Id.*

Bringing the possibility that the toaster will short-circuit to consumers' attention might not be a wise business decision, as it will reduce the demand for toasters (at least if GE's improved toaster does not completely eliminate the risk).²² Moreover, it will be costly to convince consumers that the probability that the toaster will short-circuit should guide their choice of toasters (assume that a toaster that short-circuits creates financial, not bodily harm). Finally, if GE is successful in making the risk that a toaster will short-circuit salient to consumers, then GE's competitors will also offer toasters that will short-circuit less often. The competitors will have to invest in convincing consumers that their toasters are as safe as GE's. There is no free-riding with respect to this, brand-specific piece of information. But the competitors will not have to invest in correcting consumer misperception about the risk that a toaster might short-circuit. They will free-ride on GE's investment with respect to this piece of information. I do not believe that this collective action problem will always prevent sellers like GE from correcting consumer misperception. But the collective action impediment to mistake correction cannot be dismissed off-hand, based on theory alone, as Professor Epstein suggests.²³ An empirical, market-specific analysis is required.

Finally, even apart from this collective action problem sellers might prefer not to correct consumer mistakes and might even invest in creating misperception. Arguably, manipulation of consumer perceptions, and even preferences, is a main purpose of advertising.²⁴

C. Evidence of Persistent Mistakes

The goal of the preceding sections was to demonstrate that theory alone cannot tell us whether or not consumer mistakes will persist in any given market. I now turn from theory to evidence. There are two categories of evidence that I find most convincing. The first category includes evidence of consumer behavior, and specifically evidence of mistakes in product choice that reveals the existence of systematic misperception. The second category of evidence focuses on seller behavior. In particular, sellers may design their products and pricing schemes in response to consumer

²² Jon D. Hanson and Douglas A. Kysar, "Taking Behavioralism Seriously: A Response to Market Manipulation," 6 *Roger Williams U.L. Rev.* 259, 336-37 (2000); Sovern, *supra* note ???, at 1680-81.

²³ *Id.*

²⁴ See Edward L. Glaeser, "Psychology and the Market," 94 *Amer. Econ. Rev. Papers & Proceedings* 408, 409-411 (2004) ("Markets do not eliminate (and often exacerbate) irrationality"; "The advertising industry is the most important economic example of these systematic attempts to mislead, where suppliers attempt to convince buyers that their products will yield remarkable benefits." "It is certainly not true that competition ensures that false beliefs will be dissipated. Indeed in many cases competition will work to increase the supply of these falsehoods.") Glaeser argues, however, that government decisionmakers have weaker incentives than consumers to overcome errors, and thus intervention in markets might make things worse. See also Edward L. Glaeser, "Paternalism and Psychology," 73 *U. Chi. L. Rev.* 133 (2006).

misperception. Such product design is evidence that consumers make systematic mistakes (or, at least, that sellers believe that consumers are making systematic mistakes).

I next present evidence of persistent misperception in the credit cards market. The evidence presented in this section is from the first category—product choice evidence. Evidence from the second category—product design evidence—will be presented in Part II, where I also provide a theoretical analysis of sellers’ strategic reactions, specifically through the design of their products and pricing schemes, to consumer misperception.²⁵

A series of studies provide evidence that consumers make systematic mistakes in choosing among different credit card products.²⁶ In a recent study, Haiyan Shui and Lawrence Ausubel identified mistakes in consumers’ credit card choices.²⁷ First, they found that a majority of consumers who accepted a credit card offer featuring a low introductory rate did not switch out – to a new card with a new introductory rate – after the expiration of the introductory period, even though their debt did not decline after the initial introductory period ended.²⁸ This is puzzling given that a majority of consumers in the study received multiple pre-approved credit card offers per-month and switching from one card to another would have entailed only a small transaction cost. With a common 10% margin between introductory and post-introductory interest rates and an average balance of \$2,500, this mistake costs \$250 a year.

²⁵ The evidence summarized below is drawn from the synthesis of existing studies in Oren Bar-Gill and Elizabeth Warren, *Making Credit Safer* (unpublished manuscript, 2007). See also *Seduction by Plastic*, *supra* note 2.

²⁶ The studies summarized below focus on borrowing behavior. In addition, experimental evidence suggests that credit cards affect spending behavior. See Drazen Prelec & Duncan Simester, *Always Leave Home Without It: A Further Investigation of the Credit-Card Effect on Willingness to Pay*, 12 *MARKETING LETTERS* 5 (2001) (the method of payment—credit card or cash—affects people’s willingness to pay). See also Elizabeth C. Hirschman, *Differences in Consumer Purchase Behavior by Credit Card Payment System*, *The Journal of Consumer Research*, Vol. 6, No. 1, pp. 58-66 (Jun., 1979); Richard A. Feinberg, *Credit Cards as Spending Facilitating Stimuli: A Conditioning Interpretation*, *The Journal of Consumer Research*, Vol. 13, No. 3, pp. 348-356 (Dec., 1986); Dilip Soman, *Effects of payment mechanism on spending behavior: The role of rehearsal and immediacy of payments*, *The Journal of Consumer Research*, Vol. 27, No. 4, pp. 460-474 (Mar., 2001); Michael McCall and Heather J. Belmont, *Credit Card Insignia and Restaurant Tipping: Evidence for an Associative Link*, *Journal of Applied Psychology*, Vol. 81, No. 5, pp. 609-613 (Oct. 1996); George Ritzer, *Expressing America: A Critique of the Global Credit Card Society* (1995, Pine Forge Press).

²⁷ See Haiyan Shui and Lawrence M. Ausubel, "Time Inconsistency in the Credit Card Market," 14th Annual Utah Winter Finance Conference (May 3, 2004) (Available at SSRN: <http://ssrn.com/abstract=586622>).

²⁸ The evidence shows that most consumers do not jump from one card to another and from one teaser rate to another. See Sec. III.B.1 *infra*. But detailed statistics are not necessary to conclude that consumers do not jump from one teaser rate to another; it is evident from the fact that issuers offer teaser rates. Unless issuers have decided to forgo interest revenues altogether issuers would not offer teaser rates if most consumers did not stay beyond the introductory period. (And it is clear that most issuers have not decided to forgo interest revenues altogether. In fact, in 2005 interest revenues represent 65% of issuers’ total revenues. See Card Industry Directory, Analysis, Bank Card Profitability 2004-2005 (2005).)

Shui and Ausubel also found that when faced with otherwise identical credit card offers, consumers prefer a credit card with a 4.9% teaser rate lasting for an introductory period of 6 months over a credit card with a 7.9% teaser rate lasting for an introductory period of 12 months. Consumers in this study carried an average balance of \$2,500 over a one-year period. Those who accepted the 6 month introductory offer paid a post-introductory rate of 16% during the latter half of the year. The results indicate that at least some consumers were making a substantial mistake: consumers preferred the lower rate – shorter duration card even though they paid \$50 more in interest on this card than they would have with the longer duration alternative.

What explains this mistake? Why are consumers paying more interest than they must? One possible explanation is that consumers underestimate the amount that they will borrow, or at least borrow on the specific card, in the post-introductory period. In other words, at the time they take out their cards, consumers are optimistic about their future credit needs, about their future will power, about the likelihood that they will switch to a new card with a new, low introductory rate, or all of the above.

A second possible explanation attributes a much higher level of sophistication to consumers. This explanation assumes that consumers are aware of their imperfect self-control and seek credit arrangements that would help them pre-commit to borrow less. A shorter introductory period can serve as a commitment device. If a consumer must borrow today but wishes to commit to borrow less in the future, he may prefer a credit card that allows interest-free borrowing now but makes borrowing very expensive in the future (after the introductory period ends) – so expensive that the cost of borrowing will overcome any temptation to borrow.

The data used in the Shui and Ausubel study was taken from a randomized experiment conducted by a major credit card issuer in 1995. Such experiments are conducted to help issuers optimize their marketing strategies. The specific experiment analyzed by Shui and Ausubel provides clear guidance to the issuer's marketing department: offer lower introductory rates for shorter durations in order to increase both the number of customers and the total interest revenues. While sophisticated consumers may benefit from the commitment device that the low teaser rate - shorter introductory period provides, less sophisticated consumers clearly lose from such contracts. At a cost of \$50 a year per consumer for a simple manipulation of introductory rates and periods, the potential financial harm to less sophisticated consumers from unsafe credit card contracts is substantial.

Another recent study by David Gross and Nicholas Souleles provides further evidence of seemingly irrational consumer behavior. The most striking data show that many consumers pay high interest rates on large credit card balances while holding liquid assets that yield low returns. Specifically, more than 90% of consumers with credit card debts have some very liquid assets in checking and savings accounts. And one third of credit card borrowers hold more than one month's income in these liquid assets. With a median balance of more than \$2000 (conditional on having a balance, i.e., the median balance among consumers who have a positive balance) and a spread of over 10% between credit card interest rates and the interest rates obtained on assets in checking and savings accounts, a typical consumer is losing more than \$200 a year in interest payments that could have been easily avoided.²⁹

A third study, conducted by Stephan Meier and Charles Sprenger, compares time-preference data from a field experiment with a targeted group of low-to-moderate income consumers with credit report data on these consumers.³⁰ The authors find that consumers who exhibit hyperbolic discounting and dynamically inconsistent intertemporal choices borrow more, and specifically borrow more on their credit cards.³¹ This result suggests that “individuals borrow more than they actually want to borrow given their long-term objectives.”³²

II. SELLERS' STRATEGIC RESPONSE TO CONSUMER MISTAKES

If consumers make systematic mistakes these mistakes can be expected to induce a reaction from sellers. This should not be surprising. Any factor that affects the demand for a product can be expected to induce a reaction from sellers. In particular, I have argued in previous work that sellers design their products and pricing schemes in response to consumer misperceptions.³³ Professor Epstein challenges this argument and asserts that sellers do not adjust the design of their products and prices in response to consumer mistakes.³⁴

²⁹ See David B. Gross and Nicholas S. Souleles, “Do Liquidity Constraints and Interest Rates Matter for Consumer Behavior? Evidence from Credit Card Data,” 117 *Quart. J. Econ.* 149, 180 (2002).

³⁰ See Stephan Meier and Charles Sprenger, “Impatience and Credit Behavior: Evidence from a Field Experiment,” Federal Reserve Bank of Boston, mimeo (2006).

³¹ *Id.* at 24.

³² *Id.* at 3. The authors also find that high levels of impatience, represented by a low long-run discount factor, explain account delinquencies and slow debt repayment patterns. *Id.* at 24.

³³ Seduction by Plastic, *supra* note 2 (focusing on the credit cards market); Bundling and Consumer Misperception, *supra* note 2 (focusing on the bundling response to consumer misperception).

³⁴ A different critique, not mentioned by Professor Epstein, argues that sellers will not respond to consumer mistakes as long as there are enough consumers that do not make these mistakes. This “informed minority” argument was first made in the law and economics literature by Alan Schwartz and Louis L. Wilde, “Intervening in Markets on the Basis of Imperfect Information: A Legal and Economic Analysis,” 127 *U. Pa. L. Rev.* 630, 638-39 (1979). This argument does not apply when sellers can

I begin, in Section A, by responding to Professor Epstein’s challenge. I reject Professor Epstein’s arguments and conclude that product design is in fact sensitive to consumer misperception. I then proceed, in Section B, to summarize and develop further my theory of market reactions to consumer misperceptions. In Section C, I turn from theory to evidence. I describe various design features of products and prices in the credit cards market. These design features confirm the proposed theory. Moreover, they provide additional evidence of persistent consumer mistakes in this market.

Understanding how sellers respond to consumer misperception is of both descriptive and normative importance. Such understanding also generates a new category of evidence, in addition to the product choice evidence described in Part I, that can be used to prove the persistence of consumer mistakes. Since sellers will only alter the design of their products and prices in response to robust, systematic mistakes, observing such product and price adjustments provides powerful evidence of persistent consumer mistakes.

A. Professor Epstein’s Challenge

Professor Epstein argues that consumer misperception will not invoke a strategic response by sellers.³⁵ His main argument is simple:³⁶ Consumers are heterogeneous and their misperceptions are heterogeneous. Some consumers might overestimate the value of a certain product, while others might underestimate the value of the same product. Professor Epstein argues that “the increased variance has no direction.”³⁷ He seems to be arguing that if some consumers overestimate and some underestimate, then the average estimate is unbiased—that the mean of the error is zero. And if

screen sophisticated consumer. And, of course, it is not at all clear that a sufficiently large number of sophisticated, informed buyers exist in all markets. See Sovern, *supra* ???, at 1668-72, and sources cited therein.

³⁵ See Epstein, *supra* note 1, at 120-22. Professor Epstein’s critique focuses on my theory of misperception-based bundling. See Bundling and Consumer Misperception, *supra* note 2. But his criticism applies generally to any argument that sellers adjust the design of their products and prices in response to consumer misperception.

³⁶ Professor Epstein makes another argument that is specific to the bundling response that I study in Bundling and Consumer Misperception (*supra* note 2). In that paper I discuss the example of home printing and show that when consumers underestimate the amount of printing that they will do, then sellers will bundle together printers and ink, give away printers for free, and set a high price for ink. Professor Epstein argues that this strategy is vulnerable to exploitation by savvy consumers. These savvy consumers will take two free printers from two different suppliers and play each supplier against the other, reducing the price of ink to its unit cost. See Epstein, *supra* note 1, at 121. First, it is not clear that there are enough savvy consumers to “break” the free printer—expensive ink equilibrium. Second, the savvy consumers will not affect the identified equilibrium, if sellers can screen for them. Third, Professor Epstein’s argument explains why printers are not free; it is not an argument that printers are priced at cost. The main goal of my analysis was to show that printers will be sold below cost while ink will be sold above cost.

³⁷ See Epstein, *supra* note 1, at 121.

the mean of the error is zero, then there is no systematic misperception that sellers can respond to.³⁸

I agree that generally different consumers will suffer from different misperceptions or from different levels of misperception. I am also willing to accept that for any given product some consumers will overestimate the value of the product while others will underestimate the value of the product. But the existence of both overestimators and underestimators does not mean that the average estimate is unbiased. (Neither does it mean that the average bias is sufficiently close to zero that it can be safely ignored.) It is an empirical question. And the evidence suggests that at least in some cases the average estimate is biased and that consumers suffer from a systematic misperception in an identified direction. In particular, evidence of adjustments in the design of products and prices, which is summarized in Section C below, suggests that sellers are responding to systematic biases with a direction that at least on average is very clear.³⁹

Professor Epstein recognizes the importance of product design and pricing as evidence for the *absence* of consumer mistakes. In particular, Professor Epstein brings evidence of home mortgage pricing to support his claim that myopia and hyperbolic discounting exist in the laboratory, but not in the real world.⁴⁰ Professor Epstein's evidence—"home mortgage interest tables show no trace of [hyperbolic] discounting, but a predictable yield curve in which the annual cost of money varies between, say, 5.78 percent and 6.22 percent"⁴¹—comes from the prime loans market.⁴² Indeed, consumer misperception is probably not a major problem in the prime market.

But the fact that consumers make few mistakes in one market does not imply that they make few mistakes in all markets. Staying with home equity loans, product design and pricing in the subprime market are qualitatively different from the product design and pricing that Professor Epstein describes in the prime market. This difference suggests that consumer misperception may well play an important role in the subprime

³⁸ Id. (since some consumers are optimistic while others are pessimistic "it may well be that the best strategy is to ignore these biases altogether.")

³⁹ If market segmentation based on the level or type of misperception is possible, then sellers will design their products and pricing schemes in response to consumer misperception even when the average bias is zero. In particular, sellers will offer one product design to the overestimators and another product design to the underestimators. Professor Epstein does not consider the segmentation option. He implicitly dismisses it by arguing that "no consumer wears a black or white hat that indicates his or her class [i.e., bias type or bias level – O.B.]." Epstein, *supra* note 1, at 121. But even when the bias type is not directly observable it may be correlated with a trait that is observable, thus enabling market segmentation.

⁴⁰ Epstein, *supra* note 1, at 130.

⁴¹ Id.

⁴² Id. at note 58 (citing evidence of 30-year and 15-year fixed-rate prime mortgage loans).

market.⁴³ Comparing these two sets of data highlights the importance of a market-by-market empirical analysis. Professor Epstein accepts that particular product designs can serve as evidence for the absence of consumer mistakes. To be consistent he must also accept that different product designs can serve as evidence for the persistence of consumer mistakes. The challenge is, therefore, to identify design features that can be explained only as a strategic response to consumer misperception.⁴⁴

Before these design features can be identified, however, a theory of market reaction to consumer misperceptions must be developed. I have begun to develop such a theory in my previous work. Section B summarizes this work and extends it.

B. Consumer Misperceptions and Market Reactions: Theory

The proposed theory of seller reactions to consumer misperceptions builds on the multidimensionality of products and prices. To emphasize the central role of multidimensionality consider the benchmark case of a one-dimensional product and a one-dimensional price. In this case the price will be set equal to the cost of the product regardless of any consumer misperception with respect to the value of the product.⁴⁵ By construction this benchmark case leaves no room for adjustment in the design of either product or price.

Adding multidimensionality opens the door to strategic responses by sellers to consumer misperceptions by way of product and price design. In fact, the option of such a strategic response to consumer misperception gives sellers a strong incentive to create multidimensionality. Moving gradually away from the one-dimensional product and a one-dimensional price benchmark, I first relax the one-dimensional price assumption, and analyze misperception-based, multidimensional pricing strategies. I then relax the one-dimensional product assumption, and analyze more complex, misperception-based designs of products, contracts, and pricing schemes.

⁴³ See Oren Bar-Gill and Elizabeth Warren, Making Credit Safer (unpublished manuscript, 2007).

⁴⁴ This is not an easy task. Most design features that appear to respond to consumer misperception can also be rationalized using alternative theories. These alternative theories cannot be rejected in the abstract. Only a market-specific inquiry can determine the source of the identified product/price design. I conducted such an inquiry in the credit cards market. In that market the evidence suggests that rational choice theories cannot explain the observed pricing scheme. I therefore concluded that the observed pricing scheme was designed in response to systematic consumer misperception. See Seduction by Plastic, *supra* note 2.

⁴⁵ The assumption, of course, is that the misperceived value is higher than the cost. Professor Epstein analyzes an example of a one-dimensional product and a one-dimensional price and reaches the same conclusion. See Epstein, *supra* note 1, at 120.

1. Misperception-Based Pricing

a. Rebates: The best example of misperception-based pricing is the rebates strategy. Consider a kitchen table, with a per-unit cost of \$100. If price is one-dimensional, in a competitive market the seller of this table will set a price of \$100. With consumer misperception, however, the seller will have a strong incentive to set a two-dimensional price. For instance, the seller can set a pre-rebate price of \$110 and offer a \$20 rebate. Focusing consumers' attention, through advertising, on the post-rebate price of \$90, this seller will attract business from other sellers who offer a one-dimensional, no-rebate price of \$100.

But attracting many consumers is not enough. If all consumers send-in their rebate coupons and end-up paying \$90 on a table that costs the seller \$100, the rebate-offering seller will lose money. Of course, not all consumers redeem their rebates. Specifically, if only 50% of consumers send-in their rebate coupons, then the seller will not lose money. On average she will get \$100 for each table, since 50% of consumers will pay the pre-rebate price, \$110, and 50% of consumers will pay the post rebate price, \$90 ($50\% * \$110 + 50\% * \$90 = \100).

Partial rebate redemption explains why the rebate-offering seller will not lose money. Partial redemption also reintroduces the basic question: why offer two-dimensional, pre-rebate and post-rebate prices? If consumers on average pay the same price, \$100, for the same table, why would they prefer to buy their tables from the rebate-offering seller? Misperception provides the answer. If all consumers are perfectly rational, then indeed the rebate-offering seller will enjoy no competitive advantage. But if some consumers are less than perfectly rational, specifically, if some consumers overestimate the likelihood of redeeming their rebate, then rebates becomes a winning strategy.

For example, assume that while the actual probability of redeeming the rebate is 50%, the consumer, when purchasing the table, thinks that she will send-in the rebate for sure. This consumer will mistakenly focus on the low post-rebate price of \$90, and thus will prefer to buy her table from the rebate-offering seller. The seller, on her part, knows that she will obtain an average price of \$100 ($= 50\% * \$110 + 50\% * \90), enough to cover her costs. Misperception draws a wedge between the actual price, \$100, and the perceived price, \$90. Of course, the seller can exploit this misperception only when two-dimensional, rebate pricing is employed.⁴⁶

⁴⁶ See Matthew A. Edwards, "The Law, Marketing and Behavioral Economics of Consumer Rebates," 12 *Stan. J.L. Bus. & Fin.* __ (2007). An alternative explanation for rebates, one that does not rely on consumer misperception, views rebates as a mechanism for price discrimination. According to this explanation, some consumers attach higher value to their time while others attach lower value to their

b. Credit Cards: Credit card pricing is multidimensional. The credit card contract includes numerous interest rates and fees. Focusing on the financing dimension of the credit card, the single-price benchmark would include a single interest rate reflecting the issuer's cost of funds adjusted upward for the risk of default. Issuers, of course, do not offer a single price. To take a specific example, issuers charge a separate fee for late payment in addition to the interest rate. Arguably, such multidimensional pricing responds to consumer misperception.⁴⁷

As with rebates, late fees draw a wedge between the actual price paid by the consumer and the perceived price. If consumers underestimate the likelihood of paying late (or are insensitive to late fees for other reasons), they will prefer a credit card with a lower interest rate and a late fee over a card with a higher interest rate and no late fee. Accordingly, profit-maximizing issuers will choose a two-dimensional pricing scheme with an interest rate and a late fee, rather than a one-dimensional, interest rate only scheme.⁴⁸

time. Since redeeming the rebate requires time and effort, rebates provide a way to charge more from consumers whose time is more valuable. If wealthier consumers attach a higher value to their time, rebates provide a way to set higher prices for consumers with a higher willingness to pay. *Id.* This alternative explanation is valid when sellers enjoy market power. It is not valid in a perfectly competitive market. In a competitive market wealthier consumers will not pay the high pre-rebate price. They will purchase the product from a seller that sets a single price equal to cost (\$100 in the example). The misperception-based account of bundling, on the other hand, is valid in both competitive and non-competitive markets. Further evidence of the limited explanatory power of the price discrimination theory is provided by a recent survey of Promotion Marketing Association members who work with rebates: 94.6% of respondents indicated that rebates were used as a promotion mechanism, while only 2.7% reported using rebates as a price discrimination mechanism. *Id.* (note 69)

⁴⁷ Late payment may impose an extra cost on the issuer, but this cost surely does not amount to \$40 or more for a 2-day delay in making a minimum payment of \$40.

⁴⁸ As with rebates, there is an alternative, rational choice explanation for late fees. If consumers with higher default risk are also more likely to pay late (before defaulting), then late fees provide a screening mechanism that can prevent a "lemons" problem. While theoretically valid, the practical explanatory power of this rational choice account is limited. First, it relies on the assumption that borrowers have superior information about their default risk. This assumption is questionable given issuers' sophisticated risk assessment methods. Second, the rational choice, asymmetric information model assumes that late payment provides valuable, new information to the uninformed issuers—again a questionable assumption. See Ronald J. Mann, *Chargin Ahead*, pp. 162-63 (suggesting that late fees are often incurred because of mistakes; in these cases late payment provides no new information on the consumer's default risk). Finally, the data do not support the rational choice account. If issuers wish to screen for high risk borrowers, they have other means at their disposal. Specifically, they can use default interest rates triggered by late payment. Indeed such default rates are commonly used. So why are late fees needed? Specifically, why did late fees rise substantially after they were exempt from state-level regulation by the Supreme Court's 1996 *Smiley* decision (*Smiley v. Citibank*, 517 U.S. 735 (1996))? See Tamara Draut & Javier Silva, *Borrowing to Make Ends Meet: The Growth of Credit Card Debt in the '90s*, at 35 (Demos, 2003), available at http://www.demos.org/pubs/borrowing_to_make_ends_meet.pdf. The rise of late fees after *Smiley* could make sense under the rational choice model if default interest rates triggered by late payment were reduced, but they were not. See Mark Furletti, *Credit Card Pricing Developments and Their Disclosure*, Federal Reserve Bank of Philadelphia, Payment Cards Center, Discussion Paper, p. 8 (2003) (issuers only started using default interest rates in the late 90s).

More generally, multidimensional pricing allows issuers to minimize the perceived total price by reducing price components that are more salient to consumers and increasing price components that are less salient to consumers. The evolution of pricing patterns in the credit cards market can be explained as adjustment and readjustment of multidimensional pricing in response to changing perceptions and misperceptions. When consumers focused on annual fees, issuers charged high interest rates. When interest rates became salient, issuers began adding late fees and other less salient prices.⁴⁹ With a one-dimensional price, there is little room for price misperception. The single price will always be salient to consumers. With multidimensional pricing some price components will generally be less salient than others. A seller or issuer that adjusts its pricing strategy in response to consumers' relative sensitivity to different price dimensions will enjoy a competitive advantage.

2. *Misperception-Based Bundling*

Moving beyond multidimensional pricing of a one-dimensional product, I now extend the analysis to allow for multidimensionality on both the product space and the price space. Adding another level of multidimensionality enhances sellers' ability to profitably respond to consumer misperception. Accordingly, sellers will have a strong incentive to create multidimensional products. One way to do this is by bundling together two separate products.⁵⁰

a. Printers and Ink: Consider two products: printers and ink cartridges. Assume that the per-unit cost of a printer is \$1000 and the per-unit price of an ink-cartridge is \$10. If sold separately in two separate competitive markets by two separate sellers, then a printer will be priced at \$1000 and an ink cartridge will be priced at \$10. With consumer misperception, however, it makes little sense to sell these two products separately. And, in fact, the same seller often sells both printers and ink for its printers.

Why is bundling—of printers and ink—a profitable strategic response to consumer misperception? Assume that a representative consumer will purchase 100 ink cartridges over the life of the printer. Supplying printing services to this consumer costs \$2000: the printer itself costs \$1000 to produce, and 100 ink cartridges cost the seller another \$1000 to produce (at \$10 per-cartridge). Absent bundling, when printers and ink are sold separately, the printer seller will have to set a price of \$1000, and the ink seller will have to set a price of \$10. With bundling, however, a seller that offers both printers and ink enjoys much greater pricing flexibility. For example, a bundling seller can offer printers for \$500 and ink cartridges for

⁴⁹ See Section C below.

⁵⁰ This subsection is based on Bar-Gill, Bundling and Consumer Misperception, *supra* note ???.

\$15. The seller's revenues will still be \$2000: \$500 for the printer and \$1500 for ink (100 cartridges at \$15 per-cartridge). With bundling competition only requires that *total* revenue equal *total* cost; revenues from one product need not equal the cost of that product. In this example, part of the cost of producing the printer is covered by ink sales.⁵¹

The added pricing flexibility obtained through bundling is irrelevant when all consumers are perfectly rational. A rational consumer realizes that she will end up paying \$2000 for printing. She does not care how she pays this \$2000: \$1000 for the printer and \$1000 for ink or \$500 for the printer and \$1500 for ink. Not so for the imperfectly rational consumer. In particular, assume that the imperfectly rational consumer mistakenly believes that she will buy 50, not 100, ink cartridges over the life of the printer. This consumer will prefer the bundling seller.

To see this recall that without bundling the price of a printer is \$1000 and the price of ink is \$10 per-cartridge. For the imperfectly rational consumer the perceived total price is \$1500: \$1000 for the printer and \$500 for ink (50 cartridges at \$10 per-cartridge). The bundling seller, who sets a printer price of \$500 and an ink-cartridge price of \$15, will offer a lower perceived total price. The bundling-sellers offer translates, in the eyes of the imperfectly rational consumer, into a perceived total price of \$1250: \$500 for the printer and \$750 for ink (50 cartridges at \$15 per-cartridge).

Again, misperception draws a wedge between the actual price and the perceived price. Such a wedge exists even without bundling: When a printer is priced at \$1000 and an ink cartridge is priced at \$10, the imperfectly rational consumer perceives a price of \$1500, which is significantly lower than the actual price of \$2000. But bundling broadens the wedge. With bundling the imperfectly rational consumer perceives an even lower price—\$1250. To take advantage of this increased wedge sellers will find it profitable to create product multidimensionality through bundling.

b. Health Clubs: Another common form of bundling, intertemporal bundling, is prevalent in many subscription markets. Consider the health club market. Health clubs can, and some do, offer one-time access with a per-visit price. Many health clubs, however, prefer to sell year-long access with a single subscription price. In essence, a subscription bundles together access to the health club's facilities across multiple periods.

⁵¹ This pricing flexibility requires that ink for a seller's printer be purchased only from the same seller. This, in fact, is the meaning of bundling. Such bundling is achieved, for instance, through patent protection of the printer-ink cartridge interface.

Such intertemporal bundling with its accompanying subscription pricing is attractive to consumers who overestimate the number of times that they will visit the health club. Assume that the average consumer will visit the health club 10 times in one year, but mistakenly thinks that she will visit the health club 100 times in one year.⁵² The health club can set a per-visit price, equal to the per-visit cost (to the health club), of, say, \$10. Alternatively, the health club can offer year-long access at a subscription price of \$100 (this will cover the health clubs cost since the average attendance is 10 times a year; \$100 divided by 10 equals \$10, which is the per-visit cost to the health club). With per-visit pricing the consumer expects to pay a total price of \$1000 (= 100 visits multiplied by \$10 per visit). With subscription pricing the consumer pays, and expects to pay, \$100. Clearly, the consumer will prefer to purchase a subscription. Accordingly, the health club will offer the intertemporal bundle with its accompanying subscription pricing.

c. Credit Cards: Credit cards also exhibit intertemporal bundling. Many credit card products bundle together short-term borrowing and long-term borrowing. Short-term borrowing is often priced below cost through introductory periods and introductory interest rates that can be as low as zero percent. Long-term borrowing, beyond the introductory period, is commonly priced much higher. Bundling is necessary to maintain this pricing scheme. Specifically, a sufficiently large number of short-term borrowers must also borrow in the long-term and, in particular, they must borrow in the long-term from the same issuer. Jumping from one card with a zero percent introductory rate to another card with another zero percent introductory rate must be avoided. Otherwise the issuer will lose money. The bundle is sustained through switching costs, both economic switching costs and psychological switching costs. And issuers design their products to increase the cost of switching, e.g., with the use of rewards programs.

This bundled product with its accompanying pricing scheme is more attractive to many consumers than the alternative, non-bundled product with a single, common interest rate for both short-term and long-term borrowing. This is so because many consumers underestimate the extent of their future borrowing or overestimate the likelihood of switching cards at the end of the introductory period.

C. Consumer Misperceptions and Market Reactions: Evidence

The consumer behavior evidence described in Part I suggests that in the credit cards market at least some consumers suffer from imperfect

⁵² For evidence of the large disparity between the expected and the actual number of health club visits, see Stefano Della Vigna and Ulrike Malmendier, "Paying Not to Go to the Gym," 96 *Amer. Econ. Rev.* 694 (2006).

information and imperfect rationality. If consumers make systematic mistakes, then according to the theory presented in Section B these mistakes should lead to strategic adjustments in the design of the credit card product and in how this product is priced. The product design and pricing evidence summarized in this Section confirms the theoretical predictions. This evidence also lends further support to the conclusion that systematic mistakes persist in the credit cards market.

Several features of the credit card product and the way it is priced suggest that credit card issuers are responding to systematic consumer misperception:

i. Long-term interest rates: Changes in the credit card contract reflect changing perceptions among consumers. Until recently credit card interest rates (standard APRs) were exceptionally high. The reason, as admitted by economists who worked as Visa consultants, was that issuers felt that demand for their product was not sensitive to this price dimension.⁵³ Consumers, at the time, were focusing on annual fees, not on long-term interest rates. One explanation is that consumers optimistically believed that they would not borrow, or would not borrow as much, in the long run. More recently, long-term interest rates have become more salient to consumers, perhaps reflecting their growing concern over rising balances on credit cards. The design of the credit card product changed in response. Long-term interest rates were reduced to attract and retain customers.

ii. Penalty fees and rates: When interest rates became salient, competition focused on the interest rate dimension, and revenues from finance charges dropped accordingly. But credit card issuers did not simply forgo revenues. Instead, they began to increase penalty fees and rates, which remain largely invisible to consumers.⁵⁴ For example, the average late fee rose from \$12.52 in 1994 to \$35.05 in 2006.⁵⁵ Penalty fees quickly became a major

⁵³ Evans and Schmalensee describe “[credit card issuers’] view that the overall demand for credit is relatively insensitive to interest rates, a view supported by at least one empirical study and considerable folklore within the industry.” EVANS & SCHMALENSEE, *PAYING WITH PLASTIC* 164-67 (MIT Press, 1999).

⁵⁴ In *Beasley v. Wells Fargo Bank*, 235 Cal. App. 3d 1383 (1991), the bank’s “Credit Card Task Force” proposed increasing “late” and “overlimit” fees as a “good source of revenue” (at 1389). Penalty fees are perceived as a “good source of revenue,” because the industry perceives that “there (are) very few cardholders that switch cards because the late fee is too high.” See *Credit Card Fees Soar Again*, CNNMoney, Aug. 18, 1998 (quoting Peter Davidson, Executive VP at Speer & Associates in Atlanta), available at http://money.cnn.com/1998/08/18/banking/q_bankrate.

⁵⁵ See *Fee Income*, CardFlash, Jan. 10, 2007.

source of revenue for issuers.⁵⁶ In 2005 penalty fees accounted for 7.2% of issuers' revenues, totaling \$7.88 billion a year.⁵⁷

The cost to consumers of penalty fees rose significantly with the advent of "universal default." Universal default clauses cause cardholders' rates to increase to 30% or more⁵⁸ when the cardholder takes certain actions, such as applying for a mortgage or inquiring about a car loan.⁵⁹ Consumers are imperfectly aware of the range of events that can trigger universal default and of the magnitude of the default interest rates.⁶⁰ Moreover, when getting a new credit card consumers might underestimate the likelihood of ever triggering universal default.⁶¹ Universal default increases the disparity between the real and perceived costs of penalties to consumers. Accordingly, the inclusion of universal default clauses is a rational response to consumers' imperfect rationality.

iii. Introductory rates: The introductory, teaser rate is another example of product design that targets consumers' imperfect rationality. Assuming that the costs of switching from one credit card to another are small, teaser rates would not be offered by an issuer that faces perfectly rational consumers. These consumers would transfer their balance to a new card with a low teaser rate as soon as the old card reverted to the high post-introductory rate.⁶²

⁵⁶ Penalty fees began their rapid growth in 1996 when the Supreme Court, in *Smiley v. Citibank*, 517 U.S. 735 (1996), exempted late and over-limit fees from state-level regulation. See Tamara Draut & Javier Silva, *Borrowing to Make Ends Meet: The Growth of Credit Card Debt in the '90s*, at 35 (Demos, 2003), available at http://www.demos.org/pubs/borrowing_to_make_ends_meet.pdf.

⁵⁷ See Card Industry Directory, Analysis, Bank Card Profitability 2004-2005 (2005).

⁵⁸ See GAO Increased Complexity Report, p. 49.

⁵⁹ See Consumer Action News, *2005 Credit Card Survey*, 1 (Summer 2005) (detailing most prevalent triggers of universal default rate hikes).

⁶⁰ See GAO Increased Complexity Report, pp. 49-50.

⁶¹ Another recent innovation also magnifies the cost of penalty fees. Some issuers are dividing up credit extensions between multiple cards so that a customer with a \$2500 credit limit will be issued five cards with five \$500 limits (instead of a single card with a \$2500 limit). Five cards mean five opportunities to pay late fees, overlimit fees, etc. See Robert Berner, "Cap One's Credit Trap," *Business Week Magazine*, Nov. 6, 2006 (http://www.businessweek.com/magazine/content/06_45/b4008048.htm?chan=search).

⁶² Professor Epstein argues that introductory periods with low introductory rates are a reasonable mechanism for providing valuable information to rational consumers. In making this argument, Professor Epstein relies on the 'free samples in a bakery' analogy: "So what is wrong with teaser rates anyhow? Go to any bakery and there are free samples that are intended to entice customers into purchases." Epstein, *supra* note 1, at 131. This analogy is inapt. There is significant uncertainty about the quality of the baker's product. But money is money. Professor Epstein himself argues that issuers are offering a standardized good. Id. Professor Epstein's argument that a consumer needs the introductory period to evaluate the bank's customer service (id) is unconvincing. Moreover, survey evidence suggest that customer service is not among the product attributes that attract most consumers. See "Most People Use Few Cards, a Study Shows," 5(6) *Card Marketing* 11 (July 2001); Evans & Schmalensee, *supra* note ???, at 225; EVANS & SCHMALENSEE, *PAYING WITH PLASTIC* 218 (MIT Press, Second Edition, 2005).

Issuers offer teaser rates because they are attractive to consumers who think they will switch, or pay-off their balance, after the introductory period ends, but end up staying and paying the high post-introductory rates. There are two parts to this story. The first part focuses on the ex post stage. Ex post consumers do not switch and borrow at the high post-introductory rates. In fact, a recent study found that most borrowing is done at the high post-promotion rates, rather than at the low teaser rates.⁶³ Another recent study estimated that effective switching costs must be approximately \$150 to explain the limited switching observed.⁶⁴ There is clearly a psychological, inertia component reflected in such high switching costs. Moreover, issuers design their products to increase switching costs, e.g., through rewards programs.

The second part of the story focuses on the ex ante stage. Not only do consumers fail to switch ex post, but also they fail to anticipate this effective lock-in ex ante. Alternatively, consumers simply believe that they will not need to borrow beyond the introductory period. The ex ante part of the story is necessary to explain why consumers are more sensitive to introductory rates than they are to long-term rates, despite the fact that most of the borrowing is done at the high long-term rates.⁶⁵ In fact, a recent study found that "consumers are at least three times as responsive to changes in the introductory interest rate as compared to dollar-equivalent changes in the post-introductory interest rate."⁶⁶ And survey evidence suggests that more than a third of all consumers consider an attractive introductory interest rate to be the prime selection criterion in credit card choice.⁶⁷

iv. Additional design features: Other features of the credit card contract are also designed to exploit consumers' imperfect information and imperfect rationality. In particular, many "technical" features of the credit card contract provide benefits to issuers, while imposing underappreciated costs

⁶³ See David B. Gross & Nicholas S. Souleles, Do Liquidity Constraints and Interest Rates Matter for Consumer Behavior? Evidence from Credit Card Data, 117 Q. J. Econ. 149, 171, 179 (2002). See also Lawrence M. Ausubel, Credit Card Defaults, Credit Card Profits, and Bankruptcy, 71 Am. Bankr. L.J. 249, 263 (1997) ("[A] substantial portion of credit card borrowing still occurs at postintroductory interest rates[;] ... finance charges paid to credit card issuers have not dropped as much as the introductory offers might suggest."); David I. Laibson et al., A Debt Puzzle, in Knowledge, Information, and Expectations in Modern Macroeconomics: In Honor of Edmund S. Phelps 228-29 (Philippe Aghion et al. eds., 2003) (finding that consumers pay high effective interest rates "despite the rise of teaser interest rates").

⁶⁴ Shui and Ausubel, *supra* note ???, at 24.

⁶⁵ Bar-Gill, *supra* note ???, at 1405-07.

⁶⁶ Lawrence M. Ausubel, Adverse Selection in the Credit Card Market 21 (1999) (unpublished manuscript, on file with author), available at <http://www.ausubel.com/creditcard-papers/adverse.pdf>.

⁶⁷ See Evans & Schmalensee, *supra* note ???, at 225.

on consumers. These features include pro-issuer payment allocation methods⁶⁸ and balance computation methods.⁶⁹

III. THE SOCIAL COST OF CONSUMER MISTAKES: CREDIT CARDS

Parts I and II dealt with the descriptive questions: Are consumers making systematic mistakes? And, are sellers responding strategically to these mistakes? After answering these questions in the affirmative, I turn, in Part III, to address the welfare question: Does consumer misperception entail a welfare cost? This question cannot be answered in the abstract. Therefore, following Professor Epstein, I focus on one specific market: the credit cards market.

Professor Epstein argues that credit cards do not harm consumers.⁷⁰ I begin, in Section A, by agreeing with Professor Epstein's argument that increased bankruptcy rates, even if caused by credit card debt, do not prove that credit cards are bad for consumers. But, I argue, there is other evidence – evidence of consumer mistakes and evidence of a special link between credit card debt, as distinct from debt in general, and bankruptcy – that Professor Epstein should confront. In Section B I take on Professor Epstein's more general argument that issuers have no incentive to offer dangerous, bankruptcy-inducing credit card products. I argue that this view presumes one business model, when there is evidence that at least some issuers are following another business model. After responding to Professor Epstein's challenges, I turn, in Section C, to present a more systematic account of the welfare costs generated by the market failure in the credit cards market.

A. Credit Cards and Consumer Bankruptcy

Credit cards have been blamed for the recent increase in consumer bankruptcy filings. For many critics of the credit card industry, a causal link between credit cards and bankruptcy rates, if established, would provide powerful support for increased regulatory intervention in the credit cards market.⁷¹ Professor Epstein does not argue that there is no causal link between credit cards and bankruptcy rates. Rather, he argues that even if credit cards are responsible for the higher bankruptcy rates, this does not mean that credit cards are welfare-reducing.

⁶⁸ GAO Increased Complexity Report, p. 27 (often “cardholder payments [are] allocated first to the balance that is assessed the lowest rate of interest.”)

⁶⁹ GAO Increased Complexity Report, pp. 27-28 (describing the 2-cycle billing method).

⁷⁰ See Epstein, *supra* note 1, at 127-28.

⁷¹ See Mann, *Chargin Ahead*, pp. 66-68 (arguing that a causal link exists between credit card debt and bankruptcy filings). But see Todd J. Zywicki, *The Economics of Credit Cards*, 3 *Chap. L. Rev.* 79, 82 (2000) (arguing that such a causal link does not exist).

Professor Epstein argues that higher bankruptcy rates are “an expected outgrowth of the wider dissemination of credit.”⁷² The implied presumption is that wider dissemination of credit is welfare-enhancing. Accordingly, even if more credit generates some cost in the form of higher bankruptcy rates, the net effect is positive.⁷³ If consumers are perfectly informed and perfectly rational, then more credit is definitely good for consumers. The question is whether most consumers are, in fact, sufficiently informed and sufficiently rational.

Professor Epstein answers this question in the affirmative. He correctly emphasizes that “bankrupt parties [are not] necessarily victims of some underlying cognitive bias.”⁷⁴ Professor Epstein argues that “ex post failure need not signal an ex ante mistake in judgment,” and that “[p]eople lose rational bets all the time.”⁷⁵

I agree. Bankruptcy does not necessarily imply imperfect rationality. That is why independent evidence of consumer mistakes is needed. Such evidence was provided in Parts I and II. And, if many consumers are imperfectly rational, as this evidence suggests, then for these consumers bankruptcy might not be a rational bet lost. Moreover, if many consumers are imperfectly informed and imperfectly rational, then the presumption that more credit is good for consumers becomes more difficult to defend.

There is more direct evidence to counter Professor Epstein’s argument that credit cards are generally welfare-enhancing, even if they increase bankruptcy rates. Essentially Professor Epstein argues that more credit is good, even if it entails some cost, and accordingly that credit cards are good because they provide more credit. But the “credit cards are good” conclusion does not follow from the “more credit is good” argument. If there are several sources of credit and “more credit is good,” then the additional credit should come from the source of credit that imposes minimal cost. And there is evidence suggesting that credit cards are not the least-cost source of credit. In particular, Professor Ronald Mann recently found a causal link between credit card debt and bankruptcy filings *while controlling for overall debt*.⁷⁶ This finding implies that, among the different sources of consumer credit, credit cards are especially likely to cause financial distress and bankruptcy. Of course, credit cards may still be the superior source of credit, if in addition to their higher costs they also

⁷² See Epstein, *supra* note 1, at 128.

⁷³ See Epstein, *supra* note 1, at 128.

⁷⁴ See Epstein, *supra* note 1, at 128.

⁷⁵ See Epstein, *supra* note 1, at 128.

⁷⁶ See Mann, *Charging Ahead*, pp. 66-68.

provide greater benefits. But Professor Epstein does not perform the required cost-benefit analysis.

B. Will Market Forces Protect Consumers?

Professor Epstein argues that market forces will protect consumers and prevent issuers from offering welfare-reducing terms.⁷⁷ This argument has already been challenged in Part II, where I argued that even in a competitive market sellers often choose to design their products in response to consumer misperception. But Professor Epstein makes several specific arguments that merit discussion.

1. Does Switching by Consumers Restrain Issuers?

Professor Epstein recounts the facts and ruling in *Rossmann v. Fleet Bank (R.I.) National Association*,⁷⁸ and argues that Fleet's behavior in this case exemplifies reasonable behavior by an issuer constrained by market forces.⁷⁹ In *Rossmann* Fleet issued a 'no annual fee' credit card and six months later imposed a \$35 annual fee, invoking a provision that allowed the bank to unilaterally change the terms of the contract. The Third Circuit interpreted the contract to require a zero annual fee for one year. The court intervened to restrain Fleet's behavior in *Rossmann*, and Professor Epstein commends the court for its "sensible" resolution of the case.⁸⁰

But then Professor Epstein proceeds to portray *Rossmann* as an example of reasonable, self-restraint by the card issuer. Fleet, Professor Epstein argues, reserved broad powers to raise any and all fees and interest rates right after the original contract had been signed; yet it only raised the annual fee from \$0 to \$35, and only because, higher interest rates from the Federal Reserve made "it difficult for credit card issuers to maintain products and services at current rates."⁸¹

The economic justification for Fleet's rate increase aside, Professor Epstein's main argument is that Fleet behaved reasonably because it was constrained by market forces: "[T]he fear of the loss of competitive position was a powerful constraint on the bank's behavior. And why? Because most people who carry a Fleet card will have a second or third card as well. Any increase in rates is likely to generate a migration of business elsewhere."⁸² If consumers readily switch cards in response changes in terms, then, as

⁷⁷ See Epstein, *supra* note 1, at 127.

⁷⁸ 280 F.3d 384 (3d Cir. 2002).

⁷⁹ See Epstein, *supra* note 1, at 125-27.

⁸⁰ See Epstein, *supra* note 1, at 126.

⁸¹ See Epstein, *supra* note 1, at 126-27.

⁸² See Epstein, *supra* note 1, at 127.

Professor Epstein argues, competition will prevent any welfare loss. But in fact consumer switch less often than Professor Epstein suggests.

Haiyan Shui and Lawrence Ausubel, analyzing data from a large-scale experiment in the credit cards market, found that switching is limited and that consumers' implied average switching cost is \$150.⁸³ Similarly, David Gross and Nicholas Souleles, analyzing a large proprietary data set, found only limited switching.⁸⁴ In addition, with the popularity of rewards programs based on the accumulation of points or frequent flyer miles it may well be rational not to switch cards in response to even a significant rise in fees or interest rates. Finally, the success of the teaser-rate tactic provides powerful evidence that switching is limited. If most consumers were quick to switch cards, specifically to switch away from a card at the end of the introductory period, the teaser-rate tactic would be a nonstarter.⁸⁵

I do not deny that consumers switch cards. Also, I do not deny that consumers switch cards in response to increased interest rates and fees. The tendency to switch cards is, however, more limited than Professor Epstein suggests. And the disciplinary force of the fear from switching is similarly limited.

2. Do Issuers Want to Limit Borrowing?

Professor Epstein argues that there is no need to worry about welfare-reducing credit card products because issuers operating in a competitive market will have no incentive to offer such products. In particular, Professor Epstein argues that it is in the self-interest of the profit-maximizing issuer to limit borrowing by consumers and to prevent defaults in payment.⁸⁶ Why? Because “defaults in payment hurt the banks and merchants, who collect little or nothing in bankruptcy.”⁸⁷

Professor Epstein's observation is correct. Issuers collect little in formal bankruptcy proceedings. They also collect little from financially distressed consumers who have stopped paying without filing for bankruptcy protection. The inability to collect from defaulting consumers clearly affects issuers' strategy. Specifically, it affects the business model that issuers choose. Professor Epstein assumes that issuers follow one specific business model—a model that relies on full (or near full) repayment of the

⁸³ See Haiyan Shui and Lawrence M. Ausubel, "Time Inconsistency in the Credit Card Market," 14th Annual Utah Winter Finance Conference (May 3, 2004) (Available at SSRN: <http://ssrn.com/abstract=586622>).

⁸⁴ See David B. Gross & Nicholas S. Souleles, Do Liquidity Constraints and Interest Rates Matter for Consumer Behavior? Evidence from Credit Card Data, 117 Q. J. Econ. 149, 171 (2002).

⁸⁵ See Bar-Gill, Seduction by Plastic, at ???.

⁸⁶ See Epstein, *supra* note 1, at 127 (“[banks’] self interest is a powerful market constraint against excessive borrowing.”)

⁸⁷ See Epstein, *supra* note 1, at 127.

principal plus interest. According to this business model, issuers have a strong incentive to make sure that consumers do not borrow more than they can repay. Also, under this model, issuers have a strong incentive to avoid onerous terms that might lead consumers to default on their loans.

But issuers may be following a different business model. In particular, they may be following the “sweat box” model. When a consumer stops paying, then, with or without formal bankruptcy proceedings, beyond this point the issuer will collect little. This does not mean, however, that the issuer did not collect substantial amounts of money before the consumer stopped paying. According to the “sweat box” model issuers extract most of their revenues at the pre-default stage. The high interest and fees that the consumer pays while in the “sweat box” compensates the issuer for the lost post-default revenues.⁸⁸

I am not arguing that all issuers follow the “sweat box” model all of the time. I am arguing that the “sweat box” model provides an important, economically viable alternative to a business model that relies on full (or near full) repayment of the principal plus interest. By considering only one possible business model Professor Epstein overstates the ability of market forces to protect consumers and prevent issuers from offering welfare-reducing products.

C. The Welfare Costs of the Market Failure in the Credit Cards Market

The previous sections challenged Professor Epstein’s arguments that in the credit cards market consumer mistakes do not lead to a welfare loss. In this section I present a more systematic account of the welfare costs generated by the market failure in the credit cards market.

I do not offer a comprehensive cost-benefit comparison between credit cards and alternative sources of consumer credit. Accordingly, I cannot say that credit cards are, on net, welfare-reducing. In fact, I do not believe that they are. The purpose of this Section is to lay a foundation for legal intervention in the credit cards market, not to argue for the abolition of credit cards.

1. Harm to Consumers

The data on credit card choice and use, summarized in Part I above, show that consumer mistakes cost hundreds of dollars a year per consumer. Failure to switch cards at the end of the introductory period costs \$250 a year.⁸⁹ Choosing lower introductory rates lasting for a shorter introductory

⁸⁸ See Ronald J. Mann, *Charging Ahead*, ch. 17.

⁸⁹ See Shui and Ausubel, *supra* note ???, at ???.

periods instead of higher introductory rates lasting for a longer introductory periods costs \$50 a year.⁹⁰ Paying high interest rates on credit card balances while holding liquid assets that yield low returns costs \$200 a year.⁹¹

These numbers suggest that harm to consumers is substantial. And yet these numbers underestimate the full magnitude of the harm caused by unsafe financial products. Specifically, these numbers do not include the cost of financial distress caused by unsafe financial products.⁹² Moreover, the per-consumer costs must be multiplied by the large numbers of consumers who bear these costs. For example, the \$250 cost of failing to switch cards at the end of the introductory period is born by 35% of borrowing consumers who chose cards with introductory offers—1.4 million consumers each year.⁹³ This implies an aggregate annual cost of \$350 million. And this for a single mistake triggered by a single design feature of the credit card product.

2. Externalities

Consumer mistakes, especially when coupled with product design aimed at exploiting these mistakes, hurt consumers. But the welfare costs of these mistakes are not limited to the direct harm suffered by the mistaken consumers. Unsafe financial products generate a series of negative externalities.

(a) The Cost of Financial Distress

Unsafe financial products, and specifically credit cards, contribute to financial distress, which, at the extreme, can lead to bankruptcy.⁹⁴ Financial distress captures another category of harm suffered by the mistake-prone consumer, as noted in subsection 1 above. Financial distress can also impose substantial costs on third parties.

⁹⁰ See Shui and Ausubel, *supra* note ???, at ???.

⁹¹ See Gross and Souleles, *supra* note ???, at 180.

⁹² Recent evidence shows a causal link between unsafe financial products and financial distress, including bankruptcy. See Mann, *Charging Ahead*, pp. 66-68.

⁹³ This number is based on the following data: (1) about 17 million households open a new general purpose credit card account each year; (2) about 50% of new accounts include introductory rates; (3) about 50% of cardholders carry a balance. See *Fixed Rate vs Intro Rate*, CardFlash (7/29/99) (reporting findings from a 1999 study of account acquisition and attrition conducted by PSI Global); *Consumer Action News, 2005 Credit Card Survey*, 2 (of the 146 surveyed cards, 70 (47.6%) offer teasers on new purchases"). I recognize that cards with introductory offers might be issued at different rates to borrowing and non-borrowing consumers/households. Nevertheless, the preceding calculation probably yields a conservative estimate, if issuers are more likely to target introductory offers to borrowers and/or if borrowers are more likely to be attracted by introductory offers.

⁹⁴ Mann, *Charging Ahead*, p. 66-68.

An individual in financial distress will often require support from family, friends or from the state. Such transfers from one individual to another, including transfers mediated by the state, involve transaction costs. These transaction costs are especially large when the bankruptcy system is involved.⁹⁵

Perhaps even more costly, from a social welfare perspective, are the ex ante distortions caused by the prospect of financial distress. A lender will have an added incentive to offer an unsafe financial product if it can recover not only from the borrower but also from the borrowers family, friends, and perhaps also from the state (via welfare payments made to the borrower), when the borrower is in financial distress.⁹⁶

Finally, recent evidence collected by the Department of Defense (DoD) shows that employees (or in the DoD's case military personnel) become less productive when in financial distress.⁹⁷ This finding should not come as a surprise. An employee concerned about debt repayment and about protecting her family from abusive debt-collection practices is clearly less able to focus on work.⁹⁸

(b) Market Distortions

Consumer mistakes also lead to market distortions, preventing markets from attaining allocative efficiency. Consider two financial products, a close-end bank loan and a credit card. The bank loan is better-suited for some consumers and for certain purposes. And the credit card is better-suited for other consumers and for other purposes. Now assume that the credit card, by its nature or by specific design, triggers more consumer mistakes. And because of these mistakes the relative attractiveness of the credit card increases. The result would be that consumers, who absent mistakes and misperception would take a close-end bank loan, opt for credit card financing instead.

So far this is a story of financial harm to the mistake-prone consumer (the domain of subsection 1 above). But there is more. The increased demand for credit cards and the reduced demand for bank loans affect the relative

⁹⁵ See, e.g., Adam Feibelman, "Defining the Social Insurance Function of Consumer Bankruptcy," 13 *Am. Bankr. Inst. L. Rev.* 129, 162-63 (2005); Melissa B. Jacoby, "Bankruptcy Reform and Homeownership Risk," 2007 *U. Ill. L. Rev.* 323, 330-31 (2007); Robert M. Lawless and Stephen P. Ferris, "Economics and the Rhetoric of Valuation," 5 *J. Bankr. L. & Prac.* 3, 8 (note 22) (1995).

⁹⁶ Compare: Eric Posner, "Contract Law in the Welfare State: A Defense of the Unconscionability Doctrine, Usury Laws, and Related Limitations on the Freedom to Contract," 24 *J. Legal Stud.* 283 (1995).

⁹⁷ *Report On Predatory Lending Practices Directed at Members of the Armed Forces and Their Dependents*, at 35-36, 45, 86-87.

⁹⁸ The DoD report also describes how military personnel in financial distress become more vulnerable to extortion and, consequently, lose their security clearance. *Id.* At 35-36, 45.

prices of these two financial products. As a result, mistakes by imperfectly informed and imperfectly rational consumers distort the financing choices of informed, rational consumers as well.

3. Distributional Concerns

In addition to efficiency losses, consumer mistakes and issuers' response to these mistakes raise distributional concerns. Specifically, consumer mistakes and market reactions can lead to regressive redistribution. There are several reasons for this distributional effect: First, not all consumers have identical information and not all are equally rational. Better-educated consumers are less likely to make mistakes. Richer consumers are also less likely to make mistakes, if only because they can hire experts that will prevent them from making mistakes. Second, as a consequence of these differences in information and rationality, lenders targeting less-educated, poorer consumers will offer more products that are designed to exploit consumer mistakes. Third, if poor consumers are generally in greater need of financing than rich consumers, then poor consumers will suffer more from mistakes related to the choice and use of consumer credit products. Finally, since poor consumers lack the financial cushion that rich consumers have, they are more vulnerable to the unexpected costs of financial products and are more likely to stumble into financial distress.

IV. REGULATION

Legal intervention should be based on robust evidence of consumer mistakes leading to substantial welfare costs. Such evidence must be market specific. Accordingly, I do not attempt to make a general case for regulating consumer contracts. I do not believe that such a case can be made. On the other hand, I do not believe that a general case *against* legal intervention in consumer contracts can be made. To the extent that Professor Epstein is making such a general case against regulation, it is important, I think, to challenge his arguments. I do so in Section A of Part IV. But even though Professor Epstein makes several general anti-regulation arguments, he does not reject all forms of regulation. In particular, Professor Epstein supports anti-fraud and disclosure regulation. Therefore, his anti-regulation arguments should be read as arguments against any legal intervention beyond anti-fraud measures and disclosure regulation. In my response to Professor Epstein's anti-regulation arguments, I will explore the application of these arguments to disclosure regulation and to other forms of regulation. In Section B I focus on disclosure regulation. I argue that Professor Epstein's view of current disclosure regulation, and specifically of current disclosure regulation in the credit cards market, is overly optimistic. I then propose a conceptual shift

in disclosure regulation—from disclosure of objective product attributes to disclosure of information about the individual consumer’s use of the product. I argue that this new form of disclosure regulation can more effectively counter the adverse effects of consumer misperception.

A. Anti-Antiregulation⁹⁹

1. *Mistakes and Ex Ante Incentives*

Professor Epstein concludes that the law should not intervene in mistake cases.¹⁰⁰ He reaches this conclusion based on two arguments concerning the adverse ex ante effects of a rule that provides relief for the mistaken party. First, such a rule would frustrate the reliance interest of the non-mistaken party and will reduce this party’s willingness to enter transactions in the first place. Second, a rule that provides relief for the mistaken party would dilute the mistaken party’s incentives to avoid mistakes. Put differently, Professor Epstein presumes that the mistaken party is the least-cost avoider, and thus should bear responsibility for the mistake.

Professor Epstein’s concerns about the adverse ex ante effects of legal relief for mistake are justified in the classic contractual interaction between two symmetrically-situated parties. They are not justified in consumer contracts, where sophisticated sellers with superior information engage in form contracting with imperfectly informed and imperfectly rational consumers. When neither party knows, or has reason to know, of the mistake, it makes sense to presume that the mistaken party is the least-cost avoider and to make this party bear the cost of her mistake. But in many consumer contracts the seller knows, or has reason to know, about the consumer’s mistake. This is surely the case when sellers design their products and pricing schemes in response to consumer mistakes.¹⁰¹ When the non-mistaken party knows about the other party’s mistake, it is the non-mistaken party, not the mistaken party, who is the least-cost avoider.¹⁰²

Similarly, when the seller knows, or has reason to know, about the consumer’s mistake, concerns about the seller’s reliance or the seller’s fear of entering into the transaction are completely misplaced. In fact, in many consumer contracts the situation is less akin to classical mistake cases and

⁹⁹ Compare: The discussion of anti-antipaternalism in Jolls et al., *supra* note ???, at 1541.

¹⁰⁰ See Epstein, *supra* note 1, at 115-18.

¹⁰¹ See *supra* Part II.

¹⁰² Compare: one of the exceptions to the contract law rule refusing to recognize an excuse for unilateral mistake is the case of an accounting or a clerical error, where the non-mistaken party is in a better position to detect the mistake and prevent the potential allocative inefficiency that might follow from it. See, e.g., *Boise Junior College District v. Mattefs Construction Co.*, 450 P.2d 604 (1969).

more closely resembles the fraud—false or misleading statements—cases, which Professor Epstein agrees should be regulated.¹⁰³

2. *Unpredictable Errors*

Professor Epstein argues that the direction of consumer errors, e.g., overestimation vs. underestimation of a product's value, cannot be predicted and, therefore, policy recommendations cannot be made.¹⁰⁴ Professor Epstein correctly notes that for every documented bias pulling in one direction there is another documented bias pulling in the opposite direction. But this does not mean that in a given market policymakers cannot identify the direction of the distortion. Moreover, policymakers can free-ride on sellers. As argued in Part II above, in many cases sellers identify the direction of the distortion and design their products accordingly. Policymakers can look to product design and pricing structure for information about the direction of the distortion.

I am not arguing that identifying the direction of the dominant bias in any given market is an easy task. I am arguing that making such an identification is theoretically possible and, at least in some cases, practical and socially desirable. The behavioral market failures considered here are not different, in this respect, from the traditional market failures, specifically monopoly and collusion, considered in antitrust law. In both cases a detailed factual inquiry is required to identify the source of the distortion and its adverse implications. Why is legal intervention welcomed in response to one type of market failure and completely rejected when another type of market failure is involved?

3. *Consumer Heterogeneity*

Professor Epstein invokes consumer heterogeneity as another reason why regulation, other than mandated disclosure, should be avoided. Given consumer heterogeneity, Professor Epstein argues, it is difficult to design regulation that, while helping some consumers, does not hurt other consumers. In particular, some consumers are sufficiently rational to take

¹⁰³ The facts in *Rossman* provide an example of such misleading statements. See Sec. III.B.1 *supra* and Sec. IV.B.1 *infra*.

¹⁰⁴ See Epstein, *supra* note 1, at 121 (“But at this point the behavioral critique loses much of its bite, because it can no longer predict any *systematic* direction to the market errors.”); *id.* at 122 (“[I]t is hard to make policy recommendations in the absence of information as to which effect [the effect of one bias operating in one direction or the effect of another bias operating in the opposite direction] is likely to be most profound in any given setting. The behavioral critique lacks real bite.”) See also Epstein, *supra* note 3, at 364 (“Dwelling on imperfections of ordinary individuals carries no clear implication as to the appropriate policy choice because there is no directionality to these cognitive errors.”)

care of themselves. Restrictive regulation would limit the range of choices available to these consumers.¹⁰⁵

Professor Epstein's heterogeneity argument poses a valid concern. But this concern should not be overstated. And it should not create an anti-regulation presumption. At some level any regulation has its winners and losers. The real question is whether the total benefit of the regulatory intervention outweighs the total cost of the regulation. The problem, of course, is that in many cases policymakers have little information with which to perform a meaningful cost-benefit analysis. Professor Epstein's argument is most powerful in this set of cases.¹⁰⁶

In response to this argument, proponents of behavioral law and economics have studied an important category of regulatory mechanisms that are designed to help the less sophisticated consumer while minimizing the harm to the more sophisticated consumer.¹⁰⁷ First among these regulatory mechanisms is mandatory disclosure, which Professor Epstein endorses. I will discuss this mechanism in greater detail in the next Section. But there are other mechanisms, which respond to the heterogeneity concern.¹⁰⁸

One such mechanism is based on the optimal design of default rules. A pro-consumer default would protect less sophisticated consumers, while imposing only a minimal cost on more sophisticated consumers who wish to opt out of the default. Professor Epstein rejects the default rules mechanism. He argues that sellers "could vary the terms that they offer" even without such specially designed defaults.¹⁰⁹ Presumably Professor Epstein means that sellers will offer different terms to different consumers, tailoring their contracts in response to consumer heterogeneity. But this is part of the problem. If some consumers are imperfectly informed and imperfectly rational and sellers design their contracts in response to

¹⁰⁵ See Epstein, *supra* note 1, at 128-29 ("One key difficulty with all prophylactic legislation is that it tends to ignore striking differences by treating persons, even within narrow socioeconomic groupings, as part of some homogeneous mass.")

¹⁰⁶ *Id.* at 129 ("Who is confident enough to decide which error counts for more, and to spend public money on the strength of their speculations?")

¹⁰⁷ See Colin Camerer et al., "Regulation for Conservatives: Behavioral Economics and the Case for 'Asymmetric Paternalism,'" 151 *University of Pennsylvania Law Review* 1211 (2003); Cass R. Sunstein & Richard H. Thaler, "Libertarian Paternalism is not an Oxymoron," 70 *University of Chicago Law Review* 1159 (2003).

¹⁰⁸ A regulatory mechanism, which is somewhat similar to mandatory disclosure, uses public information campaigns to undo consumer misperception. Professor Epstein argues that public information campaigns are unnecessary, since "[a]nyone can enter the market on information.... And by putting the government into the fray, there is always the risk that debiasing will take the form of rebiasing, by overstating credit card risks to individuals who would do well to have them." See Epstein, *supra* note 1, at 131. While Professor Epstein is right that anyone can enter the market for information, non-government entities might not have sufficient incentives or sufficient funding to mount effective information campaigns. The risk of rebiasing is also a valid concern—one that needs to be weighed against the benefits of debiasing. See, generally, Christine Jolls and Cass Sunstein, *Debiasing Law*.

¹⁰⁹ See Epstein, *supra* note 1, at 131.

mistakes made by these consumers, the resulting contracts might be welfare-reducing.¹¹⁰ A carefully designed, pro-consumer default can prevent this undesirable outcome.¹¹¹

4. Summary

Professor Epstein lists other valid concerns about legal intervention in consumer contracts. There is the political economy concern: The “proposed legislation [might be] hijacked as a result of political and factional risks.”¹¹² There is the imperfect regulators concern: Policymakers are not immune to “the cognitive and emotional errors that plague the rest of us.”¹¹³ Agreed on all counts. The impediments to welfare-enhancing regulation are numerous and substantial. These impediments caution against any regulation, not only against regulation motivated by consumer mistakes. Still, despite all the costs and risks and imperfections, the optimal level of regulation is not zero. Some regulation is welfare-enhancing.

The valid concerns that Professor Epstein raises should affect the type of regulation considered. In particular, I agree with Professor Epstein that disclosure mandates should be tried first, before more obtrusive regulation is considered. I now turn to examine Professor Epstein’s position on mandatory disclosure.

B. Disclosure Regulation

Professor Epstein supports existing disclosure mandates. In particular, Professor Epstein supports the Truth-in-Lending Act (TILA) disclosures governing credit card transactions.¹¹⁴ I begin by questioning the efficacy of TILA-type disclosure mandates that require disclosure of objective features of the product or service. I then turn to consider a different kind of disclosure mandates that require disclosure of individualized information about how the product or service will be used by the specific consumer.

¹¹⁰ See *supra* Parts II and III.

¹¹¹ Another way to address the heterogeneity concern is by screening for sophistication. For example, only the very wealthy, who qualify as “accredited investors,” are allowed to invest in hedge funds. See SEC, Regulation D, Rule 501 (defining the term “accredited investor”). One reason for this regulation is that the rich have a greater tolerance for risk. Another reason is that wealth can serve as a proxy for sophistication, especially since money can buy expert advice. By the same token perhaps some consumers should be denied access to mortgage loans or credit cards. The financial risk imposed by these products is substantial. And the evidence suggests that not all consumers are sufficiently informed and sufficiently rational to understand the risk and protect against it. The problem, of course, is that accurate proxies for screening consumers are hard to come by. And using wealth as a proxy might result in denial of valuable products and services to poor consumers.

¹¹² See Epstein, *supra* note 1, at 128.

¹¹³ See Epstein, *supra* note 1, at 128. See also Choi, *Behavioral Economics and the SEC*

¹¹⁴ 15 USC § 1601 et seq (2000).

1. Disclosing Product Features

Professor Epstein argues that existing TILA disclosures sufficiently protect consumers in the credit cards market. Professor Epstein's main example of TILA's success is *Rossman v. Fleet Bank (R.I.) National Association*.¹¹⁵ *Rossman* concerned the application of TILA disclosure requirements with respect to the annual fee dimension of the credit card contract. TILA requires salient disclosure of key dimensions of the credit card contract through the so-called "Schumer Box." Fleet, in its card solicitations, included the word "none" in the annual fee row of the box. In the fine print, however, Fleet reserved broad powers to unilaterally change the terms of the contract, including the annual fee term. Indeed, some six months after the card was issued to Rossman, Fleet, invoking this unilateral change provision, increased the annual fee from zero to \$35.¹¹⁶

It would seem that, if anything, *Rossman* demonstrates the weakness of TILA disclosure requirements. How can TILA disclosures protect consumers, if each and every term that is saliently disclosed in the "Schumer Box" can be unilaterally changed by the issuer using a fine-print provision that need not be saliently disclosed? Professor Epstein brings *Rossman* as proof that "the prohibition against false and misleading statements has some pop in the truth-in-lending context,"¹¹⁷ because the Third Circuit, in *Rossman*, ruled that Fleet must maintain a zero annual fee for one year. The court held, in essence, that the "Annual Fee: None" disclosure overrides, for a limited period of time, the unilateral change provision. This limited period of time was deemed to be one year, because the fee was an *annual* fee. But what about other contract dimensions disclosed in the "Schumer Box"? What about other fees, like late fees and overlimit fees, that are not annual fees? Can issuers change the magnitude of these fees immediately? *Rossman* does not provide an answer.

Moreover, why is an "Annual Fee: None" disclosure good for only one year? Professor Epstein, in commending the *Rossman* ruling, argues that the 'no annual fee for one year' interpretation "comport[s] with the reasonable expectations of both parties to the transaction."¹¹⁸ But does it? Did Rossman expect, or reasonably should have expected, that an annual fee would be imposed after one year? And if so, did he expect the annual fee to be \$35? What if Fleet had imposed an annual fee of \$350? Would that too have been expected? It is not at all clear that Rossman even knew about the provision that allows Fleet to change any term of the contract unilaterally. The *raison d'etre* of the salient "Schumer Box" is the

¹¹⁵ 280 F.3d 384 (3d Cir. 2002).

¹¹⁶ See Epstein, *supra* note 1, at 125-27.

¹¹⁷ See Epstein, *supra* note 1, at 126.

¹¹⁸ See Epstein, *supra* note 1, at 126.

understanding that provisions buried in fine print, like the unilateral change provision, are not salient to consumers.¹¹⁹

The unilateral change provision, common in many credit card contracts, could render all TILA disclosures meaningless. *Rossmann* prevents such an outcome in the case of annual fees. But, as argued above, even after *Rossmann* a prudent consumer should not place too much weight on TILA disclosures.

2. *Disclosing Use Patterns*

One conclusion that could be drawn from the preceding discussion is that the shortcomings of current TILA disclosures can be remedied by more comprehensive disclosure requirements. For example, the issuer should be required to disclose not only the magnitude of the fees charged, but also its reserved power to unilaterally change these fees. More comprehensive disclosure may reduce the incidence of consumer mistakes.¹²⁰ But even perfectly effective disclosure of all product attributes would not solve the problem. The reason is that in many cases consumers are not mistaken about product attributes; they are mistaken about their future use of the product.

Consider another important attribute of the credit card contract featured in the “Schumer Box”—the late fee. Assume that disclosure is perfectly effective and consumers understand not only the magnitude of the late fee, but also the precise meaning of “late” as defined in the contract’s fine print.¹²¹ Assume further that a unilateral change provision does not exist or, alternatively, that consumers are fully aware of this provision and its repercussions. All this information is completely useless if the consumer mistakenly believes that she will never be late.

¹¹⁹ *Rossmann*’s ‘no annual fee for one year’ interpretation does not comport with Fleet’s expectations either. Fleet did not think that it had to wait a year before imposing an annual fee. Epstein acknowledges that “the bank had planned from the outset to impose an annual fee before the end of the year.” See Epstein, *supra* note 1, at 126.

¹²⁰ More comprehensive disclosure might *not* reduce the incidence of consumer mistakes, because of the risk of information overload. Imperfectly rational consumers can process only a limited amount of information. Therefore, more disclosure does not necessarily mean better-informed consumers. See Richard Craswell, “Taking Information Seriously: Misrepresentation and Nondisclosure in Contract Law and Elsewhere,” 92 Va. L. Rev. 565, 578 (2006) (arguing that provision of additional information dilutes the effectiveness of existing disclosures); Russell Korobkin, Bounded Rationality, Standard Form Contracts, and Unconscionability, 70 U. Chi. L. Rev. 1203 (2003) (consumers can process only limited amounts of information); GAO Increased Complexity Report, p. 46 (finding that credit card disclosures contain too much information); Mark Furletti, Credit Card Pricing Developments and Their Disclosure, Federal Reserve Bank of Philadelphia, Payment Cards Center, Discussion Paper, p. 19 (2003) (concluding that it is not clear that requiring more details in regulatory disclosures would be useful for consumers.)

¹²¹ See Tamara Draut & Javier Silva, Borrowing to Make Ends Meet: The Growth of Credit Card Debt in the ‘90s, at 35 (Demos, 2003), available at http://www.demos.org/pubs/borrowing_to_make_ends_meet.pdf (finding that most major issuers consider a payment late if it arrives after 2:00 p.m. on the due date).

TILA disclosures, especially disclosures in card solicitations, are supposed to help consumers make an informed choice among the many competing credit card products. Such informed choice is crucial for the efficient operation of the credit cards market. A consumer who underestimates the likelihood of paying late and triggering a late fee will not make a truly informed choice, even if she has perfect information about the magnitude of the late fee and all related contract terms.

Informed choice assumes two distinct categories of information: information about product attributes and information about how the product will be used. The current paradigm in disclosure regulation focuses almost exclusively on the former category. To be effective disclosure regulation must evolve beyond this paradigm. Use patterns should be added to the list of required disclosures.¹²²

An immediate objection to this prescription is that sellers know their products; they do not know how consumers will use their products. Or, a more refined version: Sellers have better information than consumers about the attributes of their product; they do not have better information than consumers about consumers' use patterns. This is surely true about some products. It is not true about all products.

In particular it is not true about credit cards. Credit card issuers often have more information about how a consumer will use the credit card than the consumer herself. First, issuers have detailed statistics about card use, including statistics about card use in the consumer's demographic and socio-economic group. Second, issuers have information on the individual consumer from the credit card application and from credit bureaus. Third, and most importantly, since issuers often maintain long-term relationships with consumers, they quickly obtain information about how this specific consumer uses this specific card.

Most of this information is available to the consumer. But many consumers do not know or do not remember all the relevant information. Also, many consumers do not consolidate information from these different sources and do not use sophisticated algorithms to analyze the information and predict future use based on this information. Issuers, on the other hand, consolidate all relevant information, store it in databases, update it regularly, and analyze it using sophisticated algorithms that can also predict future use.¹²³

¹²² There are examples of existing disclosure regulations that mandate use pattern disclosures. Still, in many consumer markets use pattern disclosure is missing. And, where use pattern disclosure is required, the use pattern information disclosed is often insufficient. See Oren Bar-Gill, "The Law, Economics, and Psychology of Consumer Contracts" (unpublished manuscript; on file with author).

¹²³ See Mark Furlletti, Credit Card Pricing Developments and Their Disclosure, Federal Reserve Bank of Philadelphia, Payment Cards Center, Discussion Paper, pp. 6-9 (2003).

The TILA disclosure apparatus can and should be amended to include disclosure of use patterns. For example, issuers can disclose the amount that an average consumer pays in late fees and, more importantly, how much the individual consumer has paid in late fees over the last year.

Another way to achieve informed product choice is by reducing mistakes in product use. If a consumer chooses a credit card with a high overlimit fee anticipating and preferring not to exceed the credit limit, disclosure of information on product use can help the consumer avoid inadvertently exceeding the credit limit. Specifically, Professor Ronald Mann proposed that issuers be required to disclose, through merchants at the point-of-sale, when a certain purchase would take the consumer over her credit limit and trigger an overlimit fee. Such a disclosure could help the consumer avoid unintentionally exceeding her credit limit, perhaps by switching to another card or to another payment system.¹²⁴

Disclosure at the point-of-borrowing can be similarly effective. For example, a consumer may choose a credit card with high penalty interest rates anticipating and preferring never to trigger these high rates, e.g., by paying late. To reduce the incidence of late payment, issuers can be required to disclose, on the monthly statement, perhaps on the payment stub itself, the increase in finance charges, based on the consumer's past and predicted future use, if he pays late.

Finally, a consumer might realize that she will borrow on her card but anticipates and prefers to quickly pay-off their balance. Accordingly, this consumer might attribute little weight to interest rates (and to the minimum payment provision) in card choice. Individualized disclosure, again at the point-of-borrowing, can reduce procrastination in debt repayment. Specifically, issuers could add the following warning on the credit card bill: "Debt Increasing - At your current repayment rate, it will take you 34 years to repay your debt and you will end up paying 300% of the principal."¹²⁵

¹²⁴ See Ronald J. Mann, *Charging Ahead*, p. 162 (2006).

¹²⁵ Compare: Ronald J. Mann, *Charging Ahead*, pp. 160-61 (2006). According to a recent survey, many holders of bank-type cards "said it would be helpful to include on their billing statement information about the length of time it would take to pay off the balance if only the minimum payment were made each month." See Thomas A. Durkin, *Credit Cards: Use and Consumer Attitudes, 1970-2000*, 86 *Fed. Res. Bull.* 623, 629 (2000). Such an individualized warning, tailored to the consumer's actual repayment record, should be more effective than the general warning that Congress recently enacted as part of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, Section 1301. A more individualized version of section 1301, proposed in H.R. 1052, 107th Cong. (2001), was soundly defeated by the issuers' lobby.

CONCLUSION

Should the law account for mistakes that consumers make when contracting with sophisticated sellers? Professor Epstein's answer is 'no.' He maintains that these mistakes are not systematic and not robust. He rejects the idea that sellers respond to these mistakes by adjusting the design of their products and pricing schemes. He denies any adverse welfare implications arising from consumer mistakes. And, finally, he argues that regulation, attempting to respond to consumer mistakes, would do more harm than good.

In this Essay I have questioned the validity of this position—a position according to which the law of consumer contracts should feel free to ignore consumer mistakes. I have provided evidence that systematic mistakes persist in the marketplace. I have argued that sellers respond strategically to these systematic mistakes by redesigning their products and prices. I reviewed evidence of the welfare costs incurred because of consumer mistakes and the market's response to these mistakes. And I have argued that welfare-enhancing regulation is feasible.

What I did not argue is as important as what I did argue. I did not argue that systematic mistakes persist in every market. I did not argue that all sellers respond strategically to consumer mistakes. I did not argue that substantial welfare costs are incurred in every consumer market. And I surely did not argue for broad, intrusive regulation of consumer contracts. The evidence that I provided was market specific. Regulation should only be considered where such specific evidence proves the existence, in the specific market, of a behavioral market failure that generates significant welfare costs. Indeed, my view is that any legal intervention must be based on a detailed, market-specific inquiry.

The regulatory response must be market-specific as well. Like Professor Epstein I believe that generally the starting point for regulation should be disclosure mandates—the mildest form of legal intervention, legal intervention that facilitates rather than obstructs the efficient operation of markets. Obviously, the type of disclosure required should be tailored to the specific product and to the specific market conditions. Moreover, and here is where I part company with Professor Epstein, I do not believe that current disclosure requirements are sufficient. I advocate a reconceptualization of disclosure regulation that would recognize the importance of disclosing use patterns in addition to product attributes.

This Essay developed a four-step framework for studying the behavioral economics of consumer contracts, starting from a descriptive account of consumer mistakes and market responses to these mistakes, continuing with

a welfare analysis of market outcomes driven by consumer mistakes, and ending with the prescriptive question: should the law intervene and, if so, how? This framework provides a powerful tool for evaluating the need for regulation in consumer markets and for designing optimal regulation when needed.

THE NEOCLASSICAL ECONOMICS OF CONSUMER CONTRACTS

RICHARD A. EPSTEIN*

INTRODUCTION

There is little doubt that the major new theoretical approach to law and economics in the past two decades does not come from either field, but from the adjacent discipline of cognitive psychology, which has now morphed into behavioral economics. Starting with the pathbreaking work of Amos Tversky and Daniel Kahneman in the 1970s, the field has asked one question in thousand guises: do ordinary people obey the principles of rational choice in making their decisions? The usual answer given in the field is that in at least some domains they do not.¹ The new law and economics literature uses these behavioral findings, especially in the study of cognitive bias, to open a new chapter in the long-standing debate over the extent to which market failures the pave the way for government regulation—with the added twist that just about any market is now a plausible target for a new round of regulation.

The usual point of controversy is the neoclassical conclusion that competitive markets—that is, those with multiple, self-interested players on both sides of the market, armed with relatively full information—will generate a mix of goods and services that is superior to those that can be generated with various forms of government regulation. The conscious deviations from well-functioning competitive markets either introduce unwanted barriers or subsidies, both of which reduce overall output in the regulated sector, with spillover losses elsewhere in the general economy. The state creation of monopoly by entry restrictions, for example, will not only have a negative effect on the quantities and prices of goods and services to buyers and their customers, but will also provide an unwanted subsidy the sellers of some competitive technology.

There are, however, two-sets of well recognized circumstances in which the neoclassical theory accepts the proposition that some government intervention *may* make sense: private monopoly and imperfect information.

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¹ Amos Tversky & Daniel Kahneman, Judgment Under Uncertainty: Heuristics and Biases, in Judgment Under Uncertainty 3, 11 (Daniel Kahneman et al. eds., 1982); Daniel Kahneman & Amos Tversky, Prospect Theory: An Analysis of Decision Under Risk, 47 *Econometrica* 263 (1979). For legal applications, see, e.g., Cass R. Sunstein, Hazardous Heuristics, 70 *U. Chi. L. Rev.* 751 (2003) (reviewing Heuristics and Biases: The Psychology of Intuitive Judgment (Thomas Gilovich, Dale Griffin, & Daniel Kahneman, eds., 2002)). For the rejoinder, see, e.g., Gerd Gigerenzer et al., Simple Heuristics That Make Us Smart (1999).

The first arises in industries that for one reason or another do not assume competitive form. At its best antitrust law seeks to remove cartel agreements that restrict output, raise prices or divide territories.² Similarly, direct forms of rate regulation may be considered to cope with the problems of natural monopoly, when a single firm is the cheapest provider of any given level of output, as sometimes occurs with energy transmission, transportation, and communications.³ That monopoly issue has been raised with respect to certain practices of credit card companies,⁴ but I shall not consider it here.

The second topic is more vast because it addresses the effects of misinformation on the operation of various product and service markets. These difficulties can arise irrespective of the underlying market structure: both competitive and monopolistic markets fall within its scope. The basic instinct here is both simple and powerful: inaccurate calculations of expected benefits and/or costs of particular courses of action are always likely to lead the wrong choices.

Within the standard neoclassical field, no one doubts the existence of these structural or informational impediments to the operation of strong markets. But an immense debate arises over whether, and if so, what, types government regulation make sense in responding to these ills. The neoclassical tradition establishes a presumption against regulation in both these areas for three simple and compelling reasons. First, all forms of public intervention cost money, so that the proper question is not whether the current market operates imperfectly, but whether the costs of correcting the imperfections exceed the costs of allowing particular imperfections to remain. Second, most neoclassical economists fear that regulation will be misguided because of some misidentification of the particular imperfection. It is easy to think that the minimum wage cures the problem of inequality of bargaining power when in fact it distorts labor markets, as by hurting nonunion competition to union firms. Third, powerful political forces, with excellent private knowledge, often turn regulation to their own parochial ends by creating barriers to entry that block or hamper the emergence of strong competitive markets.

This cautious approach applies both to information markets generally, and to the full range of inventive arguments that Oren Bar-Gill has advanced for the increased level of regulation in credit card markets. Information breakdown comes in all forms, from deliberate fraud to inadvertent mistake. Without question the first order of public business is the control of fraud,

² Sherman Act Sections 1 & 2.

³ See, e.g., Harold Demsetz, *Why Regulate Utilities?*, *J. L. & Econ.* (1968); Richard A. Posner, *The Regulation of Natural Monopoly*, *Stan. L. Rev.* (1969).

⁴ See, e.g., *Wal-Mart*, 280 F.3d (2d Cir.)

which is limited in scope and serious in consequences. Simple mistakes are far more pervasive, but at the same time far more difficult to prevent. It is possible to take some simple steps, such as requiring standardized disclosures, that will reduce the rate of error without imposing heavy burdens on regulated parties. Here it is never quite clear whether the sensible forms of regulation duplicate the protections that would be otherwise in voluntary markets. But even if we put the prospect of sensible self-regulation to one side, there is little reason to quarrel with the disclosure of Annual Percentage Rates under Truth in Lending Laws.⁵ That targeted intervention that eliminates countless errors by ordinary consumers, and aids comparison shopping by standardizing interest rate calculations. The question is how much further the law ought to go. The correct answer, I think, is not very much further at all. Disclosure regimes are freely praised in the abstract, and at some level they work. But the law is littered with expensive disclosure regimes, such as those administered by the Securities and Exchange Commission, that have ever more dubious utility as they expand in scope and ambition. The best approach is to harvest the low-hanging fruit and then put the ladder away.

On this basic question, it is not surprising to find a good deal of separation between the behavioral approach championed by Oren Bar-Gill⁶ and the neoclassical approach to which I gravitate. The cognitive bias literature generally favors expanding the range of government regulation to include a wide variety of business practices that exploit the bias of consumers, or at least some consumers. I have resisted this regulatory impulse in a number of recent papers that deal with this issue.⁷ One of these articles argues that in general, light-handed regulation, such as APRs, are all that is required for the burgeoning consumer credit card market. More ambitious efforts to combat cognitive mistakes by direct regulation or disclosure provisions, do not in my view overcome the strong presumption of error under which they should be evaluated.

In his present article, Bar-Gill takes explicit issue with my point of view.⁸ In a well-turned phrase drawn from the antitrust law, he announces himself a believer in the “rule of reason” with respect to various regulatory approaches to these consumer contracts. He places that position in

⁵ 15 U.S.C. § 1601 et seq.

⁶ See, e.g., Oren Bar-Gill, *Seduction by Plastic*, 98 *Northwestern University Law Review* 1373 (2004) (henceforth: “*Seduction by Plastic*”); Oren Bar-Gill, *Bundling and Consumer Misperception*, Symposium: *Homo Economicus, Homo Myopicus, and the Law and Economics of Consumer Choice*, 73 *U. Chi. L. Rev.* 33 (2006) (Henceforth: “*Bundling and Consumer Misperception*”).

⁷ See, e.g., Richard A. Epstein, *The Regulation of Interchange Fees: Australian Fine-Tuning Gone Awry*, 2005 *Colum Bus L Rev* 551 [hereinafter, Epstein, *Interchange*]; Richard A Epstein, *Second-Order Rationality*, in *Behavioral Public Finance* 355 (E J McCaffery & J. Slemrod, eds. 2006); *Behavioral Economics: Human Errors and Market Corrections*, 73 *U. Chi. L. Rev.* 111 (2006). [Behavioral Economics]

⁸ Oren Bar-Gill, *The Behavioral Economics of Consumer Contracts*, this issue, at 4.

opposition to my own, which he accurately describes as favoring, with only limited exceptions, a per se rule of no regulation beyond such narrow matters as the APR. He has marshaled an impressive array of theoretical and empirical evidence to support his position, but in the end his extensive critiques do little to undermine my earlier position. As the focal point for his recent his analysis is my University of Chicago paper, I was happy to accept his kind invitation to write a critique of his position.

My prior position rests on several assumptions. First, the voluntary actions by individual consumers and their advisors, as well as by competitive sellers, tend to close an information gap in credit-card and other markets with standardized products. In preparing this paper, I took a look at many retail websites on a variety of industries and came away with the clear impression that pricing clarity is far greater now than it has ever been. Second, any one-size-fits-all regulation will not perform well in markets characterized by extensive consumer heterogeneity. And third, the regulation will often backfire by creating market distortions or barriers to entry.

It will, however, serve little purpose to repeat those arguments here. Rather the focus shall be on Bar-Gill's critique of my own position. Accordingly, part I of this paper therefore deals with the interaction between mistakes and standardization in consumer markets. I conclude that Bar-Gill overstates the level of consumer error by underestimating the corrective powers already at work, chiefly because he relies on an unduly cramped definition of a "standardized" good or service. Part II then critiques some of the key illustrations that Bar-Gill offers to show how credit card companies and other firms exploit these systematic biases. I conclude that his oversimplified description of these of these markets lead him, and the behavioral economists on whom he relies, to ignore more traditional explanations that better account for the apparently irrational behavior that they appear to observe. Part III then examines his more global case for regulation, and concludes that it offers no blueprint that goes above and beyond the extensive forms of regulation (some of which we could well do without) that are now in force. Credit markets are not perfect, but the introduction of new technologies, especially on the Internet, has vastly improved their operation and remains the most powerful way to combat consumer misperceptions of all sorts.

I. MISTAKES IN STANDARDIZED MARKETS

Bar-Gill and I both start from the same initial premise that cognitive mistakes are endemic to human behavior. Individual capacities to calculate the odds by formal methods are quite limited, for it is easy even for the

educated to fall into the mathematical traps that have long delighted the examiners who set problems for the College Boards. People's ability to learn by experience supplies a useful counterweight, but experience only prepares us for some the decisions we face; there are many other contingencies for which a diploma from the school of hard knocks does not help. Any argument in favor of markets, therefore, cannot realistically rest on any assumption of strong rationality, whereby everyone gets their sums (and double integrals) right all the time. Indeed, if they could, state regulation would be far more reliable than it typically is, given that even regulators cannot transcend the various biases that plague ordinary individuals.

Against this background, the neoclassical case for markets rests on the more qualified assumption that learning matters, such that on the issues that truly matter to them, people develop, if they do not already have them, good feedback mechanisms that lower the rate of shipwreck especially in standardized transactions. People do so because they pay the price for their own error. Some evidence for this result comes from a recent study of consumer behavior in six different kinds of credit markets—home equity loans, home equity lines of credit, credit cards, auto loans, small business lines of credit, and late fees for credit cards—prepared by Sumit Agarwal, John Driscoll, Xavier Gabaix and David Laibson,⁹ which investigates the relationship between age and cognitive performance. What I regard as most valuable about this study is that it does not rely on looking at studies of college studies, but tries to organize extensive data about the behavior of real people of all ages in credit markets. The relationship they posit is identical to that which applies to everything from mathematics to athletics. Starting in the early 20s, they note that people have powerful analytic and memory skills, but are weak in experience. As they grow older the basic mental skills then slowly to depreciate, but those losses are offset, usually more rapidly, from the gains to experience, so that the life cycle pattern, which nets out these two effects, shows first improvements in performance and thereafter a slow decline that increases toward the end of life. These effects are more or less constant across the different kinds of credit markets, and by their account lead to a difference, after controlling for risk of a bit more than one percent in the annual percentage rate of consumers, from about 6.50 percent to 5.40 percent, for example in the home equity market, with peak performance coming around age 53. In addition, their work reports variation across consumers of any given age, such that those who avoid familiar traps in borrowing (called rate-changing mistakes) do about the same, regardless of age. And these errors go down sharply—from about 80 percent at 18 to under ten percent at age 50, with most of the gains coming in the early years.

⁹ Sumit Agarwal, et al, The Age of Reason: Financial Decisions Over the Lifecycle, MIT Working Paper series, Working Paper 07-11, March 15, 2007.

The point of these studies should be encouraging because they show that learning really does matter in these contexts, and leads in my view to the conclusion that education on how loans work is often the best protection against various kinds of dangerous credit practices. In addition, their study does not cover the important (but difficult to measure question) of which persons in the various cohorts are most likely to make mistakes. Thus, it would be useful to see how the rate of error varies with educational levels across age, where the prediction is that the curve would be flatter, and lower, for those with more education at any given age. It would also be useful to know how the frequency of various rate-changing mistakes varies with the ability to get advice from parents (when young) or children (when older) on how to conduct these transactions.

Learning in this form is likely to have powerful effects, both in life generally and in credit card transactions. With experience, people can become familiar with, or learn to specialize in certain types of transactions. Either way, they can increase the fraction of their decisions over which they have or can acquire effective expertise. It does not therefore matter if they are unable generalize from their experiences to the larger scientific or decisional principles that lay behind their localized choice. Eskimos build heat-efficient igloos because survival is at stake, not because they are versed in the advanced principles of thermodynamics. For those events on which people have little direct knowledge, they need not rely solely on the input from potential transactors on the other side of the market. Often they seek either advice informally from friends or for hire from professionals who know more than they do. The people who cannot figure out complex financial choices are not unaware of their limitations. Knowing what they do not know, they hire financial advisors or invest in mutual funds. And they will turn to different professionals if need help in coping with depression or picking a mate. These common-sense checks against mistake do not work in all cases; nor does their use reduce the error rate to zero. But their consistent tug protects most people most of the time. No one could claim that no consumer will fall for the same marketing ploy twice. Yet by the same token, there is little hard evidence that consumers are impervious to knowledge, and studies like Agarwal's suggest that even in credit markets, people usually learn both from their own errors, and from the errors of others—bad news travels fast. We should not expect an epidemic of horror stories just because the law of large numbers guarantees that some inexcusable incidents will occur in markets that feature billions of transactions involving millions of people each day. Given that people are anxious to avoid financial losses, the widespread availability of protective devices makes it unwise to assume that an additional layer of public regulation will perform any useful protective function. To the

contrary, the danger is that the added complexity interposes yet another barrier to effective decisionmaking.

In evaluating the effectiveness of these self-help strategies, Bar-Gill is right to draw a distinction between standardized and nonstandardized products. The likelihood of mistake in with standardized products is much lower than with nonstandardized ones. Standardized products are easier to understand, because the party who sets the standard has an incentive to make the needed information available to potential customers in order to decrease their cost of doing business. People will invest more in mastering standardized devices, because they can spread the cost of their investments over multiple transactions. Put otherwise, it is easier to gain, and to share with others, useful experience about a standardized product than a nonstandardized one. Bar-Gill writes: “if a consumer makes toast only once a month and there is a 1/100 chance that the toaster will explode when used, it can take the consumer several years before she learns about the risk of toaster explosion.” Not if she has neighbors or reads consumer reports, given that virtually every toaster made will explode under standard use within six months of purchase. (It is worth noting that the probable risk of an explosion with a consumer product, apart from tampering, is less today than one part in a million.)¹⁰ No one of course can get similar levels of assurance in choosing marriage mates or even colleges.

But these problems do not afflict modern consumer markets, for the use of web-based information, for example, has increased transparency so great that it is hard to recall just how tedious it was to enter into routine business transactions before the web. For the constant fretting about imperfect information, people do at their desks tasks that previously needed the help of expensive and experienced professionals. Yet the travel agent for routine flights is gone. And for good reason: who could conceive of a better way to present information about pending flights than the Southwest Airlines site. This naïve consumer goes there first because I know that it works better than its rivals. The improvement in transparency in this market (where payment is by credit card) is a thousand-fold greater than it was in the old days of waiting in line to book tickets with real time travel agents who struggled to collect and transmit the information on prices and schedules. That systematic improvement is equally characteristic of modern credit markets. The ability to access credit card statements online has done more good for consumers than any form of regulation imaginable. The information is always up to date, and the options on payment are complete,

¹⁰ For a survey of the various fire risks, see Hazard Screening Report: Houswares and Kitchen Appliances <http://www.cpsc.gov/cpsc/pub/pubs/reports/2003rpt.pdf>. There were 467 reports of death from all types of housewares and kitchen appliances, of which the single most common cause were the 108 fire deaths from candle-related fires. *Id.* at 8. Most burn victims were over 75. Most of the minor injuries that warranted an Emergency Room visit were mechanical. Very few of these injuries appear from the summary to be due to defective products of any sort, although the study does not break this out.

so even if everyone does not know all the consequences of tardy payment, it is easy to figure out how to stay ahead of the pack, and to do so at the last minute, without being dependent on the vagaries of the US Mail. Behavioral economists duly fret about sticky default provisions,¹¹ but online credit card transactions offer no reason to worry. On my account, Chase puts the default button for payment on the current credit-card balance, and not on the amount owing on the last monthly statement. That choice suggests that Chase is more concerned about savvy customers taking advantage of the float than wringing out an extra interest payments from the revolvers (i.e. those who carry their balances over). To be sure, it appears that American Express puts the default down at minimum payment,¹² which suggests that there is a competition in strategies, and it would be instructive to see just how many people still with minimum balances just because the options are presented in that fashion. Probably not too many with the American Express client base. Not to worry, one click on the radio button restores the other option. Chase knows that it will be more likely to keep its customers if it makes clear the payment options. What system of regulation will do as well?

Bar-Gill, however, does not seize on the dynamic movements inside markets, here driven by Internet technology. Rather, his static approach is to begin with the difficulties that consumers face in using nonstandardized products. But the right first question asks whether the innovations in information technology have upset the older ratio between standardized and nonstandardized products, in ways that favor the former. Speaking generally, standard products win out because they reduce the costs of transactions on both sides of the market, whether we speak of loan securitization or standard rental car agreements. Let the critics of markets denounce commodification of markets in sex or kidneys. But in most markets, the ability to turn odd assemblages of value into standardized commodities is the key to success. People in any mainstream business call something a “commodity” because imitation and dissemination have sucked out all the monopoly rents from the project.

Given the virtues of standardization, it is useful to have some sense of what the term means. Predictably, Bar-Gill gives a narrower definition than do I, with the express intention of shrinking that category. Bar-Gill thus points to complex products that often provide potential customers which offers that vary in two or more dimensions, which he claims expands the opportunity for strategic firm behavior. But by the same token, the use of these multi-part tariffs also help sophisticated consumers by allowing them

11 Cass R. Sunstein & Richard H. Thaler, *Libertarian Paternalism Is Not an Oxymoron*, 70 U. Chi. L. Rev. 1159 (2003). Ah, but it is. Libertarian default rules is the more accurate, but less provocative term.

¹² At least for Chad Clamage.

to tailor any transaction to their needs. In any event, it seems to be a mistake to assume that the presence of any options is incompatible with the use of standardized agreements. That approach is neatly falsified by countless examples, including the payment options that are set up on the Chase credit card sites. Whether or not with think that additional disclosure is needed, there is no reason to impose an *external* restraint on the number of permissible options that can be embedded in a standard for contract. Firm standardization of terms helps facilitate management oversight and to preserve essential parity between customers. Second, the using standardized options makes comparisons across products offered by the same, or different, firms more transparent. One competitor could claim that for any given price it gives a longer warranty than the current supplier. Transferring that information seems easy when it is directed toward only one term of the arrangement. The ability of rivals to follow suit does depend not only on perceptions but also cost. If one seller has an inferior product, then either its warranty coverage will have to shrink or price will have to rise. There is in effect no real answer to the competitive thrust. Just ask General Motors.

On the second, of these issues, it is possible to imagine, as Bar-Gill imagines, that firms will opt out of the competitive game. He thus writes: “But when a flaw is pervasive in the industry, each seller must choose between correcting the flaw and educating consumers, or just going with the flow. It is not at all clear that the former, correction strategy will always prevail.”¹³ That observation seems highly implausible in any industry that is not highly concentrated. For this speak-no-evil approach to work, it has to be followed by all players. Once a single player deviates from this collective strategy, the information that is divulged will make it hard for any player to stick with the older approach, unless it is assumed that the party that seeks to press its advantage is utterly unable to make clear what it is offering to consumers, which seems highly unlikely given the skills of modern marketers. Assume five players in an industry. If there is only a 50 percent chance that any one of these will deviate from the cooperative mode, then the odds are only one in 32 that the collusive equilibrium will stick. Even that low figure is likely to be high, so long as the first firm to deviate from that solution gains some first-mover advantage, which its own marketing expertise should help it obtain. Nor is any firm likely to succeed by adopting some evasive strategy when others have told the straight story. Customers will migrate from the firm that gives poorer information. So long as built-in options are part of the standard-form game, the dominant strategy is for firms is to move ever-more transactions into standardized categories, and not to develop sophisticated, but costly, ways of coping with breakdowns in nonstandardized products,

13 Bar-Gill at 2

which can only be fixed with expensive customized treatment. And just that has happened, with every web-based transaction, for example.

Bar-Gill next argues that these forms are really not standardized at all, because the conditions that surround their use depend, for example, not only on what the issuing bank supplies, but also on the distinctive patterns of product use:

[W]hen the nature of the product is more broadly defined to include the potential uses of the product, then the group of standardized products shrinks. The value of a product does not depend only on the product's intrinsic features. It depends also on the potential uses of the product. And if different consumers use the product differently, then an otherwise standardized product becomes functionally non-standardized. And this can inhibit learning. If one consumer uses the product one way and through this use learns some information about the product, there is less reason to believe that another consumer who uses the product in a different way will find this information relevant.¹⁴

This caveat about distinctive uses of standardized products surely proves too much. By this account, no product is ever standardized, for people choose to spend their cash in different ways, or to drive identical cars in different ways, which they don't— then they pose even problems for regulators who could not draft sensible regulations the myriad of unknown end uses. But in most contexts, these supposed differences just do not matter. In supermarket transactions the price, type and quality of milk are all that need to be known. The buyer can decide whether to drink fresh skim milk—yes, it is OK to require expiration dates—or use it for preparing French toast.

The same principle holds in credit card markets. Just use the APR for all credit transactions, whether people borrow money for installing a home office or for a trip to Las Vegas. No workable system of credit card regulation can respond to a high rate of foolish purchases, if such they be. For those issues, the only plausible form of regulation must hone in on permissible end uses by allowing, perhaps unwisely, people to return certain specified goods sold by door-to-door salesmen, within three days of purchase. Bar-Gill cannot wiggle out of the following dilemma. The transactions that qualify as nonstandardized under his definition are precisely those for which any system of direct credit card regulation will fail, even in his reforms are adopted. The paternalist regulator who worries about imprudent purchases picks a losing strategy by regulating credit cards

¹⁴ Bar-Gill at 6. Similar thoughts are expressed at *Id.* at 2.

to the exclusion of cash or checks. Indeed those ills, customized help will from a different quarter, through for life-style consultants and financial managers. For some people disclosure is a sign that they need personalized help, which no lender could sensibly provide.

The regulation of nonstandardized markets also invites further difficulties. Just how is this done? Repeatedly, Bar-Gill stresses that the empirical nature of the underlying problems calls for a case-by-case or market-by-market response. Factor in the cost of public regulation, and the likelihood of a successful outcome seem slim. “The” proper market does not magically present itself, even if we ignore the endless variations in user markets. One example of the difficulty arises with the Australian Reserve Bank’s decision to control interchange fees in four-party credit transactions of the sort used by Visa and MasterCard, but not the three party transactions used by American Express.¹⁵

The Australian Reserve Bank thought that both consumer misperceptions about credit cards and the strong chokehold position of Visa and MasterCard justified cutting interchange fees, erroneously in my view.¹⁶ But even if the Bank read the situation correctly, it limited its intervention to the four-party arrangements of Visa and MasterCard to the exclusion of the three-party system of American Express. Unfortunately, Bar-Gill’s case-by-case approach opens the door to selective regulation that distorts the competitive processes, which could easily offset any supposed gains of direct regulation. Sure enough, in the Australian market, the differential system of regulation did create a competitive advantage for American Express.¹⁷ In sum, there seems to be little reason to think that the costs of additional regulation will be cost effective, and much reason to fear that selective regulation of credit card markets will introduce other distortions of far greater magnitude.

II. EMPIRICAL STUDIES

A Question of Perspective. The situation does not become more palatable when we look at the particular cases of consumer misperception on which Bar-Gill relies. At the outset, his accounts do little with the notion that

¹⁵ In four-party transactions, a merchant presents a credit card payment to its bank, which then is paid by the customer’s bank, which in turn charges the customers. Visa and MasterCard charge a “interchange fee” that lops off part of the repayment to the merchant bank. American Express is an integrated outfit that deals with both merchants and cardholders. It charges no interchange fee between banks, but keep a fraction of the amount owed for payment, which often exceeds that charged in the four-party systems. See, For accounts of these systems, see David S. Evans & Richard Schmalensee, *Paying with Plastic: The Digital Revolution in Buying and Borrowing* 1-21 (2d ed. 2005). Epstein, *Australian*, at XXXX.

¹⁶ See Epstein, *supra* at .

¹⁷ *Id.*

distinctive downstream uses create nonstandardized products. Rather, the cases that he presents all deal with misestimates of the future use or value of the product sold. As an initial matter, it is important to note that these risks rank far below other credit card issues, such as fraud, which has become a more important risk as of late. Historically, it includes persons who incurred credit card debt that they did not intend to repay, and people who use stolen credit cards for personal gain. Today, the biggest risk by far is the systematic theft of credit card information by people, often operating outside the United States, who hack into credit card data bases that are maintained by retailers and data processors.¹⁸ Frauds of this sort can result in losses in the hundreds of millions of dollars per year, for which individual prudence is no real protection. Second on the list is the panoply of monopolization charges brought against various companies, where billions are at risk.¹⁹ Right or wrong, the cost implications of this transaction again dwarf the small wealth transfers that *might* take place because of wrongful practices.

In comparison to these issues, the supposed ability of credit-card companies and other firms to manipulate various terms of their agreements looks like small potatoes. Its behavioral component is only a small part of the overall story. Other more traditional efficiency-based explanations play a far larger role.

Teaser Rates. Bar-Gill's first example of how "consumers make systematic mistakes" involves teaser, or low-interest introductory rates.²⁰ The supposed mistake comes from consumers who do not switch to other teaser rates offered by other banks, once their initial low- rate period runs out, especially since they maintain about the same credit card balances before. The implicit premise of his argument, which rests on the empirical research of Haiyan Shui and Lawrence Ausubel,²¹ is that the transactions costs to switch are less than the expected gains from shifting, at least for these nonrevolvers. (Revolvers, who pay off their loans regularly, do not care about these rates.) But that conclusion hardly seems obvious. Switching a credit card company involves more than filing a new application. There may be lag in getting the response. Yet canceling an existing card is often risky if there are disputed or outstanding charges, or if the credit card is used to pay off certain monthly bills on a regular basis. Any shift in card companies goes on the general credit record, which could lead other companies to turn down an applicant who is known regularly to switch. In

18 Big case is TJ Max or some such name.

19 Cite Wal Mart, 280 F3d, and Baxter's two sided markets; Evans and Schmalensee or other antitrust reference.

20 Bar-Gill, at 9.

21 See Haiyan Shui and Lawrence M. Ausubel, "Time Inconsistency in the Credit Card Market," 14th Annual Utah Winter Finance Conference (May 3, 2004) (Available at SSRN: <http://ssrn.com/abstract=586622>).

addition, the game is a bit trickier for the people who keep multiple credit cards, as it is not easy to juggle six or so cards at one time. In addition, many people think that this form of opportunism is not fair play, however legal. It is a bit like going to a reception to grab some food without staying to listen to the dinner speaker like others in attendance. And if it were done too often, then these rates would just dry up. Having read his plea, I have no intention of changing my credit cards any time soon, with all the fuss and bother it entails.

Hyperbolic Discounting. On a similar vein, it is no surprise that some individuals prefer a steeper discount for a shorter period to a higher one for a somewhat longer period. Thus if people know that they can accelerate their purchases—perhaps by timing the acquisition of a new card with large expenditures, then the purchase pattern makes sense. And if not, it remains unclear in dollar terms just how large the saving is.

In sum, an understanding of transaction costs and normal social practices explain why people hold on to their credit cards, without invoking any hyperbolic discounting hypothesis, which assumes that people overweigh their losses in the immediate period as against potential gains down the road. Bar-Gill acknowledges that there is little evidence of hyperbolic discounting in long-term mortgage markets, where the typical balances are far higher than those on credit cards.²² He then observes that the fact that “consumers make few mistakes in one market does not imply that they make few mistakes in all markets.”²³ That proposition is surely right if an inference was drawn about markets in hosiery from markets in credits. But it packs lots less pop when the move is from credit cards to mortgages, especially since no credit card has the outsized interest rates that are reported in some experimental settings: up to 345 percent for the first month, 120 percent for the year, and 19 percent for a ten-year wait, reported in the experimental literature.²⁴

Bar-Gill never proposes specific regulation for this ailment, but he does try to make the case for some regulation by using his own estimates as a basis for computing social loss. Thus he writes that “the \$250 cost of failing to switch cards at the end of the introductory period is born by the 35% of borrowing consumers who choose cards with introductory offers—1.4 million consumers per year. This implies an aggregate annual cost of \$350 million.”²⁵ But the overstatement should be manifest in this conclusion. If the above criticisms of Bar-Gill’s account of teaser rates are correct, then

22 Bar-Gill at 13.

23 *Id.* at 13.

24 For discussion see Epstein,

Shane Frederick, George Loewenstein, and Ted O’Donoghue, *Time Discounting and Time Preference: A Critical Review*, in C.F. Camerer, et al, eds, *Advances in Behavioral Economics* 162, 172-75 (2004).

25 Bar-Gill, at 27-28.

some of these consumers, perhaps even most, have played it right, at which point the lost payments could easily plummet. In any event, the \$350 million only refers to an inflated estimate of transfer payments. It does not explain why the social losses that stem from these payments should be regarded as equal to the size of the transfer payments. And what should be done anyhow, given that it does not make sense to order people to take out new cards when the low rates end?

Universal Default. Yet another practice that Bar-Gill finds objectionable relates to the question of universal default, which was the topic of a recent Senate Hearing.²⁶ Universal credit refers to the practice whereby interest rates on credit card loans will be raised in the event of a default of some other, and unrelated, noncredit card bill. The practice is not used uniformly throughout the industry, which indicates that market pressures are at work. These are likely to have strong impact if the increase comes without some form of advance notice to the individual cardholder to offer an explanation for the delinquency elsewhere. But some firms have persisted with the practice, and with suitable disclosures prior in the process, that decision does not appear to signal any form of cognitive bias or market failure. To the contrary, there is good reason to believe that defaults on unrelated loans are themselves positively correlated, such that a party who has defaulted on one occasion is more likely to do so others. If so, then the universal default provision, even if modified to allow for delayed implementation, can be defended as a way of reducing the cross-subsidies from better to worse credit risks, a move that has obvious efficiency advantages. As so often is the case, the aggressive condemnation of controversial practices may make credit markets less and not more efficient. There is little reason to think that individual credit card holders will volunteer information about their present credit status. The use of comprehensive credit devices could be defended on the ground that it reduces that most ubiquitous of market failures—asymmetrical information.

Checking Accounts versus Credit Cards. I think that there is a bit more pop to a study by David Gross and Nicholas Souleles,²⁷ which note that people keep money their checking at low rates of interest even as they do not pay off their credit card debt on which they have to pay a far higher rate of interest. But at least one competing explanation that demands attention. There are costs to running down checking account balances. The low average or minimum could trigger higher bank fees on accounts with minimum deposits. Using checking account funds to pay off the credit card could also make it awkward to write checks. Keeping the credit card balance alive could preserve both options, so long as the card has not been

²⁶ CNN Money: Senators to Review Credit Card Practices, March 7, 2007.

²⁷ David B. Gross and Nicholas S. Souleles, "Do Liquidity Constraints and Interest Rates Matter for Consumer Behavior? Evidence from Credit Card Data," 117 *Quart. J. Econ.* 149, 180 (2002).

maxed out. People are willing to pay for valuable options. But the price becomes too steep for large loans, at which point loan consolidations start to make sense, and a close empirical study of who takes them out and when could help shed more light on the underlying problem.²⁸

Noncredit-card Cases. In addition to looking at studies from the credit card industry, Bar-Gill goes further afield to document the notion of “misperception-based pricing”, that can arise whenever consumers are faced with a pricing regime with two or more dimensions. Sellers, even in competitive markets, can manipulate terms to receive an undeserved rate of return. His example is a kitchen table that could sell for either \$100 or for \$110 with a \$20 rebate. If consumers choose the rebate plan, they could end up paying more as a group by not cashing in 50 percent of the time.²⁹

Bar-Gill has done his sums right, but not his economics. It is always risky strategy to play the rebate game, given the risk of adverse selection. The likely scenario is that buyers will self-select into two categories. Those who are inattentive take the fixed price; those who are more disciplined take the rebate. Misperceptions have to be quite strong to counter that risk. We should look therefore elsewhere for asking why rebates are offered. In some markets, secret rebates are used where marginal cost pricing is highly inefficient, as with pharmaceuticals.³⁰ The impulse is to use the rebate as a sensible form of price discrimination. But most markets are not as complex as pharmaceuticals. Recently the web site for Brother³¹ displayed a \$20 rebate on the cheapest home consumer printer, but on no others. No theory of misconception-based pricing can explain this *selective* rebate. A simpler explanation is that the rebate is one way to stimulate sales of slow-moving or discontinued models. The skeptic should ask why the rebate is preferable to a conspicuous price cut, to which I doubt marketing people would point to misperception pricing.

This discussion easily segues to one of Bar-Gill’s favorite examples, the combined purchase printer and ink. The two-part pricing schedule allows a vendor to undersell the printer in order to recoup revenues on the sales of the cartridges to customers who underestimate their use. But Bar-Gill offers no evidence that people systematically underestimate or overestimate their use, when the most plausible assumption, especially in commercial markets with large accounts, is that the professionals get it right. Indeed, if small toner cartridges print 10,000 sheets for \$80, the cost of paper exceeds the cost of the toner: at \$6.00 per ream of 500 sheets, it equals, \$120.00,

²⁸ Are there any.

²⁹ Bar-Gill, at 16.

³⁰ For discussion, see Richard A. Epstein, *Overdose: How Excessive Pharmaceutical Regulation Stifles Pharmaceutical Innovation* 68-70 (2006).

³¹ <http://www.brother-usa.com/printer/ata glance.aspx?type=HHO>.

for which there is no tie.³² So why worry first and foremost about the ink. Nor is there any reason to worry if the price of paper is just ignored. The Hewlett-Packard web site goes to enormous lengths to persuade consumers not to refill their empty cartridges with ink supplied from other suppliers. That constant source of competition must exert at least some pressure on prices. The exclusive rights that the printing companies have over their own cartridges, which have been sustained against antitrust challenges,³³ do not block this distinct form of entry.

Other forces also limit the pricing freedom to printer manufacturers. Low printer prices bring the customer in while the toner price facilitates demand-based price discrimination, where the cost varies with the intensity of use. But monitoring does not imply extra high prices in light of the refill option, and the ability of customers to move elsewhere given the low printer prices. The enormous range of printer and toner choices hardly speaks to price manipulation but vigorous competition in markets with sophisticated customers, many of whom are professional buyers for firms. In this market, ordinary consumers can free ride their expertise. One look at the Office Depot web site³⁴ should confirm that view. The dominant price movement is down, down, down while performance moves up, up, up. Regulation to insure cost-justified pricing for toner cartridges is a wild goose chase.

Health Clubs. The health club market reveals the same pattern. The problems of estimation are not dominant for folks with regular routines. Practically, one membership problem arises for people who live in one city for only part of the year, and so desire plans that suspend their monthly membership fees during periods of absence, for which the East Bank Club of Chicago makes allowances, at least for people over 65. But the real difficulty in these cases is strategic behavior by customers. Hence this warning: “There are never discounts or specials on membership, so it doesn’t really matter when you join. You can cancel your membership at any time, but think hard first, because you won’t be allowed to join again for nine months.”³⁵ The price? Not cheap but not as steep as I had anticipated: There is a \$500 enrollment fee and monthly fees range from \$115 to \$165.”³⁶ The monthly pricing helps the clubs stabilize their earnings and to prepare for the anticipated use of their facilities. The multiple plans are needed to cope with customer heterogeneity. Quite sensibly EBC precommits itself to relative prices. The customer then

³² <http://www.officedepot.com/browse.do?Nr=200000&N=200878>.

³³ *Independent Ink, Inc. v. Illinois Tool Works*, 547 U.S. 28 (2006) (requiring proof of a monopoly in the tying product market to attack the tie-in)..

³⁴

http://www.officedepot.com/inkTonerManuf.do;jsessionid=0000S_K_Q5V0pG3gV7v99CMkfsf:11st68003.

³⁵ <http://centerstagechicago.com/healthclubs/500NKingsbury.html>

³⁶ My kind of club, fit Sugar: <http://fitsugar.com/118989>

decides which option generates the highest surplus. Pricing misperception does not look like a credible story.

III. THE FUTILITY OF (MUCH) MORE GLOBAL REGULATION

The last section of Professor Bar-Gill's paper contains his grand plea for further regulation, with due emphasis on both terms. As to the former, we both accept the use of the APR and the Schumer Box to convey relevant information. My guess is that firms are comfortable with both because they boost the overall willingness of consumers to acquire credit card by lowering the costs of acquisition. But is there more low-hanging fruit that is worth harvesting? I doubt it. Bar-Gill has no specific proposal. Instead he tries to make out the case for further legislation by pointing to regular standbys: negative externalities and adverse distributional consequences. The former follow because credit card debt can take down families. But on the other side of the ledger the inability to gain credit has negative externalities as well, especially if parties are forced into the arms of other kinds of lenders who have higher costs and more uncertain collection and control procedures. So even if the stakes are higher, the choice between the status quo and further (or even less) regulation is unclear. On the distributional frontier, he notes that the consequences of error are more likely to fall on poorer persons with limited education.³⁷ He might have also mentioned, first, that the ability to get credit cards into poorer families will on average help their position, and, second, the current forms of disclosure offer their greatest advantage to the least educated, even if the costs of regulatory compliance is spread across a wider population. Broad considerations such as these hardly tell us what to do next.

Bar-Gill also takes on the view that self-regulation within the industry helps guard against extending credits to those who are not in a position to use it wisely. My position is that the prospect of serious losses explains why credit card companies turn down some applicants and impose financial limitations on others. Bar-Gill counters that credit card companies might jettison self-regulation to adopt a "sweat box" model whereby the high fees along the way more than compensate for the inability to recover anything in bankruptcy.³⁸ That approach requires credit-card companies to live dangerously, especially if the risks of default among customers are positively correlated. As this is written, matters are badly amiss in the subprime (i.e. high-risk) lending market where at present around 14 percent of monthly payments are 60 days late, up by about 100 percent in the past

³⁷ Bar-Gill, at 32.

³⁸ Bar-Gill at 39.

year.³⁹ One major lender, New Century Financial, will have to restate earnings for three quarters and is under criminal investigation. A second, Fremont General, has announced its intention to sell off its subprime portfolio. Federal regulators under their present powers are thinking about imposing tighter standards. None of their activity is driven by the ability of these mortgage companies to exploit pricing misperceptions, which could be handled under the current laws. Rather, the recent flurry stems from the bets that subprime lenders made on the housing market, which turned bad when that market turned weak. These lenders did not make up through high interest rates what they lost on principal.

Large credit lenders face similar risk, and it is most doubtful that any of them follow policy that is inconsistent with their own card limits and credit scoring devices. Suppose that a company collects 30 percent interest for two years on average balances of \$2,000, with another ten percent in fees. It is now up \$800. It is hard to see how that sum compensates for a bankruptcy that results in a loss of that outstanding balance after two years. Even a five year run looks very dicey. It is far more plausible for a bank to adopt the tried-and-true two-part strategy. First, try to accurately classify and limit the risk, and then charge the right rates for the risks that remain. Self-regulation still matters, and where it does not the problem is not with credit card companies that exploit the innocent. It is with those who let themselves get exploited by foolish credit card decisions. Yet there is no way to help through once the usual disclosures have been made. Rather, individualized attention to look at the entire earning and spending pattern is far better, and far more targeted. There is no reason to bring down people who know how to use credit cards in the futile effort to help those who would be in as much trouble with pay-day loans as with credit cards.

In the end, the most that one could contemplate are modest emendations of what goes into the Schumer box. One candidate could concern unexpected increases (fully disclosed at the time) in annual fees after the initial honeymoon period. Bar-Gill thinks that *Rossman v. Fleet Bank (R.I.) National Association*⁴⁰ leaves too much play in the joints. But the whole point is little more than a tempest in a teapot. The major fear is that the bank could impose an annual fee of not \$35 but \$350, but there is no evidence that this maneuver has ever been attempted, or that any bank could survive the din once that information became common knowledge. Perhaps, just perhaps, we might require shifts in fees not to exceed \$100 per

39 James R. Hagerty, Damian Paletta & Lingling Wei, Subprime Troubles Grow, *The Wall Street Journal* March 3-4, 2007, at A3; Vikas Bajaj & Julie Creswell, Authorities Investigate Big Lender, *The N.Y. Times*, March 3, 2007 at B1
40 280 F.3d 384 (3d Cir. 2002), which I discuss in Epstein, at 125-27, and Bar-Gill addresses at 27-28 & 37-38.

annum, to pick a number. The point here is to prohibit that which will not happen anyhow. So why bother? Tinker if we must. Yet that said, I think that it is plain why the disclosure issues for credit card regulation have no political traction today, even with the advent of the behavioral approach. No one is quite sure what additional disclosures should be made, or has any confidence that they could alter these behaviors if they are as ingrained as Bar-Gill and others presuppose. Or that if people do substitute away from credit cards they will take a straight and narrow path instead of some other ruinous choice.

This prospect for ephemeral gains at best to the bottom end of the distribution comes at a high price for everyone else. Truth be known most people like credit cards for their unparalleled convenience. Most people would rather have higher limits than lower ones. The ability of perhaps 90% of the population or more to use these cards well cannot be ignored. The ex ante costs of regulation fall on good and bad consumers alike, which means that it won't pass if most people are comfortable with the system they have. In the end, we shall see at most marginal changes on this frontier unless and until some widespread scam hits the marketplace. The real issues have to do with industry structure and the security of credit card information. Behavioral economics comes in a distant third place, and there for the foreseeable future, it will happily remain.