Behavioral Antitrust: Unanswered Questions on the Horizon

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Beginning with Judge Robert Bork's *Antitrust Paradox* and continuing through the present, the assumption that humans behave as perfectly rational, profit-maximizing actors has taken center stage in modern antitrust law. As one scholar recently put it, "Antitrust law now worships at the shrine of rationality"[1] and therefore assumes that human and firm behavior comports with profit-maximizing behavior. Over the last fifteen years, however, a growing tide of literature in the behavioral economics field has questioned the assumption that humans always behave perfectly rationally.[2] That literature increasingly suggests (not surprisingly) that humans are imperfect decision makers and, on occasion, will predictably act in ways that are contrary to their own self-interest. The question for law generally—and antitrust specifically—is whether and in what contexts the insight that humans are imperfect decision makers is doctrinally relevant.

Scholars are now at work defining the new field of "behavioral antitrust"—i.e., the study of how behavioral economics can inform antitrust law.[3] As the behavioral antitrust literature continues to grow, so too will the debate over whether there is any practical value in applying behavioral economics to antitrust law. Several questions in conjunction with that analysis remain unanswered. Those questions include: (1) whether behavioral economics is viable in the absence of an organizing principle; (2) whether behavioral economics is helpful in analyzing firm—as distinct from individual—behavior; (3) who should make the hard decisions about whether behavioral economics should apply, if ever; and (4) whether one must adopt a particular view about the goal of antitrust law for behavioral economics to be useful. I provide some thoughts on these questions below.

Rationality and Behavioral Economics

Neoclassical economics, which is widely considered to provide the foundation for modern antitrust law,[4] is premised on the assumption that human beings—and by extension firms—are rational maximizers. This does not mean that neoclassical economists believe actual human beings

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[1] Christopher R. Leslie, *Rationality Analysis in Antitrust*, 158 U. PA. L. REV. 261, 265 (2010).

[2] Douglas H. Ginsburg & Derek W. Moore, *The Future of Behavioral Economics in Antitrust Jurisprudence*, COMPETITION POLICY INT'L, Spring 2010, at 93–94 (surveying citations to "behavioral economics" in law review texts and titles between 1980 and 2009).

[3] Maurice Stucke and Avishalom Tor have been at the forefront of this movement. *See, e.g.*, Maurice E. Stucke, *Behavioral Economists at the Gate: Antitrust in the Twenty-First Century*, 38 LOY. U. CHI. L.J. 513, 529–30 (2007) [hereinafter *Behavioral Economists*]; Avishalom Tor, *The Methodology of the Behavioral Analysis of Law*, 4 HAIFA L. REV. 237, 242–43 (2008).

[4] I use the term "neoclassical economics" to refer broadly to those schools of economic thought, including Chicago School, Post-Chicago School, and Harvard School, which rely on the assumption of rationality as a central tenet in their analyses. *See, e.g.*, Herbert Hovenkamp, *Post-Chicago Antitrust Analysis: A Review and Critique*, 2001 COLUM. BUS. L. REV. 257 (2001) (discussing the role of Chicago School and post-Chicago School economics in the development of modern antitrust law); William E. Kovacic, *The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago/Harvard Double Helix*, 2007 COLUM. BUS. L. REV. 1 (2007) (discussing role of Chicago, Post-Chicago, and Harvard schools of economics in the development of modern antitrust law).

always act rationally.[5] Instead, they believe that markets are self-correcting and will counteract faulty decision making, thereby leaving rational behavior in control. The assumption of rationality therefore provides a powerful shortcut which facilitates the development of sophisticated economic models of markets that are, in turn, considered an accurate reflection of reality. The basic principles of those models (also termed "price theory") include the propositions "that demand curves slope downward, that an increase in the price of a product will reduce the demand for its complement, that resources gravitate to the areas where they will earn the highest return, etc."[6]

Behavioral economics attacks the rational profit-maximizer assumption head on by assuming that humans have cognitive limitations that prevent them from processing information perfectly and maximizing their utility.

Judge Bork's *Antitrust Paradox*, along with the work of Judge Richard Posner, and Professors Donald Turner and Phillip Areeda, brought these ideas to the forefront of modern antitrust analysis during the 1970s and early 1980s. Collectively, their work demonstrated that all of antitrust analysis could be viewed "through the lens of price theory."[7] Indeed, while behavioral economics is frequently presented as a counter to the "Chicago School" of antitrust analysis, that characterization is a red herring: as FTC Commissioner William Kovacic has explained, members of the "Post-Chicago School" as well as the "Harvard School" (including Areeda, Turner, and Justice Stephen Breyer) have also played key roles in importing the assumption of rationality into antitrust law.[8] As a result, from the Sherman Act, to the Clayton Act, to the recently revised draft merger guidelines,[9] the neoclassical assumption of the rational profit-maximizer permeates modern antitrust law.[10]

Behavioral economics attacks the rational profit-maximizer assumption head on by assuming that humans have cognitive limitations that prevent them from processing information perfectly and maximizing their utility. Drawing on insights from cognitive psychology, neuroscience, and sociology, the behavioral economics literature has observed that humans systematically (as opposed to randomly) deviate from rationality by displaying bounded rationality, bounded willpower, and bounded self-interest.[11]

Bounded rationality refers to the insight that individuals exhibit systematic biases in their decision making which lead them to use rules of thumb (or, in behavioral economics parlance, "heuristics") and other decision-making shortcuts to simplify decision making.[12] For example, the "availability heuristic" teaches that humans judge the frequency of an event based on their recollection of the same or similar events. Thus, people are more likely to conclude that they will be in a car accident if they have recently witnessed one. Similarly, the "endowment effect" refers to the fact

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[5] Michael A. Salinger, *Behavioral Economics, Consumer Protection, and Antitrust*, Competition Policy Int'l, Spring 2010, at 67 (noting that "economic analysis necessarily relies on simplifying assumptions that sacrifice realism for tractability" and that the "rationality assumption plays so prominently in the literature because it is tractable . . . and yields some quite accurate predictions").

[6] Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. Pa. L. Rev. 925, 928 (1970).

[7] *Id.*; Robert H. Bork, The Antitrust Paradox (1978); Richard A. Posner, Antitrust Law: An Economic Perspective (1976).

[8] Kovacic, *supra* note 4, at 80 (noting that the Harvard School "had as much to do as Chicago with creating many of the widely-observed presumptions and precautions that disfavor intervention by U.S. courts and enforcement agencies").

[9] U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines: For Public Comment (Apr. 20, 2010), *available at* http://www.ftc.gov/os/2010/04/100420hmg.pdf [hereinafter Proposed Merger Guidelines].

[10] *See* Amanda P. Reeves & Maurice E. Stucke, *Behavioral Antitrust* 19–27 (U. Tenn. Legal Studies Research Paper No. 106, Apr. 24, 2010), *available at* http://ssrn.com/abstract=1582720; Leslie, *supra* note 1, at 265–74.

[11] Christine Jolls, Cass R. Sunstein & Richard H. Thaler, *A Behavioral Approach to Law and Economics*, *in* Behavioral Law and Economics (2000) (describing bounded rationality, bounded willpower, and bounded self-interest).

[12] Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, *in* Judgment Under Uncertainty 3, 11 (Daniel Kahneman, Paul Slovic & Amos Tversky eds., 1982).

that humans place a higher value on objects they own than on objects that they do not own.[13] So, for example, an individual who owns an object requires a greater payment to part with that object than he would be willing to pay to purchase the identical object. Likewise, "framing effects" refer to the way a choice is framed—a choice that is cast as a "sure gain" or an "avoidable loss" alters the way humans make decisions.

Bounded willpower refers to the perhaps unsurprising insight that individuals make decisions (skipping exercise, overspending, smoking) that are not in their long-term self-interest. People who recognize their bounded willpower will often take steps to counteract it by, for example, keeping tempting food out of the house, having automatic 401(k) deductions, or only carrying cash.

Bounded self-interest refers to the fact that an individual's self-interest is "bounded" more broadly than neoclassical economics assumes: in many market settings, people care about being treated fairly but also want other people (who are behaving fairly) to be treated fairly. Thus, if given the choice, individuals will accept a lower salary so that a co-worker is not fired, will donate a kidney to a stranger, and will pay higher taxes so that others can benefit.

Relative to neoclassical economics, which has its origins in the 19th century,[14] the fundamental insights of behavioral economics are comparatively new. Nobel Laureate Herbert Simon first introduced the idea of "bounded rationality" in the 1950s.[15] It was not until nearly two decades later, however, that behavioral economics as a subfield of economics began to take off, following the publication of Nobel Prize winner Daniel Kahneman and Amos Tversky's landmark papers that concretely identified three heuristics and supplied an alternative model to rational choice theory (which they termed "prospect theory") based on their behavioral insights.[16] During the 1990s, legal scholars began to apply behavioral economics to different areas of the law resulting in numerous law reviews, books, and academic conferences on the topic. More recent events in the mainstream media have only heightened interest in behavioral economics, including:

- the 2008 collapse of the financial markets, which has been characterized by many (including Alan Greenspan and Richard Posner) as further evidence that unregulated human decision making will not always lead the market to optimal outcomes;[17]
- a spate of bestselling books discussing behavioral economics;[18]
- a rancorous debate over the role behavioral economics should play in a new Consumer Financial Protection Agency; and
- President Obama's decision to install leading behavioral law and economics scholar Cass Sunstein as the OMB's Administrator of the Office of Information and Regulatory Affairs

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[13] Richard H. Thaler, The Winner's Curse: Paradoxes and Anomalies of Economic Life 63 (1992); Daniel Kahneman et al., *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 J. Pol. Econ. 1325, 1327 tbl.1 (1990) (summarizing studies).

[14] Geoffrey M. Hodgson, Economics and Evolution: Bringing Life Back into Economics 99–108 (1996).

[15] Herbert A. Simon, *A Behavioral Model of Rational Choice*, 69 Q.J. Econ. 99 (1955).

[16] Tversky & Kahneman, *supra* note 12; Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 Econometrica 263 (1979).

[17] Kara Scannell & Sudeep Reddy, *Greenspan Admits Errors to Hostile House Panel*, Wall St. J., Oct. 24, 2008, at A1, *available at* http://online.wsj.com/article/SB122476545437862295.html; Richard A. Posner, A Failure of Capitalism: The Crisis of '08 and the Descent Into Depression (2009).

[18] *See, e.g.*, Justin Fox, The Myth of the Rational Market: A History of Risk, Reward, and Delusion on Wall Street (2009); George A. Akerlof & Robert J. Shiller, Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters for Global Capitalism (2009); Dan Ariely, Predictably Irrational: The Hidden Forces That Shape Our Decisions (2008); Richard H. Thaler & Cass R. Sunstein, Nudge: Improving Decisions About Health, Wealth, and Happiness (2008).

("the Regulatory Czar") along with his direction to OMB to "clarify the role of the behavioral sciences in formulating regulatory policy."[19]

In short, there are now discussions of behavioral economics in virtually every substantive legal area, and the behavioral economics scholarship shows no signs of slowing down.[20]

Unanswered Questions for Behavioral Antitrust

Behavioral economics has thus far remained on the sidelines when it comes to U.S. antitrust analysis. In part this is due to the relative infancy of behavioral economics as a field: behavioral antitrust scholars have not yet provided a clear roadmap that advocates or decision makers can easily follow. But there may be other complicating factors as well that are unique to antitrust. I now turn to four of those factors.

Its imperfections notwithstanding, there is widespread agreement that one of the virtues of neoclassical economics has been its ability to supply an organizing principle in the form of the assumption that humans behave rationally.

1. Is behavioral antitrust viable in the absence of an organizing principle? Its imperfections notwithstanding, there is widespread agreement that one of the virtues of neoclassical economics has been its ability to supply an organizing principle in the form of the assumption that humans behave rationally. This organizing principle, in turn, plays a critical role in the common-law process through which antitrust law is made, by supplying standards for judges to apply and thereby preventing antitrust law from being wholly discretionary and unpredictable. Any economic theory that seeks to supplant neoclassical economics therefore bears the burden of offering an alternative organizing principle (or, alternatively, explaining why one is not needed). The main critique of behavioral economics, thus far, has been that it is not susceptible to an organizing principle or limiting principles relating to the behavior of market participants.[21] As Cass Sunstein himself has acknowledged, there is some truth in that critique.[22] While an organizing principle may eventually emerge, that has not happened yet.

The absence of an organizing principle will likely prevent behavioral economics from reshaping antitrust law in the way neoclassical economics was able to do over the last forty years. This is in large part due to the common-law nature of antitrust law. When judges issue antitrust decisions, they make law based on a single case that can have far-reaching results across industries. As a result, observations that humans behave "predictably irrationally" in certain discrete circumstances do not offer a clear tool for deciding cases that must establish broad rules across sectors of the economy, such as whether conduct qualifies as exclusionary or an agreement is anticompetitive.

Nevertheless, while the absence of an organizing principle (at least for now) may limit the ability of behavioral economics to effect across-the-board doctrinal changes in antitrust, this does not mean that there will not be any role for behavioral antitrust going forward. Doctrinally, it may still be possible for behavioral economics to play a role in certain fact-specific contexts. Two examples are illustrative.

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[19] Press Release, White House, Memorandum for the Heads of Executive Departments and Agencies (Jan. 30, 2009), *available at* http://www.whitehouse.gov/the-press-office/presidential-memorandum-regarding-regulatory-review.

[20] Ginsburg, *supra* note 2, at 94 (noting that the volume of law review articles mentioning behavioral economics doubled from 548 during 2000–2004 to 917 during 2005–2009).

[21] *See, e.g.*, Salinger, *supra* note 5, at 66, 77–79; Ginsburg, *supra* note 2, at 97.

[22] Cass R. Sunstein, *Introduction*, *in* BEHAVIORAL LAW AND ECONOMICS 1, 9 (Cass R. Sunstein ed., 2000) (noting that "an enormous amount remains to be done" in the development of behavioral economics, including determining whether "behavioral economics [can] generate a unitary theory of behavior" or whether behavioral economics is "too ad hoc and unruly to generate predictions in the legal context").

First, behavioral economics could affect merger review.[23] To understand why, it is helpful to think about why behavioral economics has been able to make inroads in the consumer protection literature and regulatory law more generally. Because behavioral economics is interested in identifying the exception to the rule (i.e., the circumstances in which humans behave irrationally), it applies best where it is possible to test a default rule repeatedly and understand how individuals will react to that default rule. Consumer protection law is largely regulatory, meaning rules and regulations are adopted after detailed proceedings that focus on a discrete issue, such as what a particular disclosure should require. Behavioral economics has likely proven useful in these rule-making settings because its discrete, fact-specific insights align with the discrete and fact-specific nature of regulatory decision making.

Merger review is the closest antitrust decision makers come to engaging in a traditional regulatory process: expert agencies make decisions that are highly fact-specific; the conclusions in the form of closing statements and/or a consent decree are case-specific and do not constitute binding precedent; and the review of the proposed merger is done ex ante rather than ex post.[24] Moreover, while economic modeling plays an important role in market definition and in predicting whether a merger will have anticompetitive effects, the agencies also have the benefit of a vast factual record, including investigational hearings of the parties, interviews with customers and competitors, and documents from the parties. The agencies' decisions during the merger review process are therefore akin to non-precedential fact-bound rulings.

It may be the case that in most mergers, firms engage in rational profit-maximizing behavior as neoclassical economics predicts. But occasionally (the "one off" case, perhaps), predictive models that require complex inferences in the face of imperfect information may tell a different story from what the parties' documents and testimony actually suggest. In these cases, rather than ignoring these facts because they are inconsistent with neoclassical theory (which assumes that irrational conduct will be canceled out) or proceeding with a particular result by shoehorning it into neoclassical theory (by saying, for example, that the party is acting consistently with its own incentives even if others similarly situated would not have the same view of their incentives), the agencies with their knowledge of how industry participants normally behave and their teams of economists may be able to explain the parties' conduct by drawing on their insights from behavioral economics literature.[25] The 2010 revised Merger Guidelines place a greater emphasis on the types and sources of evidence that the agencies will consider in evaluating a proposed transaction's anticompetitive effects.[26] As Commissioner J. Thomas Rosch has observed, a move to look more

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[23] *See* Stucke, *Behavioral Economists*, *supra* note 3 (discussing application of behavioral economics to merger review).

[24] Antitrust Modernization Commission, Report And Recommendations 51 (2007), *available at* http://govinfo.library.unt.edu/amc/report_recommendation/chapter1.pdf (noting that merger enforcement "has shifted in emphasis from a litigation-based system focused on judicial review of consummated deals to an administrative regime in which [FTC and DOJ] review mergers above a certain size prior to consummation"); Spencer Weber Waller, *Prosecution by Regulation: The Changing Nature of Antitrust Enforcement*, 77 Or. L. Rev. 1383, 1400 (1998) (discussing the move of antitrust from a prosecutorial to a regulatory model and claiming that with regard to HSR merger review, "regulation and administrative law-making have replaced the courts as the source for the creation and enforcement of antitrust law"); Harry First, *Is Antitrust "Law"?*, Antitrust, Fall 1995, at 9–12 (discussing the shift in antitrust law from a legal culture to a "bureaucratic regulatory culture").

[25] Indeed, as suggested elsewhere, this may explain the concurring statements of now Chairman Leibowitz and Commissioner Rosch in conjunction with the FTC's decision to vote out a complaint in the *Ovation* case. *See* Reeves & Stucke, *supra* note 10, at 59–61.

[26] Proposed Merger Guidelines, *supra* note 9.

carefully at the factual record could open the door to a more detailed analysis of the parties' incentives, intentions, and behavioral biases.[27]

Second, if the FTC were to (1) move toward applying sectoral-specific tests in its administrative decisions (i.e., liability standards that respond to unique concerns in certain industries, such as the high up-front costs present in the high-tech and pharmaceutical industries), or (2) engage in rulemaking, behavioral economics could play a role in the formation of those more context-driven tests. The idea of sectoral-specific tests may initially seem far fetched, but it is a common practice at the European Commission[28] and, to some extent, the United States already engages in sectoral-specific analyses insofar as the mergers and conduct of certain regulated industries—such as telecommunications and transportation—are already reviewed by specialized agencies like the Federal Communications Commission and the Federal Energy and Regulatory Commission. Moreover, the FTC's interest in applying an "inherently suspect" analysis to declare certain practices presumptively illegal,[29] could potentially open the door for the FTC to incorporate behavioral insights into its findings that recurring conduct in certain sectors is subject to a truncated rule of reason.

Likewise, although antitrust rulemaking may also seem unlikely (given that the FTC generally does not posses rulemaking authority for competition issues), the FTC recently completed such a rulemaking where, pursuant to a statutory mandate, it defined and prohibited "market manipulation" in wholesale petroleum markets.[30] Moreover, one can imagine certain recurring issues that do not comfortably fit within traditional Sherman or Clayton Act doctrine due to the overlay of a competing regulatory regime that may also be fodder for future rulemaking. The debate over the legality of pay-for-delay patent-infringement settlements is one such area. As Scott Hemphill has suggested, in the pay-for-delay settlement context, the federal courts lack the aggregate information (the various categories of such settlements, the costs, their frequency, etc.) needed to enact the optimal standard.[31] In this case, commentators have suggested that rather than litigating whether settlement agreements are anticompetitive under Section 1, the FTC should instead consider promulgating a rule to identify the circumstances under which a settlement would be illegal.[32] In so doing, the Commission would have the benefit of bringing its expertise on the practice of pay-for-delay settlements to bear more generally on the legal question of under what cir-

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[27] Commissioner J. Thomas Rosch, Managing Irrationality: Some Observations on Behavioral Economics and the Creation of the Consumer Financial Protection Agency, Remarks Before the Conference on Regulation of Consumer Financial Products 9 (Jan. 6, 2010), *available at* http://www.ftc.gov/speeches/rosch/100106financial-products.pdf.

[28] Commissioner J. Thomas Rosch, The EC's Pharmaceutical Sector Inquiry Preliminary Report—Wading into the Thicket of the Antitrust/Intellectual Property Law Overlap, Remarks Before the Innsbruck Symposium on Innovation and Competition Law 2–7 (Feb. 26, 2009), *available at* http://www.ftc.gov/speeches/rosch/090226innsbruck.pdf (discussing EC's practice of conducting sectoral specific studies).

[29] *See, e.g.*, *Realcomp II Ltd.*, FTC Docket No. 9320, 2009 FTC LEXIS 250, at *39 (Oct. 30, 2009), *available at* http://www.ftc.gov/os/adjpro/d9320/091102realcompopinion.pdf (finding certain practices of multistate listing service were "inherently suspect" and that the plaintiff did not come forward with evidence to carry its burden and explain why those practices should be legal); *see generally* Geoffrey D. Oliver, *Of Tenors, Real Estate Brokers and Golf Clubs: A Quick Look at Truncated Rule of Reason Analysis*, ANTITRUST, Spring 2010, at 40 (providing overview of "inherently suspect" analysis).

[30] 16 C.F.R. § 317 (2009). The FTC conducted the rulemaking pursuant to a Congressional delegation of authority in the Energy Independence and Security Act of 2007, 42 U.S.C. §§ 17301–17386.

[31] C. Scott Hemphill, *An Aggregate Approach to Antitrust: Using New Data and Rulemaking to Preserve Drug Competition*, 109 COLUM. L. REV. 629, 631 (2009).

[32] *Id.*

cumstances those settlements should be illegal. The insights from behavioral economics could come into play to the extent the rulemaking process yielded behavioral insights that were uniquely relevant to the issue being considered.

In short, if the FTC evaluates recurring discrete issues and makes law in those contexts (either through a rulemaking or a Part 3 administrative decision), the opportunity may arise for the agencies to apply behavioral insights that make sense in those discrete areas.

2. Can behavioral economics be useful in analyzing firm behavior? Behavioral economics provides important insights on individual decision making, but whether those insights apply to the behavior of firms remains a mostly unexplored question. Although it is likely true that the individuals who make up firms are prone to behavioral biases, it is far less clear whether these individual biases matter for antitrust law or whether, as modern antitrust analysis assumes, rational behavior cancels out irrational behavior, therefore obviating the need to account for irrational individual conduct in the analysis of firm behavior.[33]

Behavioral economics provides important insights on individual decision making, but whether those insights apply to the behavior of firms remains a mostly unexplored question.

Behavioral finance scholars thus far have identified two behavioral traits that may be particularly relevant in analyzing and predicting firm behavior: (1) overconfidence bias, which as its title implies, is the tendency of individuals to overstate their likelihood of success while underestimating their vulnerability to certain risks; and (2) "self-serving" bias, which is the idea that when individuals receive information, they process it in a way that is consistent with their own preconceived notions (including overconfidence).[34] Scholars have suggested that these biases may explain the conduct that led to the accounting scandals at Enron and elsewhere, arguing that executives overestimated the likelihood that their fraudulent schemes would succeed and/or underestimated the likelihood that the government would uncover their fraud.[35]

These behavioral biases may also have implications for analyzing the conduct of firms in the antitrust realm. In the merger review context, empirical evidence showing that these biases tend to exist in CEOs or other high-level executives in charge of making decisions about product development, entry into new markets, or the success of a merger could be probative of whether a merger is likely to have anticompetitive effects.[36] Further evidence of these biases could allow the agencies in merger review or merger litigation, for example, to rebut a showing of possible entry by demonstrating that (1) as an empirical matter, there is evidence that corporate executives tend to overestimate their success of product development or entry; and (2) the factual record showed that the decision makers at issue had exhibited this pattern of behavior.

Likewise, these biases could also inform criminal leniency programs by explaining why—notwithstanding knowledge of the possibility of jail time and large corporate fines—individuals might nevertheless enter into price-fixing agreements. Behavioral economics may be able to offer insights as to why in certain circumstances (a particular term of service at a company, experience

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[33] Herbert Hovenkamp, The Antitrust Enterprise: Principle and Execution 134 (2005) (suggesting that the "entire antitrust enterprise is dedicated to the proposition that business firms behave rationally").

[34] Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 Cal. L. Rev. 1051, 1091–95 (2000) (discussing overconfidence and self-serving biases).

[35] William W. Bratton, *Enron and the Dark Side of Shareholder Value*, 76 Tul. L. Rev. 1275, 1283 (2002).

[36] Experimental economists Colin Camerer and Dan Lovallo have shown that this optimism bias carries over to entry decision making. Colin Camerer & Dan Lovallo, *Overconfidence and Excess Entry: An Experimental Approach*, 89 Am. Econ. Rev. 306 (1999); *see also* Avishalom Tor, *The Fable of Entry: Bounded Rationality, Market Discipline, and Legal Policy*, 101 Mich. L. Rev. 482, 505 (2002) (discussing overconfidence in the context of analyzing entry); Mark Armstrong & Steffen Huck, *Behavioral Economics as Applied to Firms: A Primer*, Competition Policy Int'l, Spring 2010, at 26–28 (discussing prevalence of over-optimism in CEOs and entrepreneurs).

as a CEO or other management position, familiarity with one's competitors, lack of familiarity with the frequency of criminal cartel prosecutions), these individuals underestimate their chance of getting caught. This could lead corporations to complement their antitrust training not only with evidence of *what* happens when one gets caught, but a component that focuses on the *likelihood* of getting caught. Indeed, precisely because behavioral economics is oriented toward identifying anomalous *individual* conduct, its greatest use to antitrust over the long run might be in helping identify the circumstances in which individuals are predisposed to enter into cartels.[37]

Although most of the work on behavioral biases in firms has been in the behavioral finance realm (where the concern is typically with whether decision makers are acting contrary to their fiduciary duties), scholars have recently begun to identify other less sinister behavioral traits that could have antitrust implications for firms.[38] For example, although a fundamental tenet of profit-maximizing behavior is that fixed and sunk costs should not play a role in the setting of price, experimental work has shown that managers often do include fixed and sunk costs in setting prices.[39] This could mean that mergers that allegedly generate efficiencies based on a reduction in fixed costs could have greater benefits for consumers (in the form of lower prices), than is superficially apparent. Of course, it may be that the agencies already scrutinize efficiencies at this level of detail, in which case the behavioral economics literature could simply provide a greater theoretical foundation to support efficiencies-based claims.

More generally, these and other insights into ways in which firms do not always engage in profit-maximizing behavior could lead to more factual scrutiny in close cases (involving conduct or mergers) and less of a willingness to assume rational profit-maximizing behavior is always at work. However, for behavioral economics to play a bigger role in antitrust analysis going forward, more work needs to be done oriented toward the theory of the firm.

3. Which decision makers, if any, are qualified to make the hard decision about when (if ever) to apply behavioral economics? A recurring criticism of behavioral economics is that behavioral economics is too amorphous to apply and merely provides a mechanism for decision makers to ground paternalistic policies in post-hoc rationalizations masquerading as economic theory. This has led some to suggest that if the point of behavioral economics is to show how unpredictable and arbitrary human decision making is, then why are decision makers (who are themselves flawed and susceptible to their own biases) any better situated to make the hard decisions that govern human decision making.[40] The answer to this question will likely turn on who makes the decision to apply behavioral economics, and on what basis.

As to who should make the decision to apply behavioral economics, Judge Ginsburg and Derek Moore suggest in a recent article that, in its current form, behavioral economics is not well

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[37] Maurice E. Stucke, *Am I a Price Fixer? A Behavioral Economics Analysis of Cartels*, *in* CRIMINALISING CARTELS: A CRITICAL INTERDISCIPLINARY STUDY OF AN INTERNATIONAL REGULATORY MOVEMENT (Caron Beaton-Wells & Ariel Ezrachi eds., forthcoming 2010) (discussing situational factors that may influence cartel formation).

[38] For a detailed discussion of the issues associated with behavioral economics in the context of antitrust law and firm behavior, *see* Armstrong & Huck, *supra* note 36.

[39] *Id.* at 28–30 (discussing accounting anomalies that may be attributable to behavioral biases and explaining how these anomalies could affect merger review).

[40] *See, e.g.*, Richard A. Posner, *Treating Financial Consumers as Consenting Adults*, WALL ST. J., July 23, 2009, at A15, *available at* http://online.wsj.com/article/SB10001424052970203946904574302213213148166.html ("Behavioral economists are right to point to the limitations of human cognition. But if they have the same cognitive limitations as consumers, should they be designing systems of consumer protection?").

suited to application by the courts, which "are constitutionally adverse to broad principles, whether drawn from neoclassical or from behavioral economics" and instead are "inclined to make circumscribed decisions that narrowly answer the question whether a particular practice is impermissible in a specific context . . . ."[41] As a result, they conclude, "[t]he executive and legislature are better suited and more likely than the judiciary to incorporate the teachings of [behavioral economics]—if they are persuasive—into policy prescriptions."[42] Indeed, the Supreme Court's recent refusal in *Jones v. Harris*[43] to enter the economics fray in a case with behavioral economics undertones underscores this view. There, in reversing the Seventh Circuit, the Court refused to side with either Judge Easterbrook (who took the view that markets were self-correcting and that investors did not need additional protections beyond disclosure) or Judge Posner (who disputed that view), reasoning that such a decision "is a matter for Congress, not the courts."[44]

These observations may suggest that behavioral economics is too messy for the courts to apply in antitrust and elsewhere. But they may also suggest that, while behavioral economics is not yet positioned to provide sufficient guidance for federal court opinions, it is ripe for the DOJ Antitrust Division and FTC to consider exploring. The combination of the agencies' specialized expertise and their ability to engage in regulatory and administrative processes (including HSR merger review, detailed factual investigations before bringing suit, and, in the case of the FTC, administrative litigation and policy studies) uniquely position the agencies substantively and procedurally to engage in the hard decisions about whether behavioral economics should affect antitrust analysis. In contrast to federal courts, which engage in a case-by-case analysis, the agencies can gain substantive familiarity with an industry and assess whether a particular default rule is accurate. Similarly, in contrast to private actors (i.e., think tanks and special interest groups), the agencies have the procedural ability to subpoena documents, compel testimony, and make rulings. These features, which enable the agencies to bring their institutional expertise to bear on an in-depth review of a particular industry or recurring practice, could help avert the criticism that resorting to "behavioral antitrust" is simply playing politics with economics.

As to the "when," behavioral economics is unlikely to play any significant role in the agencies' work unless and until more empirical work is done to suggest that the insights from behavioral economics as applied to antitrust are sufficiently reliable. As the interest in the behavioral economics and behavioral antitrust fields grows in graduate economic programs, legal academia, and at the agencies, that work may follow.

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[41] Ginsburg, *supra* note 2, at 97.

[42] *Id.* at 98.

[43] Jones v. Harris Assocs. L.P., 130 S. Ct. 1418, 1426, 1431 (2010). *Jones* concerned the standard that governs whether a mutual fund investment adviser breached the "fiduciary duty [to investors] with respect to the receipt of compensation for services." Rejecting the balancing test required by the seminal decision in *Gartenberg v. Merrill Lynch Asset Management, Inc.*, 694 F.2d 923 (2d Cir. 1982), Judge Easterbrook wrote that so long as a mutual fund investment adviser discloses all of the pertinent facts and does not otherwise hinder the fund's directors from negotiating a favorable price, the investment adviser has compiled with his/her fiduciary obligations. Jones v. Harris Assocs. L.P., 527 F.3d 627, 632–34 (7th Cir. 2008) (reasoning that a free market dynamic "create[s] a competitive pressure" that generally keeps fees low and faulting *Gartenberg* on the ground that it "relies too little on markets"). Dissenting from a 5–5 decision denying rehearing en banc, Judge Posner argued that the panel's decision was based "mainly on an economic analysis that is ripe for reexamination" because there are "growing indications" that boards of directors lack the incentives to police compensation and, instead, consistent with their own personal self-interest (many directors are CEOs of their own companies) are inclined to support lax oversight. Jones v. Harris Assocs. L.P., 537 F.3d 728, 730 (7th Cir. 2008).

[44] *Jones*, 130 S. Ct. at 1431.

4. Do decision makers have to adopt a particular view about the goals of antitrust law to make behavioral economics useful? Perhaps the most important question for behavioral economics if it is to make any inroads in antitrust common law is how its observations—which at this point remain overwhelmingly directed towards consumer behavior—comport with the much debated topic of the proper goals of antitrust.[45] The standard for measuring whether conduct harms or is likely to harm competition under the federal antitrust laws is, of course, not statutorily defined and, depending on one's view, Judge Bork's *Antitrust Paradox* either added a much-needed element of order or further complicated the debate when it explained that the goal of antitrust should be to promote "consumer welfare." For now at least, the Supreme Court appears to have settled on an understanding that the antitrust laws promote "consumer welfare" as distinct from an allocative-efficiency or total-welfare standard.[46] To the extent that behavioral antitrust is able to link deficiencies in human decision making to tangible anticompetitive effects (most likely by showing that flawed decision making by firms can have anticompetitive effects), behavioral antitrust may be able to meet this standard. But the jury is still out.

Rather than thinking of behavioral economics as a stark alternative to neoclassical economics, it may be the case that a more complete antitrust analysis might eventually accommodate both approaches.

Alternatively, it may be that as insights from behavioral economics evolve and provide more clarity into human decision making, a greater case can be made that antitrust should apply a "consumer choice" framework.[47] Under this standard, the optimal level of consumer choice (and thus the optimal amount of competition) occurs in "the state of affairs where the consumer has the power to define his or her own wants and the ability to satisfy these wants at competitive prices."[48] It is not hard to see how a behavioral antitrust analysis comfortably dovetails with such an objective: if the goal of antitrust law is to maximize individuals' ability to have choices among competitively priced products, then an economic analysis that focuses on maximizing the ability of humans to make optimal decisions in light of human constraints will be informative. In short, the more antitrust law adopts a paradigm that uses informed consumers (i.e., the demand side) as the barometer for whether the market is competitive, the more likely there will be an effective role for behavioral antitrust.

Conclusion

A common assumption is that neoclassical economics and behavioral economics are polar opposites, with the former predicated on a world where humans behave perfectly and the latter predicated on a world of organized chaos. The popular media's characterization of both economic theories (neoclassical economics having played a significant role in the financial meltdown and behavioral economics supplying the left-wing's paternalistic response) has only further entrenched the perception that these two theories are inherently at odds.

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[45] *See* Barak Y. Orbach, *The Antitrust Consumer Welfare Paradox* 7 (Arizona Legal Studies Discussion Paper No. 10-07, Feb. 16, 2010), *available at* http://ssrn.com/abstract=1553226 (discussing disagreement over the meaning of the consumer welfare standard and noting that "*The Antitrust Paradox* ended the debate over the goals of antitrust laws and opened a new debate over the meaning of the term 'consumer welfare'").

[46] *See* NCAA v. Bd. of Regents of Univ. of Okla., 468 U.S. 85 (1984) (articulating consumer welfare standard); Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209 (1993) (distinguishing between consumer welfare and total welfare and clarifying that antitrust applies a consumer welfare standard).

[47] *See, e.g.*, Robert H. Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 34 HASTINGS L.J. 65 (1982); Robert H. Lande, *Consumer Choice as the Ultimate Goal of Antitrust*, 62 U. PITT. L. REV. 503 (2001) [hereinafter *Consumer Choice*]; Neil W. Averitt & Robert H. Lande, *Using the "Consumer Choice" Approach to Antitrust Law*, 74 ANTITRUST L.J. 175 (2007).

[48] Lande, *Consumer Choice*, *supra* note 47, at 503.

The perception here, however, need not become the reality. Rather than thinking of behavioral economics as a stark alternative to neoclassical economics, it may be the case that a more complete antitrust analysis might eventually accommodate both approaches. Neoclassical economics does not actually assume that humans always behave in perfectly rational ways—only that perfectly rational conduct cancels out irrational conduct. What behavioral economics may ultimately best provide is an important layer of nuance to antitrust analysis by exposing the occasional instances where this assumption does not hold up.

The doctrinal challenge for behavioral economics is achieving that end without completely upending the predictability that the neoclassical assumption of rationality provides. Absent an organizing principle, behavioral economics may be most useful to antitrust in non-lawmaking contexts that draw on the agencies' specialized expertise, such as merger review and in better understanding the behavior of criminal cartel members. As to Sherman and Clayton Act litigation, it is simply too soon to tell how behavioral economics might play a concrete role not only in assessing liability, but in articulating clear rules and standards that can govern future cases. That work is yet to be done. ●