Consumer Financial Protection Bureau
Behavioral Economics Symposium

Panel 2:

Behavioral Law & Economics and Consumer Financial Protection

The Role of Behavioral Economics in Consumer Protection Policy: Reflections of a Consumer Economist

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Washington, DC
September 19, 2019

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[1] The views expressed are those of the author and may not reflect the views of the Federal Trade Commission or any individual Commissioner. This statement draws from my prior work. I thank Jason Chen and Scott Syms for research assistance and many colleagues who have contributed to my understanding of this topic over the years, but I am responsible for any errors.

Background on my Perspective

Let me tell you a bit about my experience to shed light on my perspective. I joined the Federal Trade Commission's Bureau of Economics, Division of Consumer Protection in 1986 immediately after obtaining a Ph.D. from Cornell University with a major field in consumer economics and minor fields in industrial organization and statistics. As a staff economist, I analyzed consumer protection legal and policy matters related to unfair or deceptive practices, provided expert declarations for litigation, and conducted research on information regulation. I have published work in the *American Economic Review: Papers & Proceedings*, *Journal of Consumer Affairs*, *Antitrust Law Journal, Review of Industrial Organization*, and *Journal of Public Policy and Marketing,* from which I received two outstanding article awards. I serve on the editorial review boards of the *Journal of Consumer Affairs* and the *Journal of Public Policy and Marketing*, and I am co-editing a symposium on the economics of consumer protection for *Economic Inquiry*. I received the FTC's Paul Rand Dixon award for my work on consumer information in the mortgage market and served on the White House Task Force on Smart Disclosure. For the past decade, I have had the privilege of leading the Bureau of Economics' Division of Consumer Protection as Assistant Director. Our division, which just celebrated its 40th anniversary, is comprised of over twenty-five talented Ph.D. economists and two research analysts, who review virtually all consumer protection matters before the Commission, serve as expert witnesses in litigation, and conduct policy analysis and research.[2]

[2] For a history of the Division of Consumer Protection, including a summary of relevant research, see Pautler, P. A. (2015). A brief history of the FTC's bureau of economics: Reports, mergers, and information regulation. *Review of Industrial Organization, 46,* 59-94 and Pappalardo, J. K. (2014). Contributions by Federal Trade Commission economists to consumer protection: Research, policy, and law enforcement. *Journal of Public Policy & Marketing, 33*, 244-255. Materials for the FTC and *Economic Inquiry* Symposium on Consumer Protection Economics, celebrating the 40th anniversary of the Division of Consumer Protection within the Bureau of Economics are available at https://www.ftc.gov/news-events/events-calendar/consumer-protection-economics-symposium.

I. Introduction and Perspective

It is a great pleasure to participate in the Consumer Financial Protection Bureau's (CFPB's) Symposium on Behavioral Law and Economics and serve with such distinguished panelists. Today, I will reflect on how behavioral economics, and its role in consumer protection policy, has evolved during my three decades as a consumer protection economist at the Federal Trade Commission (FTC). At the outset, I want to be clear on two points. First, the views I express today are my own and do not necessarily represent the views of the FTC or any individual Commissioner. Second, I am not a behavioral economist, although under some definitions of "choice architecture" and "nudges," my work on information regulation might fit within a corner of the field, and at least one author has cited our mortgage disclosure research as an early application of behavioral economics by a regulatory agency.[3] At the same time, I know at least one behavioral economist who would not characterize this work as behavioral economics.

There is a lot of ground to cover in only a few minutes, but in this time, I will try to address four big picture questions from my perspective: First, what is behavioral economics and how does it differ from other fields in economics or marketing? Second, why is there debate over the role of behavioral economics in consumer protection policy? Third, how has behavioral economics evolved and contributed to consumer protection policy over the past three decades? Fourth, how can behavioral economics improve consumer protection policy in the future?

Overall, I conclude that behavioral economics has evolved substantially over the past few decades. Debate over the role of behavioral economics is real, but narrowing as scholars clarify and discuss terms of the debate, and behavioral economists develop welfare analysis to assess consumer policy interventions. What matters for improving consumer protection regulatory policy is not the field with which research is identified, but the quality of the research and the extent to which said research improves estimates of (1) the likely costs and benefits of a business practice and (2) the costs and benefits of possible remedies. Moreover, policy makers and analysts need to clarify the objective of a consumer policy to assess the costs and benefits of an intervention – is the goal to improve consumer welfare or total welfare, is it to remove deception without privileging a particular consumer choice or change consumer behavior in a particular

[3] Lunn, P. D. (2012). Behavioural economics and policymaking: Learning from the early adopters. *The Economic and Social Review, 43,* 423-449.

direction, is it to promote efficiency or equity? The policy best suited for one policy objective may not be best for another policy objective.

II. What is Behavioral Economics?

Before we can discuss the role of behavioral economics in consumer policy, we need a definition of behavioral economics. Camerer, Loewenstein, and Rabin define behavioral economics as "A subfield of economics that seeks to increase the explanatory power of traditional models by incorporating more realistic psychological foundations."[4] Yet, there is still considerable fuzziness regarding the definition as noted by Levine:[5]

> *Behavioral economics is hard to define. Because it is a terribly trendy term some research that antedates the invention of the word and has little to do with psychological theory or data – such as learning theory – is sometimes referred to also as "behavioral." Sometimes it seems as if anything these days beside the purest of rational models sells itself as "behavioral."*

One might say informally that behavioral economics is concerned with systematic deviations from standard economics models, examining if psychological realism can help explain these systematic deviations, and then exploring the implications of these deviations for economic equilibrium. One might further argue that behavioral economics has developed like many other sub-fields in economics, with scholars asking what happens when one relaxes certain assumptions. For example, one might argue that relaxing assumptions about perfect competition spawned the field of industrial organization, relaxing assumption about perfect information spawned the field of information economics, and relaxing assumptions about rational choice spawned the field of behavioral economics.

The difference between behavioral economics and other fields of economics depends, in large part, upon what "standard" economic model of consumer behavior one is using as a counter factual. If one uses a straw-man model of relatively unconstrained utility maximization, then there is a wide chasm between the concept of behavioral economics and standard economics. When a consumer does not make choices as expected by a relatively unconstrained utility maximizer, then some would say the consumer is making sub-optimal or "behavioral" decisions.

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[4] Camerer, C., Loewenstein, G., & Rabin, M. (2004). *Advances in behavioral economics.* Princeton University Press, Russell Sage Foundation.

[5] Levine, D. K. (2012). *Is behavioral economics doomed? The ordinary versus the extraordinary.* Cambridge UK: Open Book Publishers.

However, if one uses a household production model of consumer behavior, where people seek to obtain higher level goods subject to time, wealth, and household production constraints, where the costs of obtaining and comprehending information and making decisions is incorporated into the model, then one might view the same behavior as being rational or at least reasonable. I discuss how concepts of consumer rationality, irrationality, and reasonableness can frame consumer policy debates and policy choices in prior work.[6]

> *Constraints matter. If consumers appear to behave irrationally, then one should consider the consumer's constraints and alternatives before concluding that a decision is not rational. Income constraints matter. For example, the optimal choice for someone facing a credit constraint is different from the optimal choice for someone who is not credit constrained (Elliehausen 2010).*
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> *Time and information-processing constraints also matter. Consumers who appear to respond inappropriately to information disclosures may actually be acting rationally in response to information that is incomprehensible, making the cost of comprehension prohibitive. One example is work on mutual fund disclosures. Researchers have suggested that disclosures failed because they did not lead to optimal decisions by participants. However, the researchers never tested how participants comprehended the disclosures. Participants may never have understood from the disclosure that they should focus on fund fees, because this is not highlighted for them (Beshears et al. 2011). If disclosures appear to fail, one must ask if the disclosure designers failed or if the consumer failed. Consumer researchers understand that even experts are not good at predicting consumer opinions and reactions to communication efforts (Pappalardo 1997a, 1997b citing Armstrong 1991; Hoch 1988). This is why marketers use consumer research to estimate reactions to advertising campaigns and why such research is often needed to design disclosures that people will understand as intended.*

In addition to debate over the definition of behavioral economics among economists, I have often wondered how much daylight exists between the fields of behavioral economics and the field of marketing. When I arrived at the FTC over three decades ago, economists were collaborating with marketing scholars to incorporate tools and insights from marketing, which had long combined findings from psychology with economics, into their research and policy analysis. For example, we use insights from marketing research to help understand if an advertising campaign misled consumers to their detriment by (1) creating misleading beliefs about a product and (2) increasing consumer willingness to pay more or buy more of the product as a result.[7] The first part of the analysis might involve the use of randomized, controlled, information experiments known in the marketing literature as "copy-tests" to assess the net

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[6] Pappalardo, J. K. (2012). Product literacy and the economics of consumer protection policy. *Journal of Consumer Affairs*, *46*, 319-332.

[7] Pappalardo, J. K. (1997). The role of consumer research in evaluating deception: An economist's perspective. *Antitrust Law Journal, 65*, 793-812.

impression of an ad relative to a control ad to assess whether an ad is misleading. The second part of the analysis involves analyzing market data to assess whether the misleading advertising was likely to affect consumer demand, possibly increasing the prices consumers paid or the quantity purchased. Decades ago, I thought, and still think today, that specialists in psychology often have a comparative advantage in measuring information, taste, and preferences shifters that theoretically belong in any consumer demand analysis.

Regardless of debate over the definition of behavioral economics, as noted by fellow panelist, Joshua L. Wright, mainstream economics has embraced behavioral economics. Richard H. Thaler, who popularized the concept of "nudging" in his work with Cass R. Sunstein received the Nobel Prize and elevated behavioral economics within policy circles.[8] [9] Whatever its definition, the field of behavior economics, and terms such as "nudge" are thriving, and much of the old work from marketing, consumer research, and household production has been overshadowed.

III. Why is there debate over the role of behavioral economics in consumer protection policy?

One might wonder why consumer protection economists and policy makers did not universally and immediately embrace behavioral economics principles and recommendations. I can provide a bit of insight. My perspective is admittedly narrow, and colored by my work at the FTC, which has a mandate to promote competition and prohibit unfair or deceptive acts and practices. Consistent with this mandate, much of my work has involved regulating the information environment to ensure that people have non-deceptive information about products and services. My perspective might be different if I worked for an agency that had a mandate to change behavior in a particular direction – perhaps a mandate to reduce consumer consumption of a dangerous substance.

Differences in mandates matter. If the goal of the regulator is to ensure that information is non-deceptive, then one would likely judge remedies according to whether they improve

[8] Thaler, R. H., & Sunstein, C. R. (Eds.). (2008). *Nudge: Improving decisions about health, wealth, and happiness.* New Haven, CT: Yale University Press.

[9] Thaler, R. H., & Sunstein, C. R. (2009). *Nudge: Improving decisions about health, wealth, and happiness.* Rev. and expanded ed. New York: Penguin Books.

consumer comprehension, regardless of how consumer behavior changes as a result. If the goal of the regulator were to change behavior in a particular direction, then one would likely judge the intervention according to whether it leads to the desired behavioral change. This does leave open an important question, which I have raised at conferences when academics present research showing that an intervention, such as a social marketing intervention, changes behavior – did the behavior change because the intervention led to more accurate assessment of risk or to an over-inflated assessment of risk? And if the intervention promotes changing behavior by inflating assessments of risk, is this ethical? Is it acceptable to mislead people to induce the desired behavioral change?[10]

In addition to this agency-specific perspective, for those of us working in the marketing and public policy area, it was not clear how findings from the early behavioral economics literature differed from findings in the field of marketing, and should therefore lead to a change in consumer protection policy. For example, marketers have long advised that location, timing, defaults, and framing affects consumer choice. [11]

Apart from these differences in perspective or discipline, early recommendations to change consumer policy based on behavioral economics suggested a lack of nuanced awareness about the proposed policy. We addressed this disconnect at the FTC's conference on behavioral economics in 2007 in the context of financial disclosures.[12] Camerer et al.[13] called for "asymmetrically paternalistic" regulation based on behavioral economics, and wrote: "A regulation is asymmetrically paternalistic if it creates large benefits for those who make errors, while imposing little or no harm on those who are fully rational." We interpreted this as a type of cost/benefit test, and proposed using a broader cost/benefit test to assess if the total benefits of

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[10] Ringold also raises this question. Ringold, D. J. (2016), Assumptions about consumers, producers, and regulators: What they tell us about ourselves, *Journal of the Association for Consumer Research, 1 (3), 341-354.*

[11] Classic readings central to the study of consumer behavior and marketing are included in Boone, L. E. (1977). *Classics in consumer behavior: selected readings together with the authors own retrospective comments*. Tulsa (Okla.): Petroleum publ.

[12] Lacko, J. M & Pappalardo, J.K. (2007). *Information regulation is tricky: Lessons from mortgage disclosure research*. Conference Presentation. Washington, DC: Federal Trade Commission. For a summary of the conference, see Mulholland, J. P, *Summary report on the FTC behavioral economics conference*, available at: https://www.ftc.gov/reports/summary-report-ftc-behavioral-economics-conference.

[13] Camerer, C., Issacharoff, S., Loewenstein, G., O'Donoghue, T., & Rabin, M. (2003). Regulation for conservatives: Behavioral economics and the case for "asymmetric paternalism." *University of Pennsylvania Law Review, 151(3), 1211. https://doi.org/10.2307/3312889.*

intervention outweighed its total costs, including the direct and opportunity costs of implementing and enforcing a regulation. At the time, Camerer et al. also held up disclosures required by the Truth-in-Lending Act (TILA) as an example of asymmetrically paternalistic regulation:

> *The most ubiquitous and recognizable form of existing asymmetrically paternalistic regulation involving framing and information disclosure is the provision of information to consumers mandated by disclosure regulation . . . The Federal Truth in Lending Act (Act) . . . served as the starting point for this type of legislation . . .The Act provides potentially substantial benefits to those who are less than rational; it may save some consumers, otherwise uninformed, from possible catastrophic outcomes, such as losing their homes. These benefits are obtained at minimal cost to both informed consumers and providers. Educated consumers essentially ignore the mandated disclosures while uneducated consumers could potentially reap the positive benefits of additional information.*

We were dubious about this assertion, because we knew from our work as staff economists evaluating cases that consumers could receive all mandated disclosures and still misunderstand the nature of a loan transaction. We further suspected that consumers might systematically misunderstand mandated disclosures required by TILA not because consumers were biased or irrational, but because the disclosures themselves were systematically confusing. Relatedly, financial scholars had questioned the usefulness of the key metric used in many loans, the Annual Percentage Rate, because it is inappropriate and misleading in many circumstances.[14] A central problem is that simplifying assumptions used to calculate the APR often do not hold.

Our research at the FTC assessing consumer understanding of mortgage disclosures, later confirmed our suspicions. We conducted two studies. The first, a randomized, controlled test of mortgage broker compensation disclosures, confirmed that a disclosure that had been proposed by the Department of Housing and Urban Development (HUD) confused consumers, leading to misunderstanding of relative loan costs, likely leading to costly loan mistakes. It also showed that some simple design changes would substantially improve consumer understanding. The study led to new research by HUD to address our findings.[15]

In a second study, we examined mandated TILA and Good Faith Estimate (GFE) disclosures. The results confirmed that disclosures designed by regulators, without the benefit of

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[14] Guttentag, J. M., & Hurst, E. G., Jr. (1985). Truth-in-Lending as Applied to Mortgages: What Should Be Disclosed, and When? *Housing Finance Review, 4(1), 551–568.* Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eoh&AN=0187398&site=ehost-live

[15] Lacko, J. M., & Pappalardo, J. K. (2004). *The effect of mortgage broker compensation disclosures on consumers and competition: A controlled experiment.* Report. Washington, DC: Federal Trade Commission.

consumer research, were confusing, and even misleading. We also found that with some practical design changes by two staff economists asking what would be important if our best friend or mother was shopping for a mortgage, and consumer testing, following the principles we had learned from our marketing research colleagues, one could substantially improve consumer comprehension. The findings are summarized as follows:[16]

> *The qualitative interviews revealed that many borrowers, both prime and subprime, misunderstood and were confused by the mandated disclosures. Some of the mandated disclosures actually misled borrowers. Many borrowers believed, for example, that the "amount financed" disclosed on the TILA statement was their total loan amount, even though the figure is calculated by subtracting finance charges from the loan amount. A number of borrowers also mistakenly believed that the "discount fee" disclosed on the GFE was a discount they had received rather than a fee they had paid. Many borrowers also did not understand key terms of their own recently obtained loans. Many had loans that were significantly more costly than they had believed, or that contained significant restrictions, such as prepayment penalties, of which they were unaware. Many borrowers did not learn of these costs and terms until or after their loan settlement, and some appeared to learn for the first time during the interview.*
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> *The results of the controlled experiment confirmed and quantified the shortcomings of the mandated disclosures. Nearly a quarter of the subjects viewing the current disclosures could not correctly identify the amount of settlement charges, about a third could not identify the interest rate, a third did not recognize that the loan included a large balloon payment, a third did not recognize that the loan amount included money borrowed to pay for settlement charges, half could not correctly identify the loan amount, two-thirds did not recognize that they would have to pay a prepayment penalty if they refinanced, three-quarters did not recognize that a substantial charge for optional add-on credit insurance was included in the costs, and nearly nine-tenths could not identify the total amount of up-front charges.*
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> *The results of the experiment also demonstrated that the disclosures can be significantly improved. Participants viewing the prototype disclosures answered an average of 80 percent of the loan term questions correctly, compared to an average of 61 percent for participants viewing the mandated disclosures, an improvement of 19 percentage points. Eighty percent of those viewing the prototype disclosures were able to answer at least 70 percent of the questions correctly, compared to 29 percent of those viewing the mandated disclosures, an improvement of 51 percentage points. Both of these differences were significant at more than the 1 percent level.*

Most important for discussion about behavioral economics and the ability of consumers to understand simple vs. complex loan products, we concluded:

> *The performance of the prototype disclosures demonstrated that disclosure policy could have provided significantly better protection to borrowers. The poor performance of the current disclosures was not due to cognitive limitations of consumers or inexplicably complex new loan terms, but to the ineffective design and presentation of the mandated disclosures.*

[16] Lacko, J. M., & Pappalardo, J. K. (2010). The failure and promise of mandated consumer mortgage disclosures: Evidence from qualitative interviews and a controlled experiment with mortgage borrowers. *American Economic Review: Papers and Proceedings, 100*, 516-521.

I also want to make clear, as I think this point gets lost, that the objective of the disclosures is to ensure that people are likely to comprehend the terms of the product – it is not to push people toward a particular product choice. The hope is that by making it easier to understand, the cost of understanding decreases, relaxing the time constraint and making household production more efficient, consumers are in a better position to choose what is best for them. I also want to make clear that one cannot assume that a disclosure remedy is at worst, harmless. Our research shows that well-intentioned disclosures can be misleading. Thus, the assertion that TILA disclosures likely meet the asymmetric paternalism criteria turned out not to be justified.

IV. How has behavioral economics evolved and contributed to consumer protection policy?

Findings and recommendations from behavioral economists and other consumer behavior researchers have changed the consumer protection landscape. A complete accounting of these changes is beyond the scope of my essay, but I would like to highlight a few applications in my corner of the world. Behavioral economic researchers have identified a range of potential consumer choice problems, and expanded the set of potential policy interventions to address these problems. Prior to the evolution of behavioral economics, building on prior work at the FTC on information remedies, I would have ranked remedies from least interventionist to most intervention as: (1) Status-Quo (no intervention); (2) Information Disclosure (setting standardized metrics or requiring standardized formats with mandatory disclosures); (3) Education; (4) Bans (ban product claims or product characteristics). The original report on information remedies at the FTC also included the loosening of market restrictions, such as loosening restrictions on non-deceptive advertising by professionals, as a consumer information remedy.[17] If one worked in an environment that included taxation or subsidization as a policy tool, a pre-behavioral economics economist would probably add these tools to the continuum too. The idea of the continuum was not to privilege a particular remedy in all instances, but to acknowledge that relatively restrictive/interventionist policy likely had relatively high potential

[17] FTC. (1979). *Consumer information remedies: Policy session.* Report. Washington, DC: Federal Trade Commission.

risk of backfiring, and that it would be sensible to consider less restrictive remedies before considering more restrictive ones.

Behavioral economics has uncovered and categorized consumer behavior inconsistent with some definitions of rationality. For example, people may have non-neoclassical preferences and not discount time linearly (hyperbolic discounting) or may exhibit loss aversion. Johnson et al.,[18] in an article entitled: "Beyond nudges: Tools of a choice architecture," have developed a practical list of different consumer choice challenges and possible remedies for each challenge, based on findings in the broad behavioral literature. Challenges include "alternative overload" for which a reduction in options or improved decision aids are suggested. Another challenge is "decision inertia," which might be improved by mindful default setting. One might address the challenge of "myopic procrastination" with limitations on time windows or a focus on satisficing.

As I have written elsewhere, findings from behavioral economics have expanded the "consideration set" of consumer policy options:[19]

> *Behavioral economics has contributed to consumer policy by broadening the range of consumer policy options. Several years ago, I wrote about the pros and cons of three options: inform consumers, educate consumers, or regulate product characteristics (Pappalardo 1997a, 1997b). This ordering was not accidental; I tried to arrange policies on a continuum ranging from least prescriptive (or least judgmental) to most prescriptive (or most judgmental). I also discussed the importance of considering the costs and benefits of these different approaches.*
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> *Consumer policy makers must consider not only which strategy—direct regulation, information provision, or consumer education—is likely to solve a problem most efficiently, but also who in the consumer protection environment is relatively efficient at achieving the desired goal.*
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> *Today, I would add to this continuum two policy options highlighted in the behavioral economics literature: default nudges and individualized decision tools. Default remedies are more prescriptive than education remedies, but less prescriptive than a product ban. Default setting requires a value judgment about what choice most people would make if they had full information. If policy makers are correct in their assessment, then changing default settings can improve consumer welfare. If policy makers misjudge this choice, then a change in default setting can make people worse off. One concrete example in the mortgage market is the suggestion that the default mortgage for consumers ought to be the thirty-year fixed- rate mortgage, and consumers would need to opt out of this option if they choose an alternative. This nudge presumes that most people, if fully informed, would choose this option. There is*

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[18] Johnson, E. J., Shu, S. B., Dellaert, B. G. C., Fox, C., Goldstein, D. G., Häubl, G., . . . Weber, E. U. (2012). Beyond nudges: tools of a choice architecture. *Marketing Letters: A Journal of Research in Marketing, 23*(2), 487-504.

[19] Pappalardo, J. K. (2012). Product literacy and the economics of consumer protection policy. *Journal of Consumer Affairs*, *46*, 319-332.

considerable debate, however, over whether the thirty-year fixed-rate mortgage popular in the United States really is the mortgage that best matches most people's needs. One problem is that most people do not hold a mortgage for thirty years, and it is not clear whether it makes sense to pay a premium for fixing an interest rate over such a long time horizon (Bible and Joiner 2009; Campbell and Cocco 2003).

Individualized decision tools, made possible by new technology such as smart phones, are an important addition to the consumer protection policy continuum. Like any education policy, they involve some value judgment by the tool designer to determine which options are best for an individual. Individualized tools hold great promise, however, because consumers may be allowed to determine the relative importance of many attributes involved in complex decisions. For example, recommender tools may help people to identify the "consideration set" of options that is best for them. Social psychologists and marketing researchers such as John Lynch have long understood that consumer choices depend critically on the options that enter into a person's consideration set. Lynch (2009) has been working to develop a choice tool for housing and mortgage purchase decisions. Another example is work by the Obama administration to promote Smart Disclosure, which encourages making machine readable data available to third parties who can develop choice tools using data about product options (Sunstein 2011).

The work by Johnson et al. suggests adding additional remedies into the consideration set, such as limitations on time windows, (which is a difficult remedy for an economist to swallow, because one generally thinks that consumers are better off when constraints, including time constraints, are relaxed).

Johnson et al. also add nuance to the view that information remedies can ever be "neutral" or "non-judgemental," writing: "While it is tempting to think that choices can presented in a "neutral" way ("Just the facts, Ma'am"), the reality is that there is no neutral architecture – any way a choice is presented will influence how the decision-maker chooses." This observation, which rings true, gets back to a point I raised earlier – is there a responsibility for policy makers to ensure to the extent possible that information remedies do not confuse or mislead consumers?

Behavioral economics theories have also made their way into law enforcement at the FTC. As noted previously, consumer protection economists often collaborate with marketing researchers and attorneys to help determine if, and to what extent, a business practice harms consumers. The FTC's case against Russell and Catherine Dalbey and the Dalbey Education Institute (DEI) provides an example of such research in litigation, when the firm posed a ". . . novel defense with roots in behavioral economics: the "unused gym membership theory." The defense essentially argued that deceptive statements by the firm were not responsible for consumer failure in

the business opportunity; rather, consumers themselves were responsible, and the firm should not be liable.[20]

> *The defendants' attorneys argued that DEI customers may not be achieving their desired level of success due to present-bias or hyperbolic discounting.(footnote omitted) That is, for the same reasons that individuals frequently promise (themselves) to start their diets tomorrow or under-utilize gym memberships, consumers may have purchased DEI's training materials but then not invested the necessary time or effort to achieve success (O'Donoghue and Rabin, 1999; DellaVigna and Malmendier, 2006).*

FTC staff commissioned a survey of purchasers, and used a stratified sampling strategy to separate those who made substantial investments in the opportunity, signaling that they were committed to the business venture from those who did not signal strong commitment. The research helped to refute the unused gym membership defense.

Probably the biggest advance in behavioral economics over the past five years or so has been the development of structural behavioral models and the development of welfare analysis. The first wave of behavioral economics consisted of lab experiments, then the next wave largely involved demonstrating which anomalies exist and survive in real markets, and now the frontier research is incorporating these estimates into structural models. Structural models naturally lend themselves to two advances over previous "first-wave models: (1) incorporating heterogeneity among consumer types and (2) evaluating welfare effects from policy changes, which necessarily requires an assumption about the welfare criterion to use. One or two decades ago, the welfare assumption was typically "what the long-run self" would do. That may be a reasonable starting point, but more advanced options now exist. For example, (1) modeling utility as a weighted combination of long-run self and short-run selves or (2) focusing on unambiguous choices no matter what decision-model one assumes.[21] [22] [23]

The behavioral welfare economics of consumer financial regulation is a cornerstone of the prestigious Richard T. Ely Lecture presented by John Y. Campbell at the American

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[20] Brand, K., Gaynor, M., McAlvanah, P., Schmidt, D., & Schneirov, E. (2014). *Economics at the FTC: Office Supply Retailers Redux, Healthcare Quality Efficiencies Analysis, and Litigation of an Alleged Get-Rich-Quick Scheme*. *Review of Industrial Organization*, 45(4), 325–344.

[21] DellaVigna, S. (2018). Structural behavioral economics. *Handbook of behavioral economics, Volume 1* (eds. Doug Bernheim, Stefano DellaVigna, and David Laibson), Elsevier.

[22] Bernheim, B. D., & Rangel, A. (2009). Beyond revealed preference: Choice-theoretic foundations for behavioral welfare economics. *Quarterly Journal of Economics*, 124(1), 51–104.

[23] Bernheim, B. D., Fradkin, A., & Popov, I. (2015). The welfare economics of default options in 401(k) plans. *American Economic Review, 105(9), 2798–2837.*

Economics Association's annual meeting in 2016. The lecture, entitled "Restoring Rational Choice: The Challenge of Consumer Financial Regulation,"[24] should be required reading for anyone working in the area. Campbell begins by observing that "consumer regulators seek to restore the choices that consumers would make if they were rational and well informed" and further argues that this is similar to the goal of restoring competition to markets. He examines theories for intervening in financial markets, explicitly focusing in theories involving consumer financial "mistakes" consistent with theories and research in behavioral economics illuminating various mistakes. In the model, "the social planner is assumed to know agents' true utility and be at least partially paternalistic, that is the planner places some weight on agents' true utility as opposed to their self-perceived utility. (Footnote omitted noting that this is "not innocuous"). In this situation the planner may be able to increase social welfare by intervening to discourage mistaken choices."

In the model, "rational agents" are those who correctly predict the utility they will receive from buying a good or service and "behavioral agents" over-estimate the utility that they will receive. He then evaluates the welfare effects of different interventions. The model formalizes the intuition that efforts to help "behavioral" consumers can impose costs on "rational" consumers. Thus, the challenge, once again is to gather information to estimate, to the extent possible, the costs and benefits of various interventions. He concludes: "The task for economists is to confront this trade-off explicitly, bringing to bear the highest quality evidence that modern applied microeconomics can make available." To this I might add, that evidence from other fields such as psychology, marketing, and neuroscience can also be useful to assess the costs and benefits of policy interventions. One important thing that is not explicitly included in this otherwise outstanding paper is consideration of whether regulators can confuse or mislead consumers when adopting disclosures or other remedies and the research a regulator might undertake to address this potential problem.

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[24] Campbell, J. Y. (2016). Restoring rational choice: the challenge of consumer financial regulation. *American Economic Review: Papers & Proceedings, 106(5), 1–30.*

V. How can behavioral economics improve consumer protection policy in the future?

There is clearly a role for behavioral economics in developing, evaluating, and implementing consumer protection policy, just as there is a role for all type of social science research to improve public policy. Campbell provides a nice roadmap, identifying variables that one would ideally like to estimate to conduct welfare analysis of different policy interventions. However, the road map still leaves open a few questions. One question, which is still undeveloped in the slim economics of consumer protection literature, is the question of whether the goal of the regulator is to maximize consumer welfare or total welfare.[25] A related question highlighted by Campbell is whether the goal of a policy should be efficiency or equity. Yet another question, which I noted earlier, is whether the mandate of a regulator is to change consumer behavior in a particular direction or to ensure that information environment does not contain deceptive marketing claims. Relatedly, there may be some disconnect between legal mandates of regulators and perceived mandates by academic researchers. For example, Campbell begins with the premise that ". . . consumer regulators seek to restore the choices that consumers would make if they were rational and well informed." However, as a practical matter, there is a question of whether this is the official mandate of a regulator. The right regulatory policy tool will depend on the mandate of the regulator.

The future role of behavioral economics in consumer protection regulation will also depend on further clarification of what it means to be a "rational" vs. "behavioral" consumer, and how these concepts relate to being a "reasonable" consumer. A "reasonable" consumer standard guides much of consumer protection law and policy. A central question is therefore whether new findings from behavioral economics will affect the reasonable consumer standard.[26]

[25] Pappalardo, J. K. (2018). Economics of consumer protection: contributions and challenges in estimating consumer injury and evaluating consumer protection policy. Conference presentation, *Journal of Consumer Policy. Forthcoming.*

[26] Pappalardo, J. K. (2012).