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BEHAVIORAL LAW AND ECONOMICS, PATERNALISM, AND CONSUMER CONTRACTS: AN EMPIRICAL PERSPECTIVE

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Abstract

Modern legal scholars frequently and increasingly base their analyses on the assumption, grounded largely in the extensive experimental literature, that individuals are subject to a number of systematic behavioral biases. Within the legal literature, behavioral economic analysis has been relied upon to generate a significant number of proposals for paternalistic regulation. These proposals are frequently accompanied by claims that neoclassical economics is insufficiently flexible to deal with these empirical observations, and that behavioral law and economics is as a superior guide for policy analysis. These claims must ultimately be resolved empirically and turn on whether incorporating insights from behavioral economics improves our ability to explain the law, understand the behavior of economic agents, or predict the consequences of legal change. This

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paper focuses on the shared interest of both neoclassical and behavioral economists in empiricism and explanatory power. It asks whether behavioral economic analysis of law has increased our knowledge in an area of “consumer contracts.” Specifically, the paper surveys the available empirical evidence to assess claims from the behavioral law and economics literature involving exploitation of consumer biases with credit cards, standard form contracts, and shelf space contracts. I find that the empirical studies of firm and consumer behavior in these examples do not support the claims that behavioral law and economics generates greater predictive power than conventional price theory.

I. Introduction

Modern legal scholars frequently and increasingly base their analyses not on neoclassical economics’ assumption of rationality, but on the assumption that individuals are subject to a number of systematic behavioral biases. This assumption is itself grounded largely in a substantial experimental literature documenting bounded rationality, errors in judgment, and non-standard preferences.¹ Although some scholars have challenged this empirical literature,² they have not generally denied the existence of cogni-

¹ For a summary of this literature, see Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998); Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051 (2000).

² See, e.g., Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 STAN. L. REV. 1551 (1998) (arguing that apparently irrational behavior is, upon deeper inspection, ultimately rational); John A. List, *Neoclassical Theory Versus Prospect Theory: Evidence From the Marketplace*, 72 ECONOMETRICA 615 (2004) (arguing that laboratory results are not robust to market interactions where competition, expertise, and learning might be expected to ameliorate these biases); John A. List, *Does Market Experience Eliminate Market Anomalies?*, 118 Q.J. ECON. 41 (2003) (same); Michael S. Haigh & John A. List, *Do Professional Traders Exhibit Myopic Loss Aversion? An Experimental Analysis*, 60 J. FIN. 523 (2005) (same); John A. List & Uri Gneezy, *Putting Behavioral Economics to Work: Testing for Gift Exchange in Labor Markets Using Field Experiments* (Nat’l Bureau of Econ. Research, Working Paper No. 12063, 2006) (same); Charles R. Plott & Kathryn Zeiler, *The Willingness to Pay-Willingness to Accept Gap, the “Endowment Effect,” Subject Misconceptions and Experimental Procedures for Eliciting*

tive biases, or the possibility that behavioral models might have greater predictive power than neoclassical models under some conditions.

Legal scholars relying on this literature have overwhelmingly concluded that the presence of such cognitive errors favors paternalistic intervention. As one leading academic notes, "virtually every scholar who has written on the application of psychological research on judgment and choice to law has concluded that cognitive psychology supports institutional constraint on individual choice."³ Within the legal literature, behavioral law and economics scholars also claim that the tools of neoclassical economics are insufficiently flexible to deal with these new empirical observations, though the history of the evolution of neoclassical economics suggests otherwise.⁴ Nevertheless, some scholars have been less san-

Valuations, 95 AM. ECON. REV. 530 (2005) (finding that the existence and magnitude of the "endowment effect" to be a function of experimental procedures and subject misconception rather than individual preferences); Elizabeth Hoffman, Kevin McCabe, Keith Shachat & Vernon Smith, *Preferences, Property Rights, and Anonymity in Bargaining Games*, 7 GAMES & ECON. BEHAV. 346 (1994) (arguing that experimental results themselves are the product of experimental procedures and subject misconception rather than individual preferences).

³ Jeffrey J. Rachlinski, *The Uncertain Psychological Case for Paternalism*, 97 NW. U. L. REV. 1165, 1166 (2003). Prominent examples of this type of argument include: Richard H. Thaler & Cass R. Sunstein, *Libertarian Paternalism*, 93 AM. ECON. REV. 175 (2003); Jolls, Sunstein & Thaler, *supra* note 1, at 1541; Colin Camerer, et al., *Regulation for Conservatives: Behavioral Economics and the Case for "Asymmetric Paternalism,"* 151 U. PA. L. REV. 1211 (2003).

⁴ Neoclassical economics has responded to a series of challenges based on the desire to "update" its application to real world observations. For example, neoclassical economics has adjusted to the reality that firms in real world markets face downward sloping demand curves, and to claims that competitive dynamics between small numbers of firms involved interdependencies and strategic interaction far different than predicted by the neoclassical approach. From these adjustments came the birth of transactions cost economics, industrial organization, a theory of oligopoly, the economic analysis of information and search costs, and other contributions now considered standard price theory. Henry Manne recently made this point at a symposium on the implications of the behavioral finance literature, noting that: "[e]conomists should have no difficulty integrating the useful findings of the psychologists into this newer understanding of how markets function, and I suspect that behavioral finance will end up as an important sub-field of the theory of price forma-

guine about the support that behavioral economics lends to the case for paternalism, arguing that a more complete analysis of the long-run costs and benefits of paternalistic regulations suggests a much more limited role for government intervention.⁵ They have emphasized the costs of paternalistic proposals, for example, paternalistic regulations may lessen the incentive to engage in learning and the development of rational behavior or exacerbate irrational behavior by introducing moral hazard.⁶

While economic analysis of the law certainly is capable of incorporating the insights of behavioral economics, the question is whether such a move would be desirable. This is largely an empirical question that turns on whether incorporating the insights from behavioral economics improves the ability of economics to explain

tion." Henry Manne, *Remarks on the Lewis & Clark Law School Business Law Forum: Behavioral Analysis of Corporate Law: Instruction or Distraction?*, 10 LEWIS & CLARK L. REV. 169, 176 (2006).

⁵ See, e.g., Jeffrey J. Rachlinski, *Cognitive Errors, Individual Differences, and Paternalism*, 73 U. CHI. L. REV. 207 (2006); Richard A. Epstein, *Behavioral Economics: Human Errors and Market Corrections*, 73 U. CHI. L. REV. 111 (2006) (discussing the heterogeneity of cognitive biases and illustrating costs of over-regulation in the context of credit card borrowing); Edward L. Glaeser, *Paternalism and Psychology*, 73 U. CHI. L. REV. 133 (2006) (arguing that private decisionmaking typically results in better outcomes than public decisionmaking given the effect of "flaws in human cognition"); Jonathan Klick & Gregory Mitchell, *Government Regulation of Irrationality: Moral and Cognitive Hazards*, 90 MINN. L. REV. 1620 (2006) (utilizing economic and empirically-based psychological models of decisionmaking competence development to demonstrate the potential for paternalism to worsen rather than alleviate concerns about irrational choice). For a critique of behavioral law and economics scholars' use of empirical data to support their underlying assumptions, see Gregory Mitchell, *Why Law and Economics' Perfect Rationality Should Not Be Traded for Behavioral Law and Economics' Equal Incompetence*, 91 GEO. L.J. 67, 73 (2002) ("This article brings to bear a much more complete set of empirical data than that relied on by the behavioral law and economics scholars to demonstrate the dubious empirical status of the equal incompetence assumption and, by implication, the dubious status of the behavioral law and economics movement as currently conceived."); Gregory Mitchell, *Taking Behavioralism Too Seriously? The Unwarranted Pessimism of the New Behavioral Analysis of Law*, 43 WM. & MARY L. REV. 1907, 1945 (2002) (identifying the erroneous application of psychological research by behavioral law and economics scholars).

⁶ See, e.g., Klick & Mitchell, *supra* note 5, at 1625-26, 1637.

the law or the behavior of economic agents, or to predict the consequences of legal change.⁷ Both neoclassical and behavioral economics stress empiricism. Neoclassicists have traditionally stood behind Milton Friedman's statement that a "theory is to be judged by its predictive power."⁸ Behavioral economists interested in its applications to the law have described the goal of their endeavor as producing economic analysis of the law "with a higher R-squared."⁹ Christine Jolls also notes that "behavioral economics attempts to improve the predictive power of law and economics by building in more realistic accounts of actors' behavior."¹⁰

This paper focuses on this common interest in predictive power and empiricism shared by neoclassicists and behavioral economists. Specifically, I address the question of whether behavioral economic models have increased our knowledge of economic behavior in the context of what I describe as "consumer contracts." While this is a small subset of behavioral economic analysis of the law, one might reasonably believe that the impact of cognitive biases is greatest in consumer markets where learning, specialization, and repeat interaction are less likely than in relationships between firms. An exhaustive survey of the empirical evidence supporting or contradicting the testable implications of even this subset of behavioral models would be a monumental task. Therefore, I further limit my empirical investigation to firm exploitation of consumer biases involving the credit card market, standard form contracts, and shelf space contracts, and find that the empirical studies of firm and consumer behavior in these examples do not support the claims

⁷ The question is not entirely empirical. The school of thought referred to in this paper as "behavioral economics" presents a separate methodological critique of the ability of psychology and economics to displace standard economic theory. See, e.g., Faruk Gul & Wolfgang Pesendorfer, *The Case for Mindless Economics* (unpublished paper), available at <http://economics.uchicago.edu/pdf/Pesendorfer040306.pdf>.

⁸ Milton Friedman, *The Methodology of Positive Economics*, in *ESSAYS IN POSITIVE ECONOMICS* 3, 8 (1953).

⁹ Jolls, Sunstein & Thaler, *supra* note 1, at 1487.

¹⁰ Christine Jolls, *Behavioral Law and Economics*, in *ECONOMIC INSTITUTIONS AND BEHAVIORAL ECONOMICS* (Peter Diamond ed., Princeton Univ. Press) (forthcoming 2006).

that behavioral law and economics generates greater predictive power than standard price theoretic analysis.

II. Credit Cards

Behavioral law and economics scholars have suggested that market failure in the credit card market is a function of behavioral biases that consumers routinely exhibit in borrowing,¹¹ and that credit card firms' exploitation of these biases results in reduced consumer welfare. Professor Oren Bar-Gill, for example, argues that consumers consistently underestimate their future borrowing due to a hodgepodge of behavioral biases such as imperfect self-control, hyperbolic discounting, piecemeal borrowing, and systematically underestimating the probability of negative consequences (e.g. that they will be unable to pay their debt or will simply forget that their bill is due).¹² These scholars have argued that short-term features of credit card contracts such as "teaser rates," zero annual fees, and reward programs are not signs of healthy competition in the credit card market, but rather, of significant consumer welfare losses that justify paternalistic intervention. A second feature of the behavioral economic analysis of the credit card market in particular is the posited causal relationship between credit card borrowing and bankruptcy resulting from these biases.¹³

The hallmark of behavioral accounts of borrowing behavior in the credit card market is that consumers are "seduced" into a dangerous slide into debt by issuer competition on short-term features such as rewards programs and teaser rates. Consumers accumulate more debt—and at higher interest rates— than they in-

¹¹ See, e.g., Cass R. Sunstein, *Boundedly Rational Borrowing*, 73 U. CHI. L. REV. 249 (2006).

¹² Oren Bar-Gill, *Seduction by Plastic*, 98 NW. U. L. REV. 1373, 1395-1411 (2004); see also Lawrence M. Ausubel, *The Failure of Competition in the Credit Card Market*, 81 AM. ECON. REV. 50 (1991) (asserting that consumer irrationality explains observed pricing behavior in the credit card market).

¹³ See, e.g., Lawrence M. Ausubel, *Credit Card Defaults, Credit Card Profits, and Bankruptcy*, 71 AM. BANKR. L.J. 249 (1997).

tended, leading to reduced welfare and, in some cases, bankruptcy.¹⁴ Scholars in this field argue that because consumers are not sensitive to interest rate changes, competition between sellers exacerbates consumer welfare losses rather than mitigating them;¹⁵ thus, short-term features of credit card contracts such as “teaser rates,” zero annual fees, and reward programs are not signs of healthy competition in the credit card market, but traps for unwary consumers that justify paternalistic intervention.¹⁶

One obvious economic question is why these models predict unambiguous consumer welfare losses when sellers compete by offering greater short-term benefits to consumers until all supra-competitive profits are dissipated.¹⁷ Bar-Gill’s model imposes several unrealistic and highly stylized assumptions in order to obtain the result that such competition always decreases consumer welfare.¹⁸ One can, however, imagine a combination of assumptions

¹⁴ Bar-Gill, *supra* note 12, at 1399-1400.

¹⁵ *Id.* at 1376 (“[I]f the credit card market is indeed as competitive as it appears to be, issuers have to exploit consumers’ imperfect rationality in order to survive in this market.”).

¹⁶ See, e.g., Lawrence M. Ausubel, *Credit Card Defaults, Credit Card Profits, and Bankruptcy*, 71 AM. BANKR. L.J. 249 (1997).

¹⁷ For example, Bar-Gill notes that competition is “necessarily” bad for consumers because “the long-term costs to consumers will generally outweigh the short-term benefits.” Bar-Gill, *supra* note 12, at 1411.

¹⁸ Bar-Gill’s claim is puzzling given that his model does not specify the conditions under which this result holds, nor can one derive them because consumer preferences across time periods are not specified, and therefore one cannot analyze the consumer welfare tradeoffs between consumption over time. Bar-Gill’s model imposes the arbitrary and unrealistic assumption that consumers may not save at the market-determined interest rate and therefore must consume all of their first period income. These assumptions do not appear related to any sort of behavioral or cognitive flaw inherent to Bar-Gill’s analysis, but are particularly troublesome in a model about consumer borrowing behavior and income levels over time, and in light of his regulatory proposals which include reconsideration of usury laws. *Id.* at 1416-27. Further, Bar-Gill assumes that paying an additional \$20 in interest because of higher rates necessarily outweighs the benefits of a \$20 reduction in the annual fee because individuals only carry balances on their credit cards when they have lower income and therefore have higher marginal utility of income. *Id.* at 1412. In addition to the analytical error noted above, the assumption that individuals finance with debt only when they have low incomes seems inconsistent with the pervasive use of debt by

and consumer preferences that generates some an equilibrium in which consumer welfare decreases.¹⁹ In fact, several recent efforts by economists to model equilibrium equilibria with irrational consumers, or some combination of rational and irrational consumers, suggest the possibility of overborrowing and other failures of self-control in markets.²⁰

The critical question for the economic analysis of law is whether adding bounded rationality and cognitive biases to our models adds any explanatory power to our existing understanding of how the credit card market works. The behavioral approach to credit card competition and borrowing has a number of testable implications for consumer behavior, long-term interest rates, and bankruptcy patterns. In this section, I argue that the weight of this evidence cautions against adopting paternalistic interventions in the credit card market based upon behavioral explanations of borrowing.

A. Are Credit Card Users Rational After All?

There are a number of empirical studies examining actual consumer behavior in the credit card market. A comprehensive and recent study by Tom Brown and Lacey Plache tests the hypotheses of the behavioral model using a survey of consumer financial behavior commissioned by Visa U.S.A. known as the Payment System Panel Study ("PSPS").²¹ Brown and Plache conclude that hyperbolic

individuals with high incomes and with evidence that the majority of credit card users do not carry balances at all.

¹⁹ See, e.g., David Laibson, *Golden Eggs and Hyperbolic Discounting*, 112 Q.J. ECON. 443 (1997).

²⁰ See, e.g., Stefano DellaVigna & Ulrike Malmendier, *Contract Design and Self Control: Theory and Evidence*, 119 Q.J. ECON. 353 (2004); Xavier Gabaix & David Laibson, *Shrouding Attributes, Consumer Myopia, and Information Suppression in Competitive Markets* (unpublished working paper, April 2005); Alan Schwartz, *How Much Irrationality Does the Market Permit?* (unpublished working paper, 2005).

²¹ Tom Brown & Lacey Plache, *Paying with Plastic: Maybe Not so Crazy*, 73 U. CHI. L. REV. 63, 77-78 (2006) (describing the PSPS data).

discounting “does not explain the behavior of credit card issuers and their customers.”²²

Specifically, Brown and Plache are able to directly test the following predictions of the behavioral models of borrowing behavior:²³

- (1) Consumers with revolving balances should carry cards with higher long-term interest rates, lower annual fees, and higher short-term benefits such as rewards relative to consumers who do not carry balances on their cards every month;
- (2) Consumers with revolving balances will not substitute away from the use of credit cards when a new “pay-now” alternative, such as a debit card, is introduced.

Brown and Plache examine the first of these predictions by comparing the credit card features selected by non-revolvers and revolvers.²⁴ If the behavioral predictions of debtor behavior are correct, one would expect to see consumers who revolve debt carrying cards with no annual fees and higher interest rates than the non-revolving cohort. Brown and Plache, however, find that more non-revolvers than revolvers carry cards with average minimum APRs of greater than 10 percent and note that “this result does not support the hypothesis that hyperbolic discounting results in consumers bearing credit card debt at high interest rates.”²⁵ Brown and Plache also find that while most cardholders do not carry cards with annual fees, the majority of those that do are revolvers rather than non-revolvers. Again, the authors note that this result is inconsistent with the behavioral account of consumer “seduction” by short-

²² *Id.* at 78.

²³ *Id.* at 77.

²⁴ *Id.* at 80-83.

²⁵ *Id.* at 80 & Figure 2.

term features.²⁶ Finally, Brown and Plache also find that cardholders carrying cards without annual fees or with rewards programs are less likely to revolve balances than cardholders as a group.²⁷

Sumit Agrawal, Souphala Chomsisengphet, Chunlin Liu, and Nicholas Souleles ("ACLS") exploit a natural experiment involving credit card offers from a large U.S. bank to over 150,000 account-holders to test whether credit card consumers' ability to select the optimal credit contract.²⁸ ACLS examine consumers' selection between two credit card contracts, one with an annual fee but a lower interest rate and a second with no annual fee and a higher interest rate. The authors then examine post-contract borrowing behavior in order to assess whether consumers have selected the optimal credit card contract for their borrowing patterns, defined by minimizing ex post costs. Importantly, ACLS are also able to measure the magnitude of any ex post losses flowing from the choice of a sub-optimal contract. Consistent with Brown and Plache, ACLS find that the majority of consumers (about 60%) select the optimal credit card contract. Although a substantial minority of consumers initially select the "wrong" contract and incur avoidable interest charges, the authors find that these errors are bounded in magnitude by the level of the annual fee (typically around \$25). Further, consistent with standard economic theory, the probability of selecting the sub-optimal credit card contract is decreases with the cost of the error and increases with repeated consumer error, suggesting that learning may mitigate the relevant biases.

While these studies do not completely refute the possibility that behavioral biases cause some consumers to make sub-optimal decisions, the findings pose a challenge to behavioral scholars. Both

²⁶ *Id.* at 81 & Figure 3.

²⁷ *Id.* at 81-83 & Figures 4-5.

²⁸ Sumit Agarwal, et al., Do Consumers Choose the Right Credit Contracts? (Dec. 18, 2005) (unpublished working paper, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=843826); see also Eugenio J. Miravete, *Choosing the Wrong Calling Plan? Ignorance and Learning*, 93 AM. ECON. REV. 297 (2003) (presenting evidence that local telephone consumers behave rationally in selecting contracts and switching tariffs to minimize monthly payments).

the frequency and magnitude of sub-optimal credit card contract decisions appear to be less severe than is assumed in the behavioral law and economics literature. Further, it is difficult to reconcile models of irrational consumer behavior with the collective findings that consumers largely select the right contracts and err less often when the costs of doing so are higher. The best evidence of at least some consumer irrationality in this context is that a small minority of consumers make repeated errors. However, given that the magnitude of error costs are typically small, and perhaps greater than the effort costs of switching cards *ex post*, the failure of the some consumers to correct sub-optimal decisions may also be consistent with rational consumer behavior.

This empirical evidence is in tension with the simple behavioral theories relied upon in the legal literature, and contradicts the behavioral predictions that consumers are not sensitive to changes in contract terms. When coupled with the fact that the majority of consumers appear not to carry balances at all,²⁹ this evidence suggests that the magnitude of the effects of behavioral biases may be overstated in the behavioral law and economics literature. Further, because paternalistic regulation of consumers may reduce incentives to learn (and thus, opportunities to mitigate biases at lower cost), the wisdom of implementing such regulations is unclear.

A second prediction of the behavioral account of borrowing is that consumers who carry revolving debt will not substitute away from credit cards when a new “pay-now” payment method emerges. Brown and Plache describe the hypothesis as follows:

[I]f people really do not expect to end up in debt when they use their credit cards, then there is no reason to expect them to substitute away from credit cards that typically offer a thirty-day float period in addition to other benefits to

²⁹ See Todd J. Zywicki, *An Economic Analysis of the Consumer Bankruptcy Crisis*, 99 NW. U. L. REV. 1463, 1493 n.113 (2005) (citing evidence from a variety of sources estimating the percentage of “convenience” users who do not revolve debt as falling between 55 and 68 percent).

a new pay-now payment method that offers some of the benefits of credit cards, such as universal acceptance and no (or negative) marginal cost, without incurring debt, but requires immediate payment.³⁰

Brown and Plache show that revolvers responded to the introduction of the general purpose debit card by shifting spending away from credit cards.³¹

There is also evidence suggesting that consumer borrowing behaviors, and particular substitution patterns, respond to the relative prices of alternative forms of debt.³² Specifically, Todd Zywicki shows that the increase in consumer debt has occurred along with a corresponding decrease in installment debt burdens, suggesting a shift in the composition of consumer debt away from less attractive forms of debt such as pawn shops, check-cashers, and rent-to-owns.³³ The evidence that consumer substitution patterns are sensitive to relative prices not only suggests rational behavior, but also indicates that at least some portion of the increase in consumer credit card debt is a function of consumer preferences for credit card debt over installment debt. To the extent that consumers are exhibiting rational switching behavior away from more burden-

³⁰ Brown & Plache, *supra* note 21, at 83.

³¹ *Id.* at 84 & Figure 6. Revolvers' decisions to switch are inconsistent with predictions that consumers with ex ante beliefs that they will not incur debt will not respond to such a card, but may also reflect the ex post realization that those beliefs are erroneous. The policy implications of such learning by consumers, followed by increased sensitivity to interest rates, are unclear for the behavioral theories with generally assume consistent irrationality.

³² Zywicki, *supra* note 29, at 1492-97 & Figure 8.

³³ *Id.* at 1494-95 (discussing trends and empirical studies documenting shift to credit card debt from installment debt). See also Thomas A. Durkin, *Credit Cards: Use and Consumer Attitudes, 1970-2000*, 86 FED. RES. BULL. 623, 623-24 (2000); Wendy M. Edelberg & Jonas D. M. Fisher, *Household Debt*, 123 CHI. FED. LETTER 1, 3 (Nov. 1997)("[T]he increase in the credit card debt burden for the lowest income group appears to be offset by a drop in the installment debt burden. This suggests that there has not been a substantial increase in high-interest debt for low-income households, but these households have merely substituted one type of high-interest debt for another.").

some forms of debt, it is difficult to understand how the introduction of this additional choice for consumers decreases welfare.

B. “Sticky” Interest Rates and Borrower Rationality

A second characteristic of behavioral accounts of market failure in the credit card market is the assertion that interest rates are “sticky”—i.e., not responsive to changes in the opportunity costs of capital. Behavioral law and economics scholars attribute this stickiness to the influence of cognitive biases on borrowing behavior.³⁴ To be sure, there is some evidence of sticky interest rates. The basis for this finding is conventionally attributed to Lawrence Ausubel’s regression analysis of interest rate changes from 1982-89.³⁵ Paul Calem and Loretta Mester present additional evidence that credit card interest rates were sticky during the 1980s and early 1990s.³⁶

Interestingly, however, the periods of time both *before* and *after* this ten year span pose an interesting puzzle for the behavioral explanation of sticky interest rates. For instance, Zywicki presents evidence that interest rates were relatively constant not only during the 1982-89 timeframe in the Ausubel study, during which the opportunity cost of capital was *decreasing*, but also during the 1970s, when the cost of funds was *increasing*.³⁷ For example, from 1972-1982 the federal funds rate increased from a monthly low of 3.29 percent in February 1972 to a high of 19.10 percent in June 1981. Therefore, it appears that credit card interest rates from 1972-1992 were invariant to the cost of fund rates in both directions. One would expect that credit card contracts designed to exploit cogni-

³⁴ Bar-Gill, *supra* note 12, at 1383 (“credit card interest rates are not responsive to cost declines”). See also Susan Block-Lieb & Edward J. Janger, *The Myth of the Rational Borrower: Rationality, Behavioralism, and the Misguided “Reform” of Bankruptcy Law*, 84 TEX. L. REV. 1481 (2006).

³⁵ Ausubel, *supra* note 16.

³⁶ Paul S. Calem & Loretta J. Mester, *Consumer Behavior and the Stickiness of Credit-Card Interest Rates*, 85 AM. ECON. REV. 1327 (1995).

³⁷ Todd J. Zywicki, *The Economics of Credit Cards*, 3 CHAP. L. REV. 79, 111-19 (2000).

tive biases would increase interest rates in response to an increasing opportunity cost of capital.

The evidence also shows that rates are more sensitive to changes in the cost of capital in recent years, and that credit card issuers have increasingly competed on interest rates in the years following Ausubel's original study.³⁸ For example, Brown and Plache recently evaluated the sensitivity of interest rates to changes in the opportunity cost of capital from 1995-2004 utilizing the same PSPS data described above.³⁹ Brown and Plache found, contrary to the predictions of the behavioral models, that "these rates appear quite sensitive to the changes in the opportunity cost of capital."⁴⁰ For example, Brown and Plache note that in the relevant time period, the return on ten-year treasury notes fell from 6.6 to 4.3 percent, and the spread between interest rates on credit cards and returns on treasury notes fluctuated between 8.3 and 9.3 percent.⁴¹

Taken together, the evidence in Parts II.A and II.B suggests that consumers are sensitive to interest rate changes and exhibit rational substitution patterns with respect to alternative forms of debt. In addition, the evidence strongly suggests that consumers generally select the optimal credit card contract, and that failure to do so results in minimal losses, which become less likely if the costs of error are high or if learning is possible. This evidence strongly undermines the predictions of recent behavioral models relying on consumer insensitivity to interest rate changes and hyperbolic discounting to advocate paternalistic interventions.⁴²

³⁸ *Id.* at 118-19.

³⁹ Brown & Plache, *supra* note 21, at 78-79 & Figure 1.

⁴⁰ *Id.* at 78.

⁴¹ *Id.*; See also DAVID S. EVANS & RICHARD SCHMALENSEE, *PAYING WITH PLASTIC: THE DIGITAL REVOLUTION IN BUYING AND BORROWING* 239-40 (MIT Press 2d ed. 2005); Kathleen Johnson, *Recent Developments in the Credit Card Market and the Financial Obligations Ratio*, FED. RES. BULLETIN 473, 477 (Autumn 2005) (noting that correlation between credit card interest rates and the prime rate was only 0.09 during the 1980s and early 1990s but has risen to 0.90 from mid-1990s to present).

⁴² See Bar-Gill, *supra* note 12, at 1416-27 (discussing the "consideration" of a variety of regulatory solutions including increased disclosure, usury laws, and more liberal discharge of credit card debt in bankruptcy proceedings in response to the "identified failure in the credit card market"); George Loewenstein & Ted O'Donoghue, *We*

C. Behavioral Economics, Credit Cards, and Bankruptcy

Behavioral law and economics scholars point to trends in bankruptcy filings as evidence of the unique burden imposed on consumers by credit card borrowing.⁴³ The underestimation and hyperbolic discounting hypotheses imply a systematic, gradual, and unconscious accumulation of debt unique to credit cards, a mechanism that supports the suspicions of some legal scholars that the credit card market is cause for concern. For example, bankruptcy scholars Teresa Sullivan, Elizabeth Warren, and Jay Lawrence Westbrook describe a similar “insidious” process of debt accumulation based on frequent purchases.⁴⁴ Susan Block-Lieb and Edward Janger claim that consumers’ increasing debt loads are a function of lenders’ increasing ability to exploit cognitive biases, and describe the world of rational borrowers as a “myth.”⁴⁵ A frequently asserted claim in this literature is that credit card borrowing *causes* increased bankruptcies and therefore justifies intervention in the credit card market.⁴⁶

The literature on behavioral economics, credit cards, and bankruptcy generally centers around two distinct research questions. The first question, already discussed in some detail, is whether credit card borrowers are rational. Legal scholars have added to this literature by suggesting aggregate trends in bankruptcy filings, interest rates, debt levels, and other macroeconomic variables are consistent with irrational consumer behavior. Some

Can Do This the Easy Way or the Hard Way: Negative Emotions, Self-Regulation, and the Law, 73 U. CHI. L. REV. 183, 204 (2006) (advocating a ban on credit cards); Sunstein, *supra* note 11, at 261-63 (discussing “debiasing” campaigns designed to limit the impact of overborrowing).

⁴³ See, e.g., Bar-Gill, *supra* note 12, at 1399-1400.

⁴⁴ TERESA A. SULLIVAN, ET AL., *THE FRAGILE MIDDLE CLASS: AMERICANS IN DEBT* 108-40 (Yale University Press 2000).

⁴⁵ Block-Lieb & Janger, *supra* note 34, at 1563. The authors advocate adoption of the behavioral consumer model, and reject the rational consumer model, for the purposes of designing bankruptcy policy. *Id.* at 1565 (describing bankruptcy reforms aimed at the rational consumer as “particularly wrongheaded”).

⁴⁶ See, e.g., Bar-Gill, *supra* note 12, at 1385-86, 1411-16 (“mounting credit card debt fueled by high interest rates is a major cause of consumer bankruptcy”).

bankruptcy scholars have also addressed a second question, related to the notion that credit card debt accumulation exploits consumers' irrational tendencies: does credit card debt cause increased bankruptcy filings?

With respect to the first question, Block-Lieb and Janger analyzed aggregate data trends and concluded borrowers are not rational,⁴⁷ and that "the current bankruptcy filing explosion is better explained not by strategic borrowers exploiting unwitting lenders, but by rational lenders exploiting predictable cognitive weaknesses in consumers."⁴⁸ Block-Lieb and Janger frame their empirical challenge to the rational actor model as follows:

In a world of expanding consumer credit and increasing bankruptcy filings (not to mention increasing profitability and relatively constant borrowing terms), somebody must be doing the calculus wrong. Why would rational lenders with state-of-the-art information technology, universal credit reporting, and empirically sound risk-management models knowingly lend to borrowers who are out to game the system?⁴⁹

While we have seen that this assertion is inconsistent with consumer-level studies of credit card decisions, it is worth noting that the aggregate trends highlighted by the authors are also consistent with the rational actor model despite their declaration to the contrary.

Block-Lieb and Janger highlight what they believe is a tension for the rational actor model: a period of simultaneously increasing bankruptcies, falling credit card rates, constant markups,

⁴⁷ Block-Lieb & Janger, *supra* note 34, at 1556. The authors do not address the empirical studies by Brown and Plache or ACLS.

⁴⁸ *Id.* at 1525. Block-Lieb and Janger also argue that the consumer opportunism explanation is "a product of the assumption of the instrumentally rational consumer" and "not driven by the data." *Id.* The authors do concede that strategic borrowing in anticipation of bankruptcy is likely to exist "on the margin." *Id.*

⁴⁹ *Id.* at 1489.

and increasing output in the credit card market.⁵⁰ The authors argue that the period of increased bankruptcy risk increases lenders' costs, which they predict should result in an increase in interest rates or credit card markups in a world of rational borrowers, but does not. Instead, interest rates have declined and credit card markups remained relatively constant, facts that the authors declare "significantly undercuts the predictive value of the economic models of consumer credit."⁵¹

These claims, however, overstate the strength of the empirical case against models of borrower rationality. Most importantly, bankruptcy losses are not more than a trivial component of lenders' total costs.⁵² As the authors acknowledge, the important economic question is whether lenders' total costs have increased because of the increased bankruptcy filings during this time period.⁵³ In fact, more important components of the lender cost function than bankruptcy losses have decreased substantially over the same time period. For example, an increasing proportion of operating functions and services, such as electronic account clearing, have become automated, reducing operating costs and increasing the contribution of the cost of funds as a fraction of total lender costs.⁵⁴ Consis-

⁵⁰ *Id.* at 1501-08, Figures 2-7. Block-Lieb and Janger's alternative explanation for this data is exogenous technological changes allowing lenders enhanced ability to exploit cognitive biases. *Id.* at 1565.

⁵¹ Block-Lieb & Janger, *supra* note 34, at 1504, Figure 4.

⁵² Gross bankruptcy losses to the largest lenders, excluding losses from fraud, from 1994-1997, ranged from 1.74 to 2.9 percent of outstanding credit card balances. See AM. BANKERS ASS'N, BANK CARD INDUSTRY SURVEY REPORT (various years). The dominant component of credit card lending costs is operating costs. One estimate concludes that lenders' operating costs accounted for approximately 60 percent of total costs, while the cost of funds was approximately 27 percent. See Glenn B. Canner & Charles A. Lockett, *Developments in the Pricing of Credit Card Services*, 78 FED. RES. BULL. 652, 655 n.8 (1992).

⁵³ Block-Lieb & Janger, *supra* note 34, at 1506 (acknowledging that improvements in risk-based pricing, increased competition, or reduced administrative or servicing costs may explain declining interest rates).

⁵⁴ The apparent anomaly between declining costs of funds and increasing bankruptcy filings is explained by the decrease in the cost of funds on the composition of credit card borrowers. A decreasing cost of funds induces marginal consumers to substitute towards forms of credit that are more sensitive to changes in the cost of funds, such

tent with this technological shock, credit card interest rates have become less sticky over time.⁵⁵

Further, innovations in credit card pricing over the past decade enable lenders to use risk-based, non-linear pricing strategies that allow lenders to price discriminate across consumers and offer credit to more consumers.⁵⁶ The increased ability to price discriminate across consumer risk profiles through the use of late fees, overdraft penalties, and different interest rates—like most forms of price discrimination—can be expected to increase output.⁵⁷ While some have argued that the onset of these terms is also evidence of lenders' exploitation of consumer biases,⁵⁸ we have seen that this claim is not supported by consumer level evidence demonstrating that borrowers appear to respond rationally to incentives.

Any test of aggregate trends aimed at generating inferences about consumer rationality in borrowing decisions makes great demands of the data. In this case, where the increasing risk of bankruptcy losses is a trivial share of total lending costs, the demands impose a greater burden than the data can possibly bear. This point alone, of course, does not refute the possibility that consumers exhibit systematically irrational borrowing behavior. Upon closer ex-

as car loans or home equity loans. Zywicki, *supra* note 37, at 168. See also Alexander Raskovich & Luke M. Froeb, *Has Competition Failed in the Credit Card Market?*, U.S. Department of Justice Economic Analysis Group Discussion Paper (1992). The infirmarginal credit card consumers will be those who have fewer credit options and therefore one can expect higher-risk borrowers to comprise a higher percentage of credit card borrowers in periods of falling cost of funds rates, and therefore, expect default rates to increase. Raskovich and Froeb demonstrate this inverse relationship between the costs of funds and the default rate. *Id.*

⁵⁵ See Zywicki, *supra* note 37.

⁵⁶ Block-Lieb & Janger, *supra* note 34, at 1509-14.

⁵⁷ For a summary of the economic literature on the welfare effects of price discrimination under various conditions, see Lars A. Stole, *Price Discrimination and Imperfect Competition*, in *Handbook of Industrial Organization* (December 22, 2003), available at <http://web.mit.edu/14.271/www/hio-pdic.pdf>; Mark Armstrong & John Vickers, *Competitive Price Discrimination*, 32 *RAND J. ECON.* 579 (2001); Severin Borenstein, *Price Discrimination in Free-Entry Markets*, 16 *RAND J. ECON.* 380 (1985); Kenneth S. Corts, *Third Degree Price Discrimination in Oligopoly: All-Out Competition and Strategic Commitment*, 29 *RAND J. ECON.* 306 (1998).

⁵⁸ See Bar-Gill, *supra* note 12.

amination, standard economic theory comfortably explains the aggregate data. However, behavioral models that predict that competition produces greater interest rates are unable to explain both the falling interest rates and the increasing responsiveness of those rates to a declining cost of funds.

The second empirical question focuses on the nature of the relationship between credit card debt and bankruptcy filings. Some have argued that increased bankruptcy filings are the result of credit card contracts designed to exploit consumer irrationality. An examination of the empirical literature reveals a consensus that there is a significant correlation between credit card debt and bankruptcy filings,⁵⁹ but a number of difficult issues remain with respect to disentangling and isolating plausible, and possibly co-existing, mechanisms influencing this relationship.

The simplest way to examine the link between aggregate credit card debt and bankruptcy filings would be to regress bankruptcy filings in a single country or across countries on credit card debt and other country-level controls. This specification has a number of drawbacks. The first is the possibility that the specification suffers from an "omitted variables" problem. The impact of exogenous financial hardship resulting in increased credit card borrowing, and eventually bankruptcy, would be attributed to the increase in credit card debt. A second possibility is that some debtors strategically borrow in anticipation of filing bankruptcy because such debt is dischargeable, thus rendering the determination of credit card debt endogenous to the dependent variable.⁶⁰ On the margin, this sort of behavior is likely and consistent with the significant increase in filings prior to the recent bankruptcy reform legislation and other evidence that some debtors "load up" on dischargeable

⁵⁹ See, e.g., Sullivan et al., *supra* note 44, at 70-72; Ronald J. Mann, *Credit Cards, Consumer Credit, and Bankruptcy*, AM. L. & ECON. ASS'N ANNUAL MEETING 36 (2006); Block-Lieb & Janger, *supra* note 34, at 1521-24; Zywicki, *supra* note 37, at 1496 (discussing alternative causal explanations for the observed correlation between credit card debt and bankruptcy filings).

⁶⁰ Zywicki, *supra* note 37, at 1496-97.

debt in the period before filing for bankruptcy.⁶¹ This possibility raises simultaneity issues which render the coefficient estimates on credit card debt likely biased in ordinary least squares estimation because it is assumed that changes in bankruptcy filings do not impact credit card debt levels. The empirical challenge is a difficult one: to isolate these effects in order to uncover the true relationship between credit card debt and bankruptcy filings using only aggregate filing data and macroeconomic variables.

Two recent contributions to this empirical literature from legal scholars are noteworthy. Ronald Mann analyzes the impact of country-level credit card debt, total consumer credit, credit card spending, and other macroeconomic controls on bankruptcy rates across five countries with markedly different bankruptcy laws, consumption patterns, and borrowing behavior.⁶² Mann explicitly motivates his study as an attempt to resolve the endogeneity concerns discussed above. He regresses bankruptcy filings on credit card debt lagged by one, two, or three years to ensure he estimates “a relation that ran from credit card debt to bankruptcy filings rather than the reverse.”⁶³ Mann finds, perhaps unsurprisingly, that credit card debt with and without various lags is significantly correlated with the bankruptcy per capita. From a variety of regressions of this form, Mann concludes that credit card debt causally increases bankruptcy and a model including only credit card debt, credit card spending, and total consumer credit explains 90% of the variance in bankruptcy rates across countries. In a model including country-level dummies and macroeconomic variables, the R-squared increased to 97%, a result Mann describes as “striking.”

⁶¹ For example, it is difficult to explain the astronomical increase in bankruptcy filings prior to the enactment of the bankruptcy reforms of 2005 without conceding that at least some “strategic” borrowing exists. See also David B. Gross & Nicholas S. Souleles, *An Empirical Analysis of Personal Bankruptcy and Delinquency*, 15 REV. FIN. STUD. 319, 338 (2002) (finding that borrowers significantly increase use of their credit cards in the period prior to filing for bankruptcy).

⁶² Mann, *supra* note 59. The five countries are the United States, England, Japan, Australia, and Canada. There are a total of 65 observations across all countries.

⁶³ *Id.* at 17.

Despite the interesting correlations reported by Mann, the statistical evidence presented suffers from a number of flaws. One is that lagging credit card debt is unlikely to resolve the simultaneity issues.⁶⁴ Another is that models including credit card debt, credit card spending, and total consumer credit likely generate multicollinearity. The fact that controlling for country-specific differences and macroeconomics conditions only results in a marginal increase of the R-squared relative to the credit card debt only models from .90 to .97 suggests that the specification does not properly control for such differences. It is highly unlikely that country-specific income accounts for only 7% of the variance in the bankruptcy filings between countries. Further, it seems unlikely that a panel regression with approximately thirteen observations per country across five countries with highly variable borrowing and bankruptcy patterns could possibly generate these goodness-of-fit measures.

The answer to this puzzle, I believe, lies in a specification error of greater importance than those mentioned thus far. Mann's Figure 4 illustrates a scatterplot of one-year lagged credit card debt and bankruptcy rates and appears to include all 65 observations and a fitted trend line through the observations. Recall that each observation is a pair containing credit card debt and bankruptcy filing rates for a particular year. Figure 4 suggests that the model is not a panel regression at all and therefore does not distinguish between observations in particular countries or over time. In essence,

⁶⁴ One conventional solution to the simultaneity issue would be to use an instrumental variable estimator: a set of variables which are: (1) uncorrelated with the errors, in this case the unobserved factors impacting the financial situation of borrowers and therefore the use of debt and the propensity to file for bankruptcy; (2) correlated with the endogenous independent variable, in this case credit card debt; and (3) are unrelated to the dependent variable, in this case bankruptcy filings, except through its influence on credit card debt. As is typically the case with selecting instruments, the greater the correlation between the instrument and the endogenous independent variable the more likely the instrument violates the first condition. In this case, lagged credit card debt is likely an insufficient instrument because it is correlated with the omitted variables influencing the borrower's financial well-being and, therefore, propensity to file for bankruptcy. On instrumental variables estimation, see WILLIAM H. GREENE, *ECONOMETRIC ANALYSIS* 288-95 (3rd ed. 1997).

the model is an OLS regression of bankruptcy filing rates on credit card debt as if each observation represented a unique country in a cross-sectional analysis. The model cannot possibly explain the variance in filing rates between countries and over time. This would explain, for example, why country level GDP and unemployment play no significant role in explaining bankruptcy filings rates. Including GDP in this model is unlikely to add explanatory power because the model does not control for the impact of a change in Japan's GDP on Japan's filing rate. Though Mann does introduce country dummies in one specification, the analysis does not exploit the variation within countries over time and purports to explain only the impact of country specific changes on the average level of filing across all five countries.

Assuming this critique is correct, Mann's analysis does not shed any additional light on the relationship between credit card debt and bankruptcy rates controlling for country-level differences. In order to exploit the variation both between countries and within countries over time, one would ideally like to use panel data estimation techniques. However, that approach is not likely to be fruitful given only a handful of observations in each country. Alternatively, one might control for within-group variation over time by including a time trend along with country-level controls though this would not completely account for the aforementioned endogeneity problems. Mann's primary result—the significant correlation between credit card debt and bankruptcy filing rates—disappears with this specification.⁶⁵

A second recent contribution to this literature is Robert Lawless' time-series analysis of credit card debt and bankruptcy filing rates in the United States.⁶⁶ Lawless analyzes the extent to which previous attempts to reform bankruptcy laws have impacted

⁶⁵ See TODD J. ZYWICKI, *BANKRUPTCY AND PERSONAL RESPONSIBILITY: BANKRUPTCY LAW AND POLICY IN THE TWENTY-FIRST CENTURY* (Forthcoming Yale University Press, 2007).

⁶⁶ Robert M. Lawless, *The Paradox of Consumer Credit* 63 (Univ. Ill. Law & Economics Research Paper Series, Paper No. LE06-015, April 2006), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=906868.

filing rates and finds a significant negative relationship between consumer debt and bankruptcy and a significant positive relationship with the square of consumer debt. These results suggest that additional borrowing reduces bankruptcy filing for some level of consumer debt, but increases the propensity to file above some threshold level. Lawless also reports that increased consumer credit is associated with a significant and immediate decline in bankruptcy filings, but is followed by an equally significant increase in filings a few years later. Taken together, Lawless' results suggest that the relationship between credit card debt, consumer debt, and bankruptcy filings is considerably more complex than the simple hypothesis posed by the behavioral account of a gradual and "insidious" slide into insolvency. The results also pose a challenge to the hypothesis that lenders ramp up borrowing in anticipation of filing because the surge in bankruptcies comes a year after aggregate credit card debt increases. These data raise important questions to be addressed in terms of specifying the dynamics of the relationship between consumer debt and bankruptcy.

The literature on the complex relationships between credit card debt, borrowing behavior, and bankruptcies is developing, and creative empirical strategies are necessary to isolate components of this relationship. The state of the evidence, however, lags well behind the claims in the legal literature that consumer borrowing behavior is irrational, that this irrationality generates a causal link between credit card debt and bankruptcy, and that legal reform should be based on the behavioral models of consumer borrowing. To the contrary, the weight of the available evidence is consistent with neoclassical conception of the rational consumer.

III. Standard Form Contracts

Economists and legal scholars have long been interested in standard form contracts and their terms. Economists have generally found standard form terms innocuous so long as sufficient competition exists at the time of contracting. Economists have also focused on the role of contract terms, particularly terms that appear "unfair"

or give discretion to one party, in establishing self-enforcing contractual arrangements. For example, Benjamin Klein's analysis shows that where third-party enforcement is costly, sellers are likely to rely on their substantial but scarce reputational capital when dealing with consumers, which reduces the costs of contracting but requires protection against opportunistic behavior by the buyer.⁶⁷ Others have identified the theoretical possibility that a monopolist's insensitivity to consumer preferences will result in sub-optimal contract terms, though the empirical evidence does not clearly support this proposition.⁶⁸

Despite the ubiquity of standard form contracts in competitive markets, legal scholars and courts have long viewed standard form terms with a skeptical eye, associating them with monopoly power⁶⁹ or some related, but poorly-defined, coercive force that compels consumers to accept unfavorable terms.⁷⁰ In response to this view, some courts will refuse to enforce standard form contracts offered by sellers with substantial bargaining power under limited circumstances.⁷¹

The standard behavioral law and economics account supports this suspicion of standard form terms. This challenge depends on the apparently widely accepted and frequently discussed assumption that consumers are subject to a number of systematic be-

⁶⁷ See Benjamin Klein, *Transaction Cost Determinants of "Unfair" Contractual Arrangements*, 70 AM. ECON. REV. 356-62 (1980). For an analysis of standard form terms relying on similar logic, see Lucian A. Bebchuck & Richard A. Posner, *One-Sided Contracts in Competitive Consumer Markets*, 104 MICH. L. REV. 827 (2006).

⁶⁸ See Florencia Marotta-Wurgler, *Competition and the Quality of Standard Form Contracts: An Empirical Analysis of Software License Agreements* (unpublished paper, New York University School of Law, Aug. 22, 2005) (discussing the state of empirical literature and presenting evidence that the quality of software license terms does not decrease with reduced competition).

⁶⁹ See Friedrich Kessler, *Contracts of Adhesion – Some Thoughts about Freedom of Contract*, 43 COLUM. L. REV. 629 (1943).

⁷⁰ See, e.g., ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 279 (2000); RICHARD A. POSNER, ECONOMIC ANALYSIS OF THE LAW 126-28 (1998).

⁷¹ See, e.g., U.C.C. § 2-302(1); E. ALLEN FARNSWORTH, CONTRACTS § 4.28 (2d ed. 2001); RESTATEMENT (SECOND) CONTRACTS § 208 (1981).

havioral biases and cognitive quirks.⁷² Specifically, the behavioral law and economics account begins with the dual premises that purchasing decisions will be “sufficiently complex that buyers will be selective in their consideration of product attributes,”⁷³ and that standard form terms are especially likely not to influence the consumer’s purchase decisions because “their usual content makes them unlikely to attract buyers’ voluntary or involuntary attention.”⁷⁴ While laboratory experiments appear to support these premises, the challenge for behavioral law and economics has been to map these findings into a coherent theory about behavior in markets characterized by specialization, learning, and repeated interaction.

Professor Russell Korobkin attempts to deliver such a theory. The model is simple and superficially appealing. Korobkin assumes that buyers compare only limited numbers of product attributes when contemplating purchase, and claims that competition between sellers will generate efficient quality terms for those attributes which buyers consider “salient,” but low-quality terms regarding non-salient attributes.⁷⁵ The lynchpin of the theory is that sellers are unable to recoup the costs of offering efficient non-salient terms and that this condition worsens with increasing competition.⁷⁶ This

⁷² For examples of these proposals in the standard form contract context, see Oren Bar-Gill, *supra* note 12; Paul Bennett Morrow, *The Unconscionability of a Liquidated Damages Clause: A Practical Application of Behavioral Decision Theory*, 22 PACE L. REV. 27 (2001); Matthew T. Bodie, *Questions About the Efficiency of Employment Arbitration Agreements*, 39 GA. L. REV. 1 (2004).

⁷³ Russell Korobkin, *Bounded Rationality, Standard Form Contracts, and Unconscionability*, 70 U. CHI. L. REV. 1203, 1225-26 (2003).

⁷⁴ *Id.* at 1226.

⁷⁵ *Id.* at 1206.

⁷⁶ *Id.* at 1243-44. Jonathan Klick challenges this conclusion by arguing that low probability events have the potential to change consumers’ salience profiles, and the occurrence of these events imposes a reputational sanction on firms offering inefficient terms. Jonathan Klick, *The Microfoundations of Standard Form Contracts: Price Discrimination v. Behavioral Bias*, 32 FLA. STATE U. L. REV. 555 (2005). The stability of salience profiles raises a number of issues. A firm with a competitive advantage in offering non-salient terms may not simply surrender to the buyers’ non-salience. For example, such a firm might attempt to attract attention to their inclusion of favorable terms or educate consumers’ about their value. The conditions under which ineffi-

analysis leads Korobkin to make the startling claim that competition not only does not ameliorate the impact of consumer irrationality, but also simultaneously reduces *both* consumer welfare *and* producer surplus.⁷⁷ This consumer welfare result is the foundation for Korobkin's proposal to modify the unconscionability doctrine to protect behaviorally biased consumers from competition.⁷⁸

The behavioral law and economics account of competition with standard-form contracts raises some interesting questions in terms of consumer welfare analysis. Presumably, in a zero-profit equilibrium with completely irrational consumers, sellers will compete by offering more favorable salient terms (and worse non-salient terms) than would prevail in a world of rational consumers. This begs the question of the welfare trade-offs inherent in this lower price and lower quality world. Korobkin avoids this issue altogether by failing to recognize that sellers will compete by lowering the price (or improving other salient features); he asserts that sellers will offer the *same prices* to behaviorally-biased consumers as they would to fully rational consumers. The flawed economic logic that sellers will not reduce prices below the level that would prevail in a world of fully rational consumers drives Korobkin's startling result that *sellers* are also worse off with competition on standard form contracts.⁷⁹ However, once one recognizes that a zero-profit equilibrium requires sellers to lower the price relative to the rational equilibrium world, it follows that sellers will *increase* total sales relative to the "rational consumer" equilibrium.

These flaws undermine, but are not fatal, to the behavioral attack on standard form contracts on consumer protection grounds. It is possible that the lower price and lower quality equilibrium would result in lower consumer welfare under some conditions.⁸⁰

cient standard form contracts would persist in equilibrium with endogenous salience profiles are unclear.

⁷⁷ Korobkin, *supra* note 73, at 1242-44.

⁷⁸ *See id.* at 1278-79.

⁷⁹ *Id.* at 1235-36.

⁸⁰ *See, e.g.,* Carl Shapiro, *Aftermarkets and Consumer Welfare: Making Sense of Kodak*, 63 ANTITRUST L.J. 483, 511 (1995) (demonstrating that potential consumer welfare losses

But the question remains whether the behavioral account helps us to understand the nature of competition with standard form contracts. The key feature of the behavioral account, which distinguishes it from the neoclassical approach, is the perverse relationship it predicts between competition and the quality of “non-salient” terms. In theory, this prediction allows for a very simple test of the behavioral approach if one can operationalize non-salience. If the consumers are unable to price “non-salient” terms, and the behavioral account has predictive power, we should observe the quality of “non-salient” standard form terms decrease with more competition.

There is a good deal of evidence documenting the relationship between standard terms and competition, and a substantial theoretical literature on the relationship between competition and product quality, where standard form terms are conceived of as product attributes.⁸¹ The empirical industrial organization literature documents a relationship between competition, typically measured by market concentration, and product quality.⁸² However, very few

in the analogous aftermarket context are small relative to the deadweight losses associated with monopoly pricing).

⁸¹ See generally JEAN TIROLE, *THE THEORY OF INDUSTRIAL ORGANIZATION* (1988); Lewis Kornhauser, *Unconscionability in Standard Forms*, 64 CAL. L. REV. 1151, 1179 (1976) (standard form term quality increases with competition); A. Michael Spence, *Monopoly, Quality, and Regulation*, 6 BELL J. ECON. 417 (1975); Alan Schwartz & Louis Wilde, *Intervening in Markets on the Basis of Imperfect Information: A Legal and Economic Analysis*, 127 U. PA. L. REV. 630 (1979); Richard Schmalensee, *Market Structure, Durability, and Quality: A Selective Survey*, 17 ECON. INQUIRY 177 (1979) (summarizing the conditions under which monopolists provide lower quality); Victor P. Goldberg, *Institutional Change and the Quasi-Invisible Hand*, 17 J.L. & ECON. 461 (1974); Avery Katz, *Your Terms or Mine? The Duty to Read Fine Print in Contracts*, 21 RAND J. ECON. 518 (1990).

⁸² See, e.g., Michael J. Mazzeo, *Competition and Service Quality in the U.S. Airline Industry*, 22 REV. INDUS. ORG. 275 (2003) (finding a negative relationship between market concentration and quality in the airline industry); Stephen Foreman & Dennis Shea, *Publication of Information and Market Response: The Case of Airline on Time Performance Reports*, 14 REV. INDUS. ORG. 147 (1999) (same); Caroline M. Hoxby, *Does Competition Among Public Schools Benefit Students and Taxpayers*, 90 AM. ECON. REV. 147 (2000). Florencia Marotta-Wurgler summarizes this literature in Marotta-Wurgler, *supra* note 68, at 8-10. See also David Dranove & William D. White, *Recent Theory and Evidence on Competition in Hospital Markets*, 3 J. ECON. & MGMT. STRATEGY 169 (1994).

studies have focused on the precise question posed by the behavioral literature: the relationship between competition and product quality as measured by standard form terms. The few studies that have examined this relationship, however, do not find the negative relationship between competition and quality of standard form terms predicted by the behavioral approach. George Priest's seminal examination of household appliance warranties did not find a significant relationship between restrictive warranty terms and firm-specific market share or industry concentration.⁸³

The most recent and comprehensive analysis of the relationship between competition and standard form terms is Florencia Marotta-Wurgler's examination of software end-user license agreements ("EULAs").⁸⁴ Marotta-Wurgler collects a remarkably large sample of 647 EULAs from 598 companies and categorizes each into a product market consistent with Amazon.com's classification system. In addition, Marotta-Wurgler measures the content of each EULA using an index on 25 common standard terms in seven categories. Marotta-Wurgler measures the quality of these EULA terms by adding (subtracting) one point if the term is more pro-buyer (pro-seller) than the Article 2 default rule, and assigning a score of zero if the EULA is silent with respect to the term. Aggregating these scores to create a "bias index" for standard form terms that roughly measures the pro-buyer features of EULAs, Marotta-Wurgler proceeds to examine the extent to which product and company characteristics, including market share,⁸⁵ explain EULA bias and product price.

Consistent with standard economic theory, Marotta-Wurgler finds that less competition is associated with higher product prices. The study also finds no significant relationship between

⁸³ George L. Priest, *A Theory of the Consumer Product Warranty*, 90 YALE L.J. 1297 (1981).

⁸⁴ Marotta-Wurgler, *supra* note 68.

⁸⁵ Judith Chevalier and Austan Goolsbee, *Measuring Prices and Price Competition Online: Amazon.com and BarnesandNoble.com*, 1 QUANTITATIVE MKTG. & ECON. 203 (2003) (following this methodology, Marotta-Wurgler transforms Amazon.com sales rank data to market share figures).

competitive conditions and EULA bias; higher concentration or firm market share does not lead to terms less favorable to consumers, as is predicted by the behavioral models. Korobkin hypothesizes that consumers may only focus on “salient terms” and therefore increased competition will have a negative impact on certain subsets of terms. To the contrary, Marotta-Wurgler finds no significant “competition effect.” These results contradict the predictions of the behavioral model, but are not in tension with price theory.

Admittedly, few studies directly test the behavioral account of standard form contracts, but both Priest’s and Marotta-Wurgler’s results are inconsistent with the prediction that non-salient terms decrease in quality as competition increases. Further, the empirical economics literature documents a relationship between competition and product quality more generally, that suggests the behavioral account neither explains what we observe in standard form contracts nor forms an appropriate foundation for policy analysis.

IV. SHELF SPACE CONTRACTS

Supermarkets are another excellent laboratory for testing the predictive power of behavioral models. Jon Hanson and Douglas Kysar describe the modern supermarket as “a marketing marvel,” which “vividly illustrates consumer susceptibility to manipulation,” and symbolizes the “untold manipulation” of which competitive markets are capable.⁸⁶ For the irrational consumer plagued by behavioral biases, the supermarket represents a confusing maze of atmospherics, a constant barrage of in-store advertising, and the constant need to defend against firm attempts to exploit these biases through inducing “impulse” purchases. Hanson and Kysar discuss in great detail what they describe as the “sleight of hand” carried out in supermarkets to influence consumer behavior.⁸⁷

⁸⁶ Jon D. Hanson & Douglas Kysar, *Taking Behavioralism Seriously: Some Evidence of Market Manipulation*, 112 HARV. L. REV. 1420, 1444 (1999).

⁸⁷ *Id.* at 1444-50.

The proposition that retailers attempt to influence consumers' shopping experiences, often with manufacturer cooperation and funding, is not controversial. Supermarkets compete for the favor of customers and to increase purchases by using music to influence the mood of shoppers, designing the store layout to maximize sales, by locating impulse items at the checkout counters, and by placing staple items on opposite ends of the store to increase total shopping time. Manufacturers also spend billions of dollars annually on point-of-purchase advertising and premium shelf space. Manufacturers and retailers analyze scanner data and use computer simulations to inform shelf space allocation decisions.⁸⁸ The decision to place a particular brand of soda or breakfast cereal in the highly valuable eye-level real estate is not random, but the outcome of a complex decision-making process that is the outcome of the competitive process and designed to maximize profit. In many cases, the shelf space placement decision involves an agreement between the manufacturer and retailer called a "slotting contract." Retailers, including supermarkets, also increasingly make use of category management, a marketing principle which delineates the store into distinct product categories, each managed by a supplier, to maximize category profits.

Hanson and Kysar's collection of evidence is an important descriptive analysis of the reality of supermarket competition. Indeed, Hanson and Kysar's description of "real world" supermarket competition offers a fertile field for assessing whether market-based exploitation of consumer cognitive biases harms consumers or is more consistent with neoclassical economics. To be sure, these realities also present a challenge for the standard economic models of product distribution, where it is assumed that retailers' only function is to reduce search costs and passively transmit exogenous consumer preferences. The relevant question for our purposes is whether behavioral economics provides a better explanation of

⁸⁸ For an economic analysis of category management in retail distribution, see Joshua D. Wright, *Antitrust Analysis of Category Management: Conwood v. United States Tobacco Co.* (unpublished paper, available from author).

these realities of shelf space competition than neoclassical economics. The answer to this question must be extracted from the data.

This section proceeds in three steps. The first is to sketch a stylized behavioral theory of shelf space allocation grounded in Hanson and Kysar's description of "market manipulation" and derive testable implications. The second step is to test the predictions against available empirical evidence regarding shelf space contracts. The last step is to demonstrate that manufacturers' efforts to maximize impulse and unplanned purchases are not inconsistent with conventional economic analysis.

A. "Market Manipulation" Theory of Shelf Space Allocation

Hanson and Kysar offer an informal theory of supermarket competition as firm exploitation of behavioral biases. The research of other behavioral law and economics scholars, such as Oren Bar-Gill's recent behavioral account of bundling in competitive markets as a response to consumer misperception,⁸⁹ is illustrative of the mechanism by which such manipulation could result in consumer harm. Bar-Gill contemplates firm responses—specifically the bundling of products—to consumers' inability to accurately value all components of a product, e.g., misestimating how much ink the buyer will ultimately consume when purchasing a printer.⁹⁰ Bar-Gill argues that bundling in response to consumer misperception may decrease consumer welfare under some conditions. The theoretical net cast by such an account is incredibly broad. One can conceive of most products sold today as a "bundle" of product characteristics. Grocery products and premium shelf space might reasonably be viewed as such a bundle, where the product package consists of both the product and its location on the shelf. If consumers overestimate shelf space value, and are irrationally prone to changes in shelf space allocation, one can conceptualize competition between sellers for scarce shelf space as a process to extract con-

⁸⁹ Oren Bar-Gill, *Bundling and Consumer Misperception*, 73 U. CHI. L. REV. 33 (2006).

⁹⁰ *Id.* at 33.

sumer surplus from behaviorally biased consumers.⁹¹ The ultimate question is whether the theory of shelf space allocation decisions and contracting as an exploitative response to the presence of consumer biases explains what we observe in the market for shelf space better than existing theories which rely on the tools of neoclassical economics. There are several testable implications of the market manipulation explanation for shelf space contracts:

- (1) Generally, competition between sellers exacerbates, rather than mitigates, consumer biases.⁹² Slotting contracts—agreements involving payments from manufacturers to retailers for premium shelf space—should therefore occur with greater frequency in more competitive markets.
- (2) Habitual consumers of a particular product are less likely to overestimate their willingness to pay for that product, or to fall victim to shelf space framing effects. Therefore, *ceteris paribus*, we should observe less intense use of slotting contracts and shelf space manipulation should result where a significant fraction of sales are the result of repeat purchase.
- (3) Market manipulation by use of shelf space contracts should remain relatively constant over time unless consumer biases or susceptibility to manipulation has increased.

⁹¹ Bar-Gill mentions bundles of products and promotional services such as showrooms and knowledgeable salespersons. *Id.* at 54. I do not mean to imply that bundling is the only behavioral story one can tell about supermarket shelf space allocation. For instance, one can also imagine a story where shelf space decision is motivated by exploiting “framing” effects or changes in consumer preferences for a product which are a function of the surrounding products.

⁹² See, e.g., Bar-Gill, *supra* note 89 at 40; Korobkin, *supra* note 73, at 1243–44.

- (4) The shelf space manipulation theory suggests that slotting contracts generate supra-competitive profits for both suppliers and supermarkets. Thus, supra-competitive supermarket profits should coincide with the widespread increase in the use of shelf space contracts over the past twenty-five years.

B. Testing the Shelf Space Manipulation Theory

Systematic evidence about slotting contracts is sparse and largely anecdotal. Klein and Wright have collected and analyzed the available evidence on slotting contract terms, as well as which products are covered under those terms, the characteristics of those products, and the increase in slotting in magnitude and frequency over time.⁹³ Klein and Wright also present an economic explanation of slotting contracts, which relies on the standard economic assumptions that consumers and firms are rational. I will discuss the performance of Klein and Wright's promotional services theory in Part C. With regard to the predictions of the behavioral account, the data reject three of these predictions and are ambiguous as to the fourth.

The evidence is ambiguous with respect to the prediction that slotting contracts will be more prevalent when product markets are more intensely competitive. If consumers do not place the correct value on shelf space due to cognitive bias, behavioral models have predicted that competition leads to larger incentives to manipulate consumers. There is little systematic data regarding the correlation between the incidence of slotting contracts and objective measures of competitiveness such as industry concentration or firm market share, though anecdotal evidence suggests that this prediction does not hold. For instance, while firms with relatively small market shares utilize slotting contracts, recent antitrust cases involving slotting have involved firms with high market shares oper-

⁹³ Benjamin Klein & Joshua D. Wright, *The Economics of Slotting Contracts*, 50 J. LAW & ECON. (forthcoming Aug. 2007).

ating in relatively concentrated industries, such as Philip Morris, Barnes and Noble, Gerber, Coca-Cola, United States Tobacco, and McCormick Spice Company.⁹⁴ Nonetheless, the lack of systematic evidence regarding the competitive conditions in industries where there is greater intensity of slotting activity prohibits any definitive conclusions.

The behavioral model of shelf space competition also predicts less frequent “market manipulation” for incumbent, repeat-purchase products with established demand relative to new products. For example, one would not expect consumers who prefer Pepsi to *repeatedly* purchase Coke because of favorable shelf space allocation if the product disappoints. Slotting contracts, however, are pervasively used not only by Coca-Cola, but also by tobacco companies, whose products involve frequent repeat purchases and established demand.⁹⁵ Klein and Wright show that the prevalence of slotting contracts follows a very interesting and predictable pattern, specifically that they systematically occur in product categories with significantly higher manufacturer margins—measured by

⁹⁴ See, e.g., *R. J. Reynolds Tobacco Co. v. Philip Morris Inc.*, 199 F. Supp. 2d 362, 388, 390 (M.D.N.C. 2002), *aff'd per curiam*, 67 F. App'x 810 (4th Cir. 2003); *Conwood Co. v. United States Tobacco Co.*, 290 F.3d 768 (6th Cir. 2002); *American Booksellers Ass'n, Inc. v. Barnes & Noble, Inc.*, 135 F. Supp. 2d 1031 (N.D. Cal. 2001); *Intimate Bookshop, Inc. v. Barnes & Noble, Inc.*, 88 F. Supp. 2d 133 (S.D.N.Y. 2000); *FTC v. H.J. Heinz Co.*, 116 F. Supp. 2d 190 (D.C.C. 2000), *rev'd*, 246 F.3d 708 (D.C. Cir. 2001); *FTC v. McCormick*, FTC Docket No. C-3939 (2000). Slotting fees and other forms of shelf space payments were also central to Coca-Cola's 2004 settlement with the European Commission. See *Undertaking*, Case Comp/39.116/B-2-Coca-Cola, available at http://europa.eu.int/comm/competition/antitrust/cases/decisions/39116/tccc_final_undertaking_041019.pdf.

⁹⁵ Klein & Wright, *supra* note 93; Joshua D. Wright, *Slotting Contracts and Consumer Welfare*, 74 (2) ANTITRUST L.J. (forthcoming 2007) (documenting use of slotting contracts in military commissaries for thousands of incumbent products); FEDERAL TRADE COMM'N, REPORT ON THE FEDERAL TRADE COMM'N WORKSHOP ON SLOTTING ALLOWANCES AND OTHER MARKETING PRACTICES IN THE GROCERY INDUSTRY 29 n. 94 (2001), <http://www.ftc.gov/os/2001/02/slottingallowancesreportfinal.pdf> (last visited Jun. 26, 2007) [hereinafter *FTC Report*]; Staff Study, FED. TRADE COMM'N, SLOTTING ALLOWANCES IN THE RETAIL GROCERY INDUSTRY: SELECTED CASE STUDIES IN FIVE PRODUCT CATEGORIES 19 n.92, 57 (Nov. 2003), available at <http://www.ftc.gov/os/2003/11/slottingallowancerpt031114.pdf>.

the ratio of value added to the value of shipments—than those where slotting has not been reported to occur.⁹⁶

Additionally, behavioral theories cannot explain the time series evidence regarding slotting contracts. Over the last twenty years, the market for slotting contracts has changed considerably. During this period, the prevalence and magnitude of slotting contracts increased.⁹⁷ Further, the form of slotting contracts changed in the early to mid-1980s, from discounts from the manufacturer's wholesale price to the use of lump-sum, per-unit time payments.⁹⁸ This time series evidence poses a challenge for any theory of shelf space contracts. Behavioral theory implies that, because such contracts are a reaction designed to manipulate and exploit consumer cognitive biases, either manufacturers' and retailers' abilities to exploit consumers or the magnitude of the relevant consumer biases must have increased over the same time period. There is little evidence to support the latter possibility, but one might believe that the former is supported by the introduction of scanner data technology in 1981, which may allow firms to more efficiently manipulate consumers' cognitive shortcomings through the use of shelf space allocation. However, this change would impact all product categories and not just those with high margins. Additionally, the behavioral theory cannot explain the increased tendency to compensate retailers for shelf space with per unit time payments rather than discounts from the wholesale price that occurred in the mid-1980s.

A fourth testable implication involves supermarket profitability. If market manipulation of shelf space allows retailers to extract additional surplus from consumers, the manipulation theory

⁹⁶ Klein & Wright, *supra* note 93, at Table 2. Klein and Wright are able to reject the null hypothesis that the median value added relative to sales for products with slotting equals the median for products without slotting, using the Wilcoxon Rank Sum test, at the .01 level. *Id.* Adam Rennhoff, *Promotional Payments and Firm Characteristics: A Cross-Industry Study* (unpublished working paper, on file with author, 2004), available at <http://www.pages.drexel.edu/~adr24/accounting3-18.pdf>, also finds a significant correlation between high manufacturer margins and slotting.

⁹⁷ *FTC Report*, *supra* note 95, at 4, 11 & n.18-19.

predicts that retailers would have experienced an increase in profitability over the past twenty-five years during which shelf space contracts have increased in frequency and magnitude. To the contrary, Klein and Wright show that there is no positive association between increased slotting contracts and supermarket profitability.⁹⁹

Finally, it is worth noting that the existence of slotting contracts poses a challenge for behavioral theories. If supermarket retailers are aware of these consumer biases—a proposition that lies at the very heart of Hanson and Kysar’s analysis—this raises a fundamental economic question: why would retailers not choose the mix of products and shelf space allocation that maximized profit, including the profits earned by exploiting these biases, *without* a separate contract with the manufacturer? In other words, why must the manufacturer compensate the retailer here at all? If shelf space contracts are a function of behavioral biases, one must believe that manufacturers and retailers have different incentives to exploit these biases in order to explain the existence of the contract itself. The question remains whether an economic analysis of supermarkets assuming rational consumers bears more explanatory fruit than its behavioral cousin. I argue that it does.

C. An Alternative Explanation of Shelf Space Contracts: The Promotional Services Theory

Klein and Wright present a “promotional services” economic explanation of slotting contracts which is consistent with the available data and assumes, contrary to the behavioral accounts, that consumers are rational.¹⁰⁰ The fundamental assumption behind the promotional services theory is that retailer shelf space is a form of promotion which induces additional sales of the featured prod-

⁹⁸ Klein & Wright, *supra* note 93, at 6 n.12.

⁹⁹ Klein and Wright, *supra* note 93, Fig. 2, n. 31.

¹⁰⁰ *Id.* at 9.

uct.¹⁰¹ Contrary to conventional economic models that assume that retail only exists to reduce shopping costs, supermarkets in the real world, the world described by Hanson and Kysar, have the ability to influence consumers' purchasing decisions by altering shelf space and display allocations. Klein and Wright demonstrate that where retailer shelf space induces profitable incremental sales and consumers do not engage in substantial store switching in response to shelf space allocation decisions, shelf space contracts are a consequence of the normal competitive process because retailers do not have the incentive to provide the joint profit-maximizing amount of shelf space under these conditions.¹⁰²

In contrast to the behavioral account of supermarket shelf space decisions, the promotional services theory correctly implies that slotting will be positively related to manufacturer incremental profit margins, a fact that explains both the growth and the incidence across products of slotting in grocery retailing. Further, the theory explains the prevalence of slotting contracts for new and incumbent products, as well as those which consumers' purchase repeatedly, such as Coca-Cola. In sum, the promotional services theory explains the existing data where the behavioral theory does not.

Hanson and Kysar's supermarket analysis illustrates both fundamental similarities and differences between behavioral and price-theoretic approaches to consumer contracts. On the one hand, Hanson and Kysar's realistic description of supermarket shelf space decisions and deliberate design of store layouts to maximize profit tell a tale that is not reflected in standard economic models of retail which focus exclusively upon retailers' ability to reduce search costs. Their account therefore poses a very real and important chal-

¹⁰¹ Numerous marketing studies support this proposition. See Adam Rennhoff, *Paying for Shelf Space: An Investigation of Merchandising Allowances in the Grocery Industry* (unpublished working paper, on file with author, July 2004); Xavier Dreze, et al., *Shelf Management and Space Elasticity*, 70 J. RETAILING 301 (1994); Charles Areni, et al., *Point-of-Purchase Displays, Product Organization, and Brand Purchase Likelihoods*, 27 J. ACAD. MKTG. SCI. 248 (1999).

¹⁰² This incentive incompatibility problem is the retailer insufficient supply of promotion problem first illustrated in Benjamin Klein and Kevin M. Murphy, *Vertical Re-*

lence to neoclassical economists to explain some of the observed facts that appear inconsistent with the economic standard models, which assume a very passive role for the retailer. Both the behavioral and promotional services theory share the desire to engage in “real world” economics, accepting the reality that supermarkets do indeed have the ability to influence consumer purchasing decisions in a myriad of ways. Each theorist makes decisions regarding which descriptive features of the market to include in the model based upon concerns of tractability and contributions to predictive power, including consumer rationality.

Despite the similarities in methodologies, and the shared interest in predictive power, there also appears to be a considerable chasm between the two approaches. A behavioral economist might respond to the well-established empirical result that premium shelf space increases sales by arguing that this evidence supports the behavioral theories arguing that consumer willingness to pay for this display space is ultimately irrational. After all, one might suggest, Coke tastes like Coke whether purchased from the bottom or top shelf. But this argument boils down to whether consumer willingness to pay for “non-informative” advertising is rational. The notion that consumer demand is a function of both price and demand-increasing services, such as promotion, is not new to price theory.¹⁰³ But perhaps consumers’ positive consumer reactions to shelf space are irrational because they are unlike product demonstrations and point-of-sale services which provide valuable information to consumers? The view that consumer willingness to pay for “non-informative” advertising or investments in brand names is irrational relies on the dual assumptions that consumers do not generate utility from consuming the promotional service and that the sole legitimate economic function of advertising is to supply information about the product.

straints as Contract Enforcement Mechanisms, 31 J.L. & ECON. 265 (1988).

¹⁰³ See, e.g., Lester G. Telser, *Why Should Manufacturers Want Fair Trade?*, 3 J.L. & ECON. 86 (1960).

These assumptions ignore, and perhaps implicitly reject, long-standing arguments by economists that consumers may rationally value even so-called “non-informative” advertising such as celebrity endorsements, commercials, sponsorships of athletic events, and charities. Benjamin Klein and Keith Leffler’s seminal analysis of the role of advertising demonstrates the role of a non-salvageable investment in advertising in signaling the presence of a large selling cost and existence of a price premium.¹⁰⁴ Consumers with imperfect information rely on brand names and advertising instead of investing large amounts of time to learn all the details about a company’s product. In the Klein and Leffler model, for example, firm-specific assets such as “luxurious storefronts,” as well as point-of-sale investments, can supply information that the firm is advertising, and therefore supply information about the opportunity costs to firms of “cheating” and producing low quality goods or services.¹⁰⁵ Contrary to the assumption that brand-name investments and so-called “non-informative” advertising are not valuable, consumers that are willing to pay a higher price for brand name items are rationally purchasing additional quality assurance because firms selling brand-name products have more to lose by failing to provide quality goods or services.¹⁰⁶ In the supermarket con-

¹⁰⁴ Benjamin Klein & Keith B. Leffler, *The Role of Market Forces in Assuring Contractual Performance*, 89 J. POL. ECON. 615, 629-33 (1981). The “complementary” view of advertising, wherein individuals have stable preferences and consumption of advertising is complementary to consumption of the good, also considers the possibility that consumers value advertising without information. See, e.g., George J. Stigler & Gary S. Becker, *De Gustibus Non Est Disputandum*, 67, 83-87 AM. ECON. REV. 76 (1977); Gary S. Becker & Kevin M. Murphy, *A Simple Theory of Advertising as a Good or Bad*, 108 Q. J. ECON. 941 (1993).

¹⁰⁵ Klein & Leffler, *supra* note 104, at 630-31.

¹⁰⁶ The idea that reputations and brand names may facilitate private contract enforcement has a long history in economic thought. See, e.g., FRIEDRICH A HAYEK, *Stafford Little Lecture at Princeton University: THE MEANING OF COMPETITION* (May 20, 1946), in *INDIVIDUALISM AND ECONOMIC ORDER* 92, 97 (1948); ALFRED MARSHALL, *PRINCIPLES OF ECONOMICS: AN INTRODUCTORY VOLUME* (1949); Stewart Macaulay, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55 (1963); Klein & Leffler, *supra* note 104. The related idea concept that advertising and brand name investments may have a quality-guaranteeing effect was also emphasized by early economic thinkers. See, e.g., Emily Fogg-Meade, *The Place of Advertising in Mod-*

text, the purchase of premium shelf space and point-of-sale promotional investments may play a role in providing incentives that assure contract performance.¹⁰⁷

While I have emphasized the view that empiricism will ultimately resolve the extent to which behavioral insights should be incorporated into economic analysis of law, at least in the relatively data-rich environment of consumer contracts, the shelf space example suggests that there are at least some limits to this relatively optimistic view. The implication of the fact that some supermarket consumers value premium shelf space signals for consumer irrationality is, at least partially, a matter for interpretation. That interpretation must be guided by alternative theories explaining the data. I have suggested in the case of shelf space contracts and supermarket advertising, and consistent with the broader set of consumer contracts that are the subject of this essay, that neoclassical price-theoretic models have greater explanatory power.

V. Conclusions

The message of this essay has primarily been that in the sample of consumer contracts examined here—credit card contracts, standard form contracts more generally, and supermarket shelf space allocation—behavioral economic analysis, despite claims to the contrary in the legal literature, has not provided greater predictive power than its neoclassical counterpart. The limits of this survey are obvious, and the findings in these particular settings only begin to shed light on the more critical question of what explana-

ern Business, 9 J. POL. ECON. 218, 234 (1901); ALFRED MARSHALL, *INDUSTRY AND TRADE: A STUDY OF INDUSTRIAL TECHNIQUE AND BUSINESS ORGANIZATION; AND OF THEIR INFLUENCES ON THE CONDITIONS OF VARIOUS CLASSES AND NATIONS* 300-02 (1919). Klein & Leffler, *supra* note 104, present an early formalization of the role of advertising in assuring the supply of quality. For a comprehensive survey of the economics of advertising, see Kyle Bagwell, *The Economic Analysis of Advertising* (unpublished working paper, Aug. 2005), available at <http://www.columbia.edu/~kwb8/adchapterPost082605.pdf>.

¹⁰⁷ Wright, *supra* note 95, analyzes the role of category management in retail distribution in facilitating contract performance.

tory power behavioral insights have added in other contexts. Nor do the results here suggest that irrational behavior does not cause significant inefficiencies in some markets, or that intervention will never be required to minimize those inefficiencies. Incorporating the insights of behavioral economics will doubtlessly add explanatory power to existing approaches in some areas. For example, there is burgeoning literature in industrial organization economics¹⁰⁸ which discusses the implications of bounded rationality and “psychology and economics,” and which may ultimately improve our understanding of markets.

The evidence of firm and consumer behavior within this subset of contracts, however, minimally suggests that legal scholars approach cautiously the very common practice of relying on experimental evidence as the foundation for advocating paternalistic interventions in consumer markets on the assumption that the findings in these experiments translate to markets. Unfortunately, the explosion of paternalistic proposals within the behavioral law and economics literature do not always display such caution. Klick and Mitchell describe the behavioral law and economics literature as generally “proceed[ing] from little more than an identification of a cognitive bias that may explain a patter of seemingly inefficient choices,”¹⁰⁹ and offer a set of factors emphasizing both the dynamic consequences of paternalistic intervention as well as the relative institutional costs and benefits of public versus private decision-making, that should inform institutional design decisions aimed at correcting inefficiencies caused by systematic irrationality.¹¹⁰ Careful efforts by legal scholars to address the cost-benefit analysis con-

¹⁰⁸ See, e.g., Glenn Ellison, Bounded Rationality in Industrial Organization (unpublished paper, Aug. 2005), available at <http://www.hss.caltech.edu/~camerer/NYU/05-Ellison.pdf>.

¹⁰⁹ Klick & Mitchell, *supra* note 5, at 1654.

¹¹⁰ *Id.* at 1653-61. See also Glaeser, *supra* note 5, at 133-34, 146-49 (comparing the relative costs of government and individual decision-making, considering models where endogenous cognitive error increases the advantage of private decisionmaking, and arguing that the presence of cognitive error should “make us more, not less, wary about trusting government decisionmaking”).

templated by these factors, rather than merely assuming that paternalistic regulations will increase welfare where individuals exhibit some cognitive bias in experimental settings, along with subjecting both behavioral and neoclassical economic models to continued empirical testing in the field and in markets, should serve to improve the quality of debate as to whether, when, and what types of paternalistic intervention are justified.