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How can competition agencies use behavioral economics?

BY MAURICE E. STUCKE*

Behavioral economics is both mainstream and timely. The financial crisis raised important issues of market failure, weak regulation, moral hazard, and our poor understanding of how key markets operate. One therefore expects lawyers and economists to bring the current economic thinking to competition agencies, some of which are already taking note. How should the competition agencies respond? This article examines how competition agencies can consider behavioral economics' implications on four levels: first as a gap filler, that is, to help explain "real world" evidence that neoclassical economic theory cannot explain; second, to assess critically the assumptions of specific policies, such as merger review and cartel prosecutions; third, to revisit fundamental questions, such as what is competition and what are the goals of competition law; and fourth, to assess how behavioral economics will affect the degree of convergence of competition law among the over 100 jurisdictions with competition laws today.

KEY WORDS: *behavioral economics, antitrust, competition, cartels, mergers*

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I. INTRODUCTION

Behavioral economics, an Organisation for Economic Co-operation and Development (OECD) book recently noted, "has been swept into the mainstream with surprising speed"[1] and is influencing policy in a number of countries. "Economic regulators in several countries" Pete Lunn observed, "have also begun to recruit behavioural economists to assist with regulatory delivery, particularly in the context of market studies aimed at ensuring consumer protection and effective competition."[2] The U.K.'s Behavioural Insights Team, also known as the Nudge Unit, "applies insights from academic research in behavioural economics and psychology to public policy and services."[3] The U.K.'s Financial Conduct Authority (FCA)[4] and U.S. Consumer Financial Protection Bureau[5] are discussing how market forces will not always reduce, and at times will exploit, consumers' behavioral biases.[6] Indeed, the belief is that consumers' behavioral biases "can lead firms to compete in ways that are not in the interests of consumers."[7] Presi-

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1 PETE LUNN, REGULATORY POLICY AND BEHAVIORAL ECONOMICS 12 (2014).

2 *Id.*

3 Gov.UK, https://www.gov.uk/government/organisations/behavioural-insights-team.

4 Kristine Erta et al., *Applying Behavioural Economics at the Financial Conduct Authority* (Financial Conduct Authority, Occasional Paper No. 1, Apr. 2013), http://www.fca.org.uk/static/documents/occasional-papers/occasional-paper-1.pdf.

5 Proposed Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by the Bureau of Consumer Financial Protection, 77 Fed. Reg. 46069 (Aug. 2, 2012) (inquiring "[w]hat research in behavioral economics or other academic fields—published or still in process—provides insight into financial education approaches that can help consumers achieve their own financial goals?"); Irene Skricki & Dubis Correal, CFPB, Our Progress on Financial Education (Mar. 25, 2013), http://www.consumerfinance.gov/blog/our-progress-on-financial-education/ (CFPB "developing and testing new financial education strategies to build on insights from the field of behavioral psychology" and working "on an initiative to help consumers overcome common financial challenges they face on a regular basis").

6 Dee Pridgen, *Sea Changes in Consumer Financial Protection: Stronger Agency and Stronger Laws*, 13 WYO. L. REV. 405, 408 (2013).

dent Obama in 2013 asked his Cabinet "to carry out an aggressive management agenda for his second term that delivers a smarter, more innovative, and more accountable government for citizens," which includes "[a]pplying behavioral insights to improve results and lower costs in direct operations."[8]

The economics literature some time ago moved beyond neoclassical economic theory's assumptions of perfectly rational market participants who pursue with willpower their economic self-interest. Over the past twenty years, the economic literature has increasingly recognized and measured how (1) willpower is imperfect, (2) biases and heuristics can affect decision making, and (3) people will incur costs to punish unfair behavior and care about treating others, and being treated, fairly. The economic crisis raised important issues of market failure, weak regulation, moral hazard, and our lack of understanding about how many markets actually operate. The OECD noted how "the worst financial and economic crisis in our lifetime"[9] has prompted policy makers to ask: "Are our economic theories, our economic models, and our assumptions still valid?"[10]

With behavioral economics' rapid ascent, one expects lawyers and economists to bring the current economic thinking to the competition agencies and courts. Indeed competition authorities are already taking note. Some officials at the Federal Trade Commission (the FTC),[11] Euro-

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[7] Erta et al., *supra* note 4, at 4.

[8] Memorandum to the Heads of U.S. Departments and Agencies from Sylvia M. Burwell, Director, Office of Management and Budget, Next Steps in the Evidence and Innovation Agenda (July 26, 2013), *available at* http://www.whitehouse.gov/sites/default/files/omb/memoranda/2013/m-13-17.pdf.

[9] OECD, SECRETARY-GENERAL'S STRATEGIC ORIENTATIONS FOR 2011 AND BEYOND 2 (May 2011).

[10] *Id.*

[11] *See, e.g.*, J. Thomas Rosch, Comm'r, Fed. Trade Comm'n, Behavioral Economics: Observations Regarding Issues that Lie Ahead, Remarks at the Vienna Competition Conference (June 9, 2010), http://www.ftc.gov/speeches/rosch/100609viennaremarks.pdf; J. Thomas Rosch, Comm'r, Fed. Trade Comm'n, Managing Irrationality: Some Observations on Behavioral Economics and the Creation of the Consumer Financial Protection Agency, Remarks at the Conference on the Regulation of Consumer Financial Products (Jan. 6, 2010), http://www.ftc.gov/speeches/rosch/100106financial-products.pdf.

pean Commission (the Commission),[12] and the United Kingdom's Competition and Markets Authority[13] have noted neoclassical economic theory's limitations in depicting reality under all, or nearly all, circumstances. Some competition authorities are exploring the implications of behavioral economics. A 2012 OECD workshop, for example, fostered an in-depth discussion among competition authorities from around the globe on the implications of behavioral economics on competition policy.[14] As the OECD's Competition Committee Chairman Frédéric Jenny remarked after the hearing, "The debate has opened new horizons for competition authorities."[15] In 2013, the Irish Competition Authority and the National Consumer Agency hosted the European Competition and Consumer Day, where officials further discussed the implications of behavioral economics on competition policy and consumer protection.[16]

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[12] *See, e.g.*, Emanuele Ciriolo, *Behavioural Economics in the European Commission: Past, Present and Future*, OXERA AGENDA, Jan. 2011, http://www.scp-knowledge.eu/knowledge/behavioural-economics-european-commission-past-present-and-future; Eliana Garcés, *The Impact of Behavioral Economics on Consumer and Competition Policies*, 6 COMPETITION POL'Y INT'L 145 (2010); Press Release, European Union Comm'n for Consumers, Why Consumers Behave the Way They Do: Commissioner Kuneva Hosts High Level Conference on Behavioural Economics (Nov. 28, 2008), http://europa.eu/rapid/pressReleases Actiondo?reference=IP/08/1836&format=HTML& aged=0&language=EN& guiLanguage=en.

[13] OFFICE OF FAIR TRADING (UK), THE IMPACT OF PRICE FRAMES ON CONSUMER DECISION MAKING (2010), http://www.oft.gov.uk/shared_oft/economic_research/OFT1226.pdf; Matthew Bennett, John Fingleton, Amelia Fletcher, Liz Hurley & David Ruck, *What Does Behavioral Economics Mean for Competition Policy?*, 6 COMPETITION POL'Y INT'L 111, 118 (2010); Amelia Fletcher, Chief Economist, Office of Fair Trading, What Do Policy-Makers Need from Behavioural Economists?, Address at the European Commission Consumer Affairs Conference (Nov. 28, 2008), http://ec.europa.eu/consumers/dyna/conference/programme _en.htm.

[14] OECD, Competition Committee, Hearing on Competition and Behavioural Economics, Paris, France (June 2012), http://www.oecd.org/document/43/0,3746,en_2649_37463_48742443_1_1_1_37463,00.html#Beh_Eco.

[15] Barbara Casassus, *Lead Report: OECD Committee Probes Intricacies Of Behavioral Economics in Cases*, BLOOMBERG BNA ANTITRUST & TRADE REG. DAILY, June 25, 2012.

[16] Competition Authority (Ire.), European Competition and Consumer Day, http://www.tca.ie/en/news—publications/Events/European-Competition-and-Consumer-Day~.aspx.

How should the competition agencies and courts respond to the insights of behavioral economics? This article examines how competition authorities can consider the implications of behavioral economics on four levels:

- *first*, as a gap filler, that is, to help explain "real world" evidence that neoclassical economic theory cannot explain,
- *second*, to assess critically the assumptions of specific antitrust policies, such as merger review and cartel prosecutions,
- *third*, to revisit fundamental antitrust questions, such as what is competition and what are the goals of competition law, and
- *fourth*, to assess how behavioral economics will affect the degree of convergence or divergence of competition law among the over 100 jurisdictions with competition laws today.

II. LEVEL I: BEHAVIORAL ECONOMICS AS A GAP FILLER

Outside the narrowing realm of offenses deemed per se illegal, the federal agencies and courts typically resolve antitrust claims under a rule of reason analysis, focusing on the "particular facts disclosed by the record."[17] Agencies and courts rely on the current economic theories to explain their decision and help understand the particular facts of the market under investigation. Competition policy, given the Chicago, post-Chicago, Harvard, and neo-Chicago schools, is not beholden to one economic theory. But whatever its school, the economic theory must be able to explain the market realities at issue.

At times the neoclassical economic theories premised on rational market participants with willpower who pursue their economic self-interest cannot easily be reconciled with evidence of the parties' actual behavior, intent, motives, and post-merger plans.[18] The agency and court are now in a quandary. One can assume that a behavioral

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[17] Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 467 (1992).

[18] In *Eastman Kodak*, defendant argued as a matter of economic theory that, absent interbrand market power, a manufacturer could not raise the price for its aftermarket parts or services. Rational consumers considering the purchase of the equipment "will inevitably factor into [their] purchasing decision the expected cost of aftermarket support." *Id.* at 495 (Scalia, J., dissenting). But the record in *Kodak* did not show that higher prices to service

irregularity "crops up in smoothly functioning, even perfectly competitive, markets," but is of "no concern to the antitrust laws."[19] One could argue that "a brief perturbation in competitive conditions" is "not the sort of thing the antitrust laws do or should worry about."[20] At times, the divergence between economic reality and neoclassical economic theory is brief. At other times, the anticompetitive realities, contrary to neoclassical economic theory, persist.

Behavioral economics will not always supply an answer. But its insights can enrich competition policies' economic theories in better understanding the parties' actual behavior, motives, or post-merger plans. Thus, the easiest entrée of behavioral economics into competition policy is as a gap-filler, that is, to help understand actual, specific anticompetitive behavior that neoclassical economic theory cannot adequately explain.

One illustration of behavioral economics as a gap filler is the European Commission's prosecution of Microsoft for abusive tying.[21]

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and repair Kodak photocopiers did (or likely would) lead to a disastrous drop in Kodak's photocopier sales. Contrary to Kodak's theoretical claims, the evidence did not show that (1) Kodak actually priced its equipment at below-market prices and its services at supracompetitive prices for an overall competitive price; (2) Kodak's customers engaged in lifecycle pricing; or (3) Kodak's competitors would provide this costly lifecycle information. Kodak's claims were inconsistent: buyers were sufficiently sophisticated to engage in accurate lifecycle pricing but too naïve in blaming Kodak for poor service of their copier machines. *Kodak* is problematic even under neoclassical theory: Even if customers possessed perfect foresight, a customer, after buying a photocopier, faces switching costs if the supplier raises the price of service. As economist Roger Noll told me in an e-mail, even in a perfectly competitive market (which copiers were not), the equilibrium—in which copier prices were below long-run average cost and service prices were above long-run average cost—creates inefficiency. This price structure induces consumers to buy new copier machines too frequently.

[19] *Id.* at 497–98.

[20] *Id.*

[21] Case COMP/C-3/37.792, Microsoft Corp., European Comm'n, Commission Decision of 24.03.2004 Relating to a Proceeding under Article 82 of the EC Treaty ¶ 5 (Apr. 21, 2004)), http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_37792 [hereinafter *EC Microsoft*] (Second Statement of Objections).

Microsoft's defense was premised on neoclassical economic theory. The Commission and Court of First Instance responded with actual, specific consumer behavior, which the behavioral economics literature explains well.

The Commission accused Microsoft, inter alia, of tying its media player to its personal computer operating system, where it had a monopoly for personal computer operating systems.[22] Media players enable consumers to store and play music and videos on their computers (and now on handheld devices). The Commission, like the district court in the U.S. antitrust case, observed how the personal computer software industry was characterized by network effects. The Commission argued, and Court of First Instance found, that such bundling would discourage investment in "all the technologies in which Microsoft could conceivably take an interest in the future."[23] Microsoft's tying created "a disincentive for users to use third-party media players and for [original equipment manufacturers] to preinstall such media players on client PCs."[24] Given this disincentive, the concern was that Microsoft's tying would weaken competition among media players "in such a way that the maintenance of an effective competitive structure would not be ensured in the near future."[25]

Under neoclassical economic theory, it is difficult to see any significant foreclosure and resulting harm to competition. Microsoft's Windows Media Player came with the Windows operating system. But consumers, after unpacking the computer and starting it up, could search the Internet for the media player they want, download the software to their com-

[22] By the late 1990s, Microsoft accounted for more than ninety-five percent of the licensing of all Intel-compatible PC operating systems worldwide. United States v. Microsoft Corp., 253 F.3d 34, 54 (D.C. Cir. 2001). *See also id.* at 53 ("Operating systems perform many functions, including allocating computer memory and controlling peripherals such as printers and keyboards," found the court, including the "function as platforms for software applications.").

[23] Case T-201/04, Microsoft Corp. v. Comm'n, 2007 E.C.R. II-3601 [hereinafter *CFI Microsoft*].

[24] Press and Information, CJE/07/63, Press Release No. 63/07, Judgment of the Court of First Instance in Case T-201/04, Microsoft Corp. v Comm'n of the European Communities (Sept. 17, 2007).

[25] *Id.*

puter, and use that media player to stream music or videos.[26] The Commission never claimed that consumers were unaware of competing media players. Consumers presumably knew of RealNetworks's media player—it was part of Microsoft's earlier operating system.

Nor were consumers or the original equipment manufacturers disadvantaged if they selected an alternative media player. After the U.S. consent decree, Microsoft could not design its operating system to hamper rival media players, as it earlier did with its Internet browser.[27] Nor could Microsoft contractually require software developers, content providers, or others to distribute or promote exclusively or mainly its Windows Media Player.[28] Microsoft's operating system could run one or more media players without affecting the media players' performance.[29] Nor were consumers forced to use Microsoft's media player. Consumers could set another media player as the default option.[30] Consequently, how could Microsoft foreclose competition when consumers could download (often for free) Apple's and RealNetworks's media players off the Internet?[31]

One could strain under neoclassical economic theory to find coercion. First, consumers, particularly those without broadband Internet service, must expend some time and effort to download a media player.[32] Second, computer manufacturers and consumers could not delete Microsoft's

[26] *CFI Microsoft, supra* note 23, ¶ 829. Moreover media players may be sold in retail outlets or distributed with other software products. *Id.* ¶ 830.

[27] *EC Microsoft, supra* note 21, ¶ 796 n.922.

[28] *CFI Microsoft, supra* note 23, ¶ 995 (no exclusivity provisions).

[29] *Id.* ¶ 993.

[30] *Id.* ¶¶ 952 & 932 (a "not insignificant number of customers continue to acquire media players from Microsoft's competitors, separately from their client PC operating system, which shows that they regard the two products as separate").

[31] The Commission questioned the extent to which the media players were free. *EC Microsoft* ¶ 847. Consumers today can download a free copy of RealPlayer, QuickTime, and other media players.

[32] *EC Microsoft, supra* note 21, ¶¶ 866–67. The scarcity of broadband Internet, slower download times, and failed downloads also may have contributed to consumers' sticking with the default.

Media Player.[33] Any media player would be in addition to Microsoft's.[34] Thus the computer memory taken by Microsoft's Media Player was unavailable for other purposes. Third, Microsoft devised its software so that its Media Player could override the consumer's default setting and reappear when the consumer used Microsoft's web browser, Internet Explorer, to access media files streamed over the Internet.[35]

Apart from some reduction in computer memory, these factors when viewed under neoclassical economic theory would not explain the market realities of rival media players being sufficiently foreclosed from the market to weaken competition. If other media players offer superior performance for free or at an attractive price,[36] consumers should acquire the other competing media player. Put simply, if the benefits of using a competing media player outweigh the costs, consumers should switch. Since rational consumers would switch to media players of "better quality,"[37] software programmers and music companies would support the superior players' formats. Microsoft's attempt to thwart the competitive threat of middleware (or leverage its monopoly to the media player market) would fail.

If many consumers could, but did not, download competing media players then this behavior, under neoclassical economics theory, is consistent with competition on the merits. Rational consumers could and would switch to superior media players. If consumers did not switch, and if the costs Microsoft imposed to use a competing media player were nominal, then Windows Media Player's quality must equal or surpass that of competing media players.

Herein was the problem. Windows Media Player's growth, as Microsoft recognized, was not attributable to superior quality.[38] Consequently, fewer consumers than neoclassical economic theory predicted were switching to superior media players.

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[33] *CFI Microsoft*, *supra* note 23, ¶¶ 832, 837.

[34] *Id.* ¶ 946.

[35] *Id.* ¶ 974.

[36] *EC Microsoft*, *supra* note 21, ¶¶ 847–48.

[37] *CFI Microsoft*, *supra* note 23, ¶ 971.

[38] *Id.* ¶ 1057; *EC Microsoft*, *supra* note 21, ¶ 948.

For a rational choice theorist, the default option (assuming low transaction costs and no informational asymmetries) is irrelevant. Say consumers prefer Windows Media Player. If computer manufacturers installed another media player, consumers would switch to Windows Media Player. So whatever the default option, consumers should opt for the superior media player. But if Microsoft seriously considered downloading as "an equivalent alternative to pre-installation," observed the Commission, then Microsoft's "insistence on maintaining its current privilege of automatic pre-installation appears inconsistent."[39]

As the behavioral economics literature and everyday experience show, the setting of the default can affect the outcome—even when transaction costs are nominal.[40] Default options have played an important role in participation and investment in retirement savings, contractual choices in health clubs, organ donations, car insurance plans, and participation in class actions.[41]

Not surprisingly, firms and consumers can have different preferences over the default option.[42] Regulators and industry battle over whether consumers need to opt out or in. For example, one major

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[39] *EC Microsoft, supra* note 21, ¶ 871.

[40] RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS 78 (2008).

[41] OECD, CONSUMER POLICY TOOLKIT 46–47 (2010); THALER & SUNSTEIN, *supra* note 40, at 129–30; Stefano DellaVigna, *Psychology and Economics: Evidence from the Field,* 47 J. ECON. LITERATURE 315, 322 n.11 (2009); Eric J. Johnson et al., *Defaults, Framing and Privacy: Why Opting In–Opting Out,* 13 MARKETING LETTERS 5-15 (2003) (consent to receive e-mail marketing); C. Whan Park et al., *Choosing What I Want Versus Rejecting What I Do Not Want: An Application of Decision Framing to Product Option Choice Decisions,* 37 J. MARKETING RES. 187–202 (2000) (car option purchases); European Consumer Consultative Group, Opinion on Private Damages Actions 4 (2010), http://ec.europa.eu/consumers/empowerment/docs/ECCG_opinion_on_actions_for_damages_18112010.pdf (in European countries, where the default option was opt-in, so that consumers had to opt into the class, the rate of participation in class actions for consumer claims was less than one percent; under opt-out regimes, where the default is that one is a class member unless one opts out, participation rates were typically very high (97% in the Netherlands and almost 100% in Portugal)).

[42] Final Rule—Official Staff Commentary, Board of Governors of the Federal Reserve System, 12 C.F.R. Part 205, 74 Fed. Reg. 59034-36 (Nov. 17,

issue in privacy law is over the default: whether nonpublic personal data information is presumably confidential (and consumers can opt out of the confidentiality protections), or have to opt in.[43]

In competition cases, default options can help foreclose rivals. The consumer choice that spurs competition is a deliberative choice among several options. But if many consumers stick with the default option, then being the default option (or the first option encountered) provides a significant competitive advantage. Firms may compete more to become the default option (such as by paying an Internet browser to be the default search engine) than on other dimensions (objectively providing responsive information to search requests).

Microsoft preferred having its Windows Media Player as the default choice, thereby requiring consumers to opt out. As Microsoft recognized, some consumers would reject the default media player and download a rival player. But many consumers would stick with the default media player. Consequently, the Court of First Instance recognized that consumers "who find Windows Media Player pre-installed on their client PCs are generally less inclined to use another media player."[44] The Commission was blunter: "A supply-side aspect to consider is that, while downloading is in itself a technically inexpensive way of distributing media players, vendors must expend resources to overcome end-users' inertia and persuade them to ignore the pre-installation of [Windows Media Player]."[45]

This quote also illustrates the fallacy of equating a remedy (for example, making it easier for consumers to choose) with a competitive outcome (for example, consumers searching the Internet and

2009) (consumer advocates and majority of surveyed participants preferred setting the default as opt in (consumers having to opt into the bank's overdraft program) rather than opt out (which many banks preferred)).

[43] Reno v. Condon, 528 U.S. 141, 144-45 (2000) (noting how Congress amended the Driver's Privacy Protection Act so that "States may not imply consent from a driver's failure to take advantage of a state-afforded opportunity to block disclosure, but must rather obtain a driver's affirmative consent to disclose the driver's personal information for use in surveys, marketing, solicitations, and other restricted purposes").

[44] *CFI Microsoft*, *supra* note 23, ¶ 980.

[45] *Id.* ¶ 1052 (quoting *EC Microsoft*, *supra* note 21, ¶ 870).

downloading a rival software program). Even if the competition agency has made competitive alternatives technically feasible, inexpensive, and simple under the auspices of its proposed remedy, consumers will not always exercise that choice. Not only is inertia at work. Some non-computer-savvy consumers may believe that the default option represents the computer manufacturer's choice of the superior media player.[46] Consumers evaluate the product based on a preexisting reference point:

> The basic idea is simple and psychologically appealing. Possible future outcomes are compared to the status quo. If the status quo moves, valuations of alternatives will change. Moreover, there is an asymmetry in the perception of gains and losses: Losses loom larger than gains. This is known as loss aversion. (Notice that without the "kink" in the valuation of an item that is induced through loss aversion, a reference point would not affect choice. In other words, it is loss aversion that renders reference points economically important.)[47]

Status quo bias explains why many consumers remain with the default option, even though neoclassical theory predicts that consumers would download superior alternative media browsers.[48]

Consequently, to the extent courts and agencies continue to conduct a rule of reason, case-by-case analysis of the economic realities of the particular industry, then behavioral economics at times can serve as a gap filler—namely, to understand better the observed behavior (such as the importance of the default option). Under Level I, the competition agency has the benefit of observing the conduct's anticompetitive effects; its difficulty is using neoclassical economic theory to explain the observed conduct. If the competition agencies follow the evidence wherever it leads them, then the agencies, like the U.K.'s Competition and Markets Authority, must be familiar with behavioral economics to better understand the firm-consumer interactions.

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[46] *CFI Microsoft*, *supra* note 23, ¶ 1050.

[47] STEFFEN HUCK ET AL., CONSUMER BEHAVIOURAL BIASES IN COMPETITION: A SURVEY, FINAL REPORT FOR THE OFT ¶ 3.3 (May 2011) [hereinafter OFT REPORT].

[48] RICHARD H. THALER, THE WINNER'S CURSE: PARADOXES & ANOMALIES OF ECONOMIC LIFE 68–70 (1992).

III. LEVEL II: REVISIT ASSUMPTIONS UNDER NEOCLASSICAL ECONOMIC THEORY

The likely entrée for behavioral economics into competition policy is under Level I, as a gap filler. The agencies and courts enrich their economic theories with the findings of behavioral economics to better understand the observed behavior.

Often, however, competition authorities must predict competitive consequences, notably in reviewing proposed mergers and determining the deterrent effect of increasing sanctions for price-fixing cartels. With the exception of mergers to monopoly, economic theory will likely play an even larger role in predicting future competitive behavior than in explaining observed behavior under Level I.

On the one hand, the behavioral economics literature currently does not provide competition authorities a unifying theory. But as Level I shows, economic reality does not always square with neoclassical economic theory. If certain markets are currently not behaving as neoclassical economic theory would suggest, one cannot assume that neoclassical economic theory will reliably predict future behavior. Thus, under Level II, behavioral economics can spur the agencies to reassess specific assumptions of their economic theories and better assess the risk and cost of false positives versus false negatives. Two examples are merger review and cartel prosecutions.

A. *Merger review*

Suppose, for example, the two largest organic supermarket chains seek to merge. Under U.S. competition law, the parties first must notify the competition agencies of their proposed merger. In assessing whether the merger may substantially lessen competition or tend to create a monopoly, the competition authority does not have the benefit of economic realities—namely, to allow the merger, assess its competitive impact, and then enjoin the merger if it proves anticompetitive.[49] The closest thing premerger is an analogous historical event or "nat-

[49] The FTC and the Department of Justice can always challenge a consummated merger. But by the time an agency assesses the merger's competitive effects several years later, the agency's remedy will often be ineffectual, as among other things stores will be closed and employees fired.

ural experiment," which the agencies can use to "examine the impact of recent mergers, entry, expansion, or exit in the relevant market" or "similar" markets.[50]

Absent natural experiments and consummated mergers, the agencies typically rely on economic theory to predict a merger's likely competitive effects. In assessing a proposed merger, competition authorities typically assume that actual marketplace behavior comports with rational, profit-maximizing behavior. Underlying this conclusion are at least five assumptions:

- the relevant anticompetitive effects often manifest themselves as higher prices[51];
- anticompetitive effects are likely only in highly concentrated (not moderately concentrated to unconcentrated) markets[52];

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[50] U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES § 2.1.2 (2010), *available at* http://www.justice.gov/atr/public/guidelines/hmg-2010.html [hereinafter HORIZONTAL MERGER GUIDELINES].

[51] The 2010 Horizontal Merger Guidelines, however, are an improvement over the earlier merger guidelines in recognizing nonprice competition. *Id.* § 1.0 (explaining how market power can be manifested in "non-price terms and conditions that adversely affect customers, including reduced product quality, reduced product variety, reduced service, or diminished innovation" and how such "non-price effects may coexist with price effects, or can arise in their absence"). The Commission likewise recognizes nonprice anticompetitive effects, but uses "the expression 'increased prices'" as "shorthand for these various ways in which a merger may result in competitive harm." European Comm'n, Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings, 2004 O.J. (C 31) § 8 [hereinafter EC Merger Guidelines].

[52] FED. TRADE COMM'N & U.S. DEP'T OF JUSTICE, MERGER CHALLENGES DATA, FISCAL YEARS 1999–2003, at 2 (2003), *available at* http://www.usdoj.gov/atr/public/201898.htm ("Although large market shares and high concentration by themselves are an insufficient basis for challenging a merger, low market shares and concentration are a sufficient basis for not challenging a merger."); EC Merger Guidelines, *supra* note 51, §§ 19–20 (Commission "unlikely to identify horizontal competition concerns in a market with a post-merger [Herfindahl-Hirschman Index (HHI)] below 1000," as such markets "normally do not require extensive analysis," and is "also unlikely to identify horizontal competition concerns in a merger with a post-merger HHI between 1000 and 2000 and a delta below 250, or a merger with a post-merger HHI above 2000 and a delta below 150" with several exceptions).

- even in highly concentrated markets, anticompetitive effects are unlikely given certain economic conditions, such as big buyers or sellers that would discipline any non-cost-based price increase post-merger[53];
- anticompetitive effects are unlikely, absent high entry barriers[54]; and
- many companies merge to generate significant efficiencies.[55]

An assumption of rational self-interested market participants affects the balancing of false negatives and positives: The stronger the assumption, the weaker the concern over false negatives and the greater the concern over false positives. Rational firms presumably merge for efficiencies or to increase market power (or both). If the agency cannot prove the latter, then the merger's purpose is likely the former—to yield significant efficiencies. The merger, even if not yielding efficiencies, would unlikely be anticompetitive where entry barriers are not high, where other rational, profit-maximizing competitors or powerful buyers or sellers could keep the merging firm in check, or where rational consumers could discipline the exercise of market power by taking enough of their business elsewhere to make a price increase unprofitable. Thus the risk and cost of false positives increased.

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[53] *See, e.g.*, EC Merger Guidelines, *supra* note 51, § 64 ("Even firms with very high market shares may not be in a position, post-merger, to significantly impede effective competition, in particular by acting to an appreciable extent independently of their customers, if the latter possess countervailing buyer power.").

[54] *Id.* § 68 ("When entering a market is sufficiently easy, a merger is unlikely to pose any significant anti-competitive risk. Therefore, entry analysis constitutes an important element of the overall competitive assessment."); HORIZONTAL MERGER GUIDELINES, *supra* note 50, § 9 ("A merger is not likely to enhance market power if entry into the market is so easy that the merged firm and its remaining rivals in the market, either unilaterally or collectively, could not profitably raise price or otherwise reduce competition compared to the level that would prevail in the absence of the merger.").

[55] Fed. Trade Comm'n & U.S. Dep't of Justice, Commentary on the Horizontal Merger Guidelines *v* (Mar. 2006), http://www.justice.gov/atr/public/guidelines/215247.htm ("The vast majority of mergers pose no harm to consumers, and many produce efficiencies that benefit consumers in the form of lower prices, higher quality goods or services, or investments in innovation.").

With the Chicago school's rise in the late 1970s, some economists and lawyers found it fashionable to dismiss antitrust's historic concerns over trends toward concentration and concentrated economic power. Instead the conventional wisdom was that antitrust agencies and courts could (and should) use concentration only as a screen—the agencies would challenge only those few mergers that, under the prevailing neoclassical economic thinking, would demonstrably lead to higher post-merger prices in narrowly defined markets. Although the Department of Justice at times argued the incipiency standard, it inexplicably alleged in its complaints how the merger *will* (rather than may) lessen price competition in narrowly defined markets.[56]

One explanation is that courts, in accepting the Chicago school's ideologies, demanded more evidence from antitrust plaintiffs to overcome their belief in self-correcting markets. While courts continued to cite the *Philadelphia National Bank* presumption of harm and the incipiency standard, many went further in requiring the competition agencies to prove that a merger would cause prices to rise, and to explain the chain of events that would lead to the post-merger price increase (either unilateral or coordinated effects) and the price increase's likely magnitude. This, in turn, led the agencies to calculate diversion ratios, the estimated consumer demand at post-merger prices, and the profit margins of the merging parties' competing products. The concern was that absent this proof, the agency risked prohibiting mergers that would yield significant cost savings to society's benefit. Requiring such certainty and actuality of injury to competition, however, was contrary to both the Clayton Act's plain language, which requires the plaintiff to prove that the merger *may* substantially lessen competition or tend to create a monopoly, and its purpose to supplement the Sherman Act by reaching incipient restraints.[57]

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[56] Maurice E. Stucke, *Should Competition Policy Promote Happiness?*, 81 FORDHAM L. REV. 2575, 2608 (2013) (citing cases).

[57] Brown Shoe Co. v. United States, 370 U.S. 294, 323 n.39 (1962) (quoting Senator Reed from the Congressional Record); HORIZONTAL MERGER GUIDELINES, *supra* note 50, § 1 (referring to the Congressional intent "that merger enforcement should interdict competitive problems in their incipiency and that certainty about anticompetitive effect is seldom possible and not required for a merger to be illegal").

Consequently, over the past thirty years, the competition agencies challenged relatively few mergers that, under the prevailing neoclassical economic thinking, would demonstrably lead to higher post-merger prices in narrowly defined markets. The agencies' merger review migrated toward assessing what was measurable—namely short-term pricing effects under unilateral effects theory and short-term productive efficiencies. And what is measureable is not necessarily critical, especially on issues of dynamic efficiencies and systemic risk.

1. POST-MERGER REVIEW—One cannot fault the competition agencies if their "modern" economic theories accurately predict most mergers' competitive effects. So how often did the agencies predict correctly? No one really knows, since the agencies do not regularly revisit the industries post-merger to assess how often they predicted correctly.

The available post-merger reviews, however, paint a bleak picture. One recent analysis of post-merger reviews found that of the 53 post-merger reviews with price estimates, "40 or 75.5 percent, report post-merger price increases."[58] Of the mergers for which data on the agency's actions were available, the agency opposed five mergers, cleared eight mergers, and obtained remedies in ten mergers.[59] As Professor Kwoka concluded, "Collectively, these results suggest that merger control in these studied cases may overall be too permissive, that the remedies chosen may be inadequate to the task of preserving competition, and that conduct and conditions remedies may be especially ineffective."[60] But as Professor Kwoka cautioned, "the number of

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[58] John E. Kwoka, Jr., *Does Merger Control Work? A Retrospective on U.S. Enforcement Actions and Merger Outcomes*, 78 ANTITRUST L.J. 619, 631–32 (2013) (the average increase was 9.40 percent, ranging from a 0.06 percent up to a high of 28.4 percent; with thirteen transactions (24.5 percent of the total) found to result in price decreases, which average 4.29 percent and range from 0.04 percent to 16.3 percent in absolute value; the survey included three joint ventures and four airline code-shares; of the three joint ventures "(all in petroleum), two reported price increases while one reported a decrease. The magnitudes are all small, and average a positive 0.43 percent. On the other hand, all four of the studied airline code-sharing arrangements are found to have resulted in price decreases.").

[59] *Id.* at 638.

[60] *Id.* at 641.

observations is not especially large, classifications are sometimes difficult, the data have other limitations, and selection issues abound."[61]

But based on what do know, three out of four mergers for which we have post-merger analysis led to price increases. A .250 batting average may suffice for a mediocre minor league baseball team, but not for mergers that affect trillions of dollars of commerce. It may be that selection bias abounds—namely the fifty-three post-merger studies involved the more contentious and problematic mergers. Perhaps the agencies predicted accurately for most other mergers. But looking at the wreckage in the radio,[62] financial,[63] and agricultural industries,[64] one should hesitate in dismissing the post-merger studies as idiosyncratic.

Given the post-merger review data, one would think competition agencies would revisit their Merger Guidelines assumptions and explore when actual marketplace behavior deviates from their theories' predicted behavior. Competition agencies are often evaluated on how quickly they assess mergers, the predictability of their review, and the cost imposed on the firms. Rarely are the agencies assessed on how often they accurately predict the mergers' likely competitive effects.

Again the FTC and Department of Justice need not predict perfectly. The Clayton Act tilts the balance toward enjoining mergers. Congress did not require proof that the merger actually will lessen competition. Instead, Congress intended the agencies to arrest trends toward concentration in their incipiency. Thus, built into the law is some tolerance of false positives, namely that some mergers may ultimately not lessen competition but are enjoined to prevent further concentration. But if Kwoka's survey of post-merger reviews even approximates the agencies' track record (a big *if*, I concede), then the agencies and courts are simply not enforcing the Clayton Act well.

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[61] *Id.* at 644.

[62] Maurice E. Stucke & Allen P. Grunes, *Why More Antitrust Immunity for the Media Is a Bad Idea*, 105 NW. U. L. REV. 1399 (2011).

[63] Maurice E. Stucke, *Occupy Wall Street and Antitrust*, 85 S. CAL. L. REV. POSTSCRIPT 33 (2012); Maurice E. Stucke, *Lessons from the Financial Crisis*, 77 ANTITRUST L.J. 313 (2010).

[64] Stucke, *supra* note 56, at 2624–25; Maurice E. Stucke, *Looking at the Monopsony in the Mirror*, 62 EMORY L.J. 1509 (2013).

And their so-called "modern" economic tools are not helping the agencies predict a merger's likely competitive effects.

Thus, under Level II, behavioral economics can spur the agencies to test empirically the key assumptions underlying their merger policies by routinely revisiting any extensively investigated merger where the agency: (1) took no enforcement action; (2) permitted the merger in part to be consummated pursuant to a settlement; or (3) legally challenged the merger, but lost. The agency's aim is to assess its predictions when it originally reviewed the merger. The agency's predictions and assumptions are often discussed in the agency's internal closing memoranda. When closing its investigation, the agency typically discusses why the merger is unlikely to substantially lessen competition. The closing memorandum consequently offers testable predictions (such as whether an entrant or big buyer would defeat the exercise of market power or consumers would shift to other products or sellers in other geographic areas). For companies identified as potential entrants in the original merger review, the reviewing agency would analyze, based on its interviews with these identified entrants, why they did not enter, or if they did enter, why they were ineffectual.

Merger retrospectives can be expensive. One issue confronting the competition agency is how it can maximize the usefulness of this exercise while keeping costs down and not tying up enforcement resources that could be used for other purposes. To reduce the burden on the agency and market participants, the agency can develop a two-stage post-merger review. In the first stage, the agency does a quick review of the state of competition in that industry two to five years after the merger, including pricing levels and nonprice components such as innovation, productivity, services, and quality, to the extent readily observable. The staff would interview a small but representative sample of industry participants (for example, in a merger involving household consumer products, the staff would interview buyers from food, drug, and mass merchandiser retailers) about the competition and request from the merged entity a limited quantity of data, including price data. If the quick-look review suggests that competition significantly diminished, the agency would undertake an in-depth review. The agency would report whether factors other than the merger might explain the increase in prices or reduction in innovation, productivity, services, and quality.

Moreover, more ex post merger review can help assess the risk and costs of false positives and negatives. The Chicago school decried how earlier merger policy inhibited efficiencies. The behavioral economics literature on firm behavior is less developed than that on consumer behavior. But the literature suggests that many large mergers do not yield significant efficiencies.[65] If true, this should reduce the

[65] KENNETH M. DAVIDSON, REALITY IGNORED: HOW MILTON FRIEDMAN AND CHICAGO ECONOMICS UNDERMINED AMERICAN INSTITUTIONS AND ENDANGERED THE GLOBAL ECONOMY 64 (2011); Ulrike Malmendier et al., *Winning by Losing: Evidence on the Long-Run Effects of Mergers* (NBER Working Paper 18024, Apr. 2012), http://www.nber.org/papers/w18024 (collecting data on all U.S. mergers with concurrent bids of at least two public potential acquirers from 1985 to 2009, comparing winners' and losers' performance prior and several years after the merger contest, and finding that post-merger, losing bidders significantly outperform winning bidders); George Alexandridis et al., *How Have M&As Changed? Evidence from the Sixth Merger Wave,* 18 EUR. J. FIN. 663 (2012); Klaus Gugler et al., *Market Optimism and Merger Waves,* 33 MGMT. DECISION ECON. 159, 171–72 (2012); Clayton M. Christensen et al., *The Big Idea: The New M&A Playbook,* HARV. BUS. REV., Mar. 2011, at 49, 49 (reporting that "study after study puts the failure rate of mergers and acquisitions somewhere between 70 percent and 90 percent"); Spencer Weber Waller, *Corporate Governance and Competition Policy,* 18 GEO. MASON L. REV. 833, 873–79 (2011) (examining evidence from corporate finance that suggests that entire categories of mergers are "more likely to destroy, rather than enhance, shareholder value"); Vicki Bogan & David Just, *What Drives Merger Decision Making Behavior? Don't Seek, Don't Find, and Don't Change Your Mind,* 72 J. ECON. BEHAV. & ORG. 930, 930–31 (2009) (collecting some of the academic research showing that many mergers add no value or reduce shareholder value for the acquiring firm); Sara B. Moeller et al., *Do Shareholders of Acquiring Firms Gain from Acquisitions?* (NBER Working Paper 9523, Feb. 2003), http://www.nber.org/papers/w9523 (in examining whether shareholders of acquiring firms gain when firms announce acquisitions of public firms, private firms, and subsidiaries, the study examined over 12,000 purchases between 1980 to 2001 for more than $1 million by public firms and found roughly that "shareholders from small firms earn $8 billion from the acquisitions they made from 1980 to 2001, whereas the shareholders from large firms lose $226 billion"); James A. Fanto, *Braking the Merger Momentum: Reforming Corporate Law Governing Mega-Mergers,* 49 BUFF. L. REV. 249, 280 (2001) ("The systematic empirical evidence on past mergers and the available data on the mega-mergers, however, now supports the conclusion that a large majority of these transactions destroy shareholder value."); Walter Adams & James W. Brock, *Antitrust and Efficiency: A Comment,* 62 N.Y.U. L. REV. 1116, 1117 n.8 (1987) (highlighting earlier studies).

anxiety that if the agency cannot prove post-merger market power, then the merger must promote efficiencies.[66]

2. INFORMING MERGER REVIEW—Besides prompting the agencies to do more post-merger reviews, behavioral economics can assist the courts and agencies during the merger review. One illustration involves market definition, which often determines the outcome. The key question the agencies pose to the merging companies' customers is what would happen if the prices of the merging companies' competing products increased by a small but significant nontransitory amount (SSNIP), generally five to ten percent.[67] The agency asks the SSNIP question to define the relevant market, which assists it in tackling the ultimate issue of whether the merger facilitates the exercise of market power. If the SSNIP inquiry suggests a broad product or geographic market, then the merging parties' market shares and the industry concentration levels are likely to be lower, and the agency will be unlikely to challenge the merger.

At times, the agencies or merging parties rely on consumer survey data on consumer behavior in response to a SSNIP. Under neoclassical economic theory, the way the choice is framed should not affect the rational profit-maximizer's response. Consumers should not differentiate between a price increase (the merging parties increasing

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[66] Post-merger review can empirically test this. The agencies would describe which, if any, of the merging parties' efficiencies it could verify post-merger, the magnitude of the efficiencies, and the extent to which consumers directly benefited from such efficiencies. The agency can require any publicly held company that relies on an efficiency defense to report its claimed efficiencies in its public securities filings. If such disclosure would divulge a trade secret or other confidential, commercially sensitive information, then the company may disclose the information privately to the agency. For each year post-merger that the merging parties claim the efficiencies will be realized, the company would report the actual amount of efficiencies realized versus the projected amount. This should deter company executives from inflating the claimed efficiencies and hold them accountable to the shareholders for pursuing a growth-by-acquisition strategy, while informing the agencies of those efficiencies for particular industries that are more likely to be cognizable and substantial.

[67] HORIZONTAL MERGER GUIDELINES, *supra* note 50, § 4.1.1; Commission Notice on the Definition of Relevant Market for the Purposes of Community Competition Law, 1997 O.J. (C 372) ¶ 17.

the widget's price from $8 to $9) and a price decrease (firms post-merger halting the price erosion and maintaining price at $9 rather than the competitive level of $8). This leads to the following puzzle:

> One of the pieces of evidence that is commonly cited by farmers as evidence of buyer power is that there is an asymmetric price response of retail products to farmgate price changes. This means, for example, that when there is a supply shortage that raises farmgate prices, the increase is immediately passed on to consumers, while when there is a decrease in farmgate prices, the expected decrease in retail prices appears gradually and results in high profits to intermediaries during the period in which prices are unusually high. While there is substantial evidence of price asymmetry, it is not clear that this arises from buyer power. An alternative explanation is that such asymmetry arises from different search patterns by consumers when they face increasing prices compared to decreasing prices. In particular, they may search more aggressively for alternative suppliers when prices increase, but less aggressively when prices are stable or slowly decreasing.[68]

The behavioral economics literature suggests that "framing effects" (how the issue is worded or framed) do matter.[69] Consumers typically base a deal's "value" on the deviation from an established reference point (for example, a sale of twenty percent off the regular price). Kahneman and Tversky's prospect theory predicts that consumers will likely be more risk-seeking when avoiding a loss, and thus more willing to switch to alternative products. Consumers may be less concerned when discounts are eliminated than when prices increase (although both have the same net effect). Thus deviations from the perceived reference point are marked by asymmetric price elasticity: Consumers are angrier about, and more sensitive to, price increases than to the elimination of a discount or the maintenance of prices during periods of deflation.[70]

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[68] OECD, Executive Summary, Competition and Regulation in Agriculture: Monopsony Buying and Joint Selling, DAF/COMP(2005)44, at 8 (2005).

[69] Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263 (1979); OFT Report, *supra* note 47, ¶¶ 3.10-3.201.11.

[70] Colin F. Camerer, *Prospect Theory in the Wild: Evidence from the Field*, *in* ADVANCES IN BEHAVIORAL ECONOMICS 148, 152 (Colin F. Camerer et al. eds., 2004) (many consumers "dislike price increases more than they like the windfall gain from price cuts and will cut back purchases more when prices rise

For example, the majority of people, in one survey, said that a car dealer's elimination of a $200 discount off the list price for a popular vehicle was acceptable; seventy-one percent viewed selling the vehicle $200 above the list price as unfair.[71] Both scenarios produce the same effect—a higher net retail price—but the direction of the deviation to or from the established reference point differed. Rather than provoke consumer anger by increasing the list price, the merging parties may cancel or reduce the level or size of discounts, which may face less consumer resistance.

Consequently, the agencies and courts should scrutinize consumer survey data for framing effects. Suppose many survey consumers said they would switch to alternatives if the price increased by five percent. This is equivocal in industries where price has trended downward and would likely continue to fall absent the merger. The key issue is whether consumers would discipline the firm for not lowering prices to the likely level absent the merger. The survey should also ask consumers how they would respond if the hypothetical monopolist maintained the current price, but prices of possible substitutes fell by a small but significant nontransitory amount. If many consumers would switch to other products if the hypothetical monopolist increased prices, but not when the hypothetical monopolist fails to lower price, then framing effects are likely at play.

Besides framing effects, other biases may skew responses to the SSNIP question. The SSNIP inquiry assumes fairly transparent pricing: Hold everything else equal, and ask how consumers would respond to a percentage price increase for a product with a single transparent price. One insight from the behavioral literature is that firms may shroud price increases by making the price terms more complex.[72] The

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compared with the extra amount they buy when prices fall"); Daniel Kahneman, *Maps of Bounded Rationality: Psychology for Behavioral Economics*, 93 AM. ECON. REV. 1449, 1458 (2003).

[71] Daniel Kahneman et al., *Fairness as a Constraint on Profit Seeking: Entitlements in the Market*, *in* ADVANCES IN BEHAVIORAL ECONOMICS, *supra* note 70, at 252, 257.

[72] OFT REPORT, *supra* note 47, ¶ 1.11; Ellen Peters et al., *More Is Not Always Better: Intuitions About Public Policy Can Lead to Unintended Health Consequences*, 7 SOC. ISSUES & POL'Y REV. 114, 122 (2013); Xavier Gabaix & David

U.K.'s Office of Fair Trading, for example, experimented with five common price frames: (1) "drip pricing," where a lower price is initially disclosed to the consumer and additional charges are added as the sale progresses; (2) "sales," where the "sale" price is referenced off an inflated regular price (for example, was $2, now $1); (3) "complex pricing" (such as three-for-two offers), where the unit price requires some computation; (4) "baiting," where sellers promote special deals with only a limited number of goods available at the discounted price; and (5) "time limited offers," where the special price is available for a short period.[73] For the rational profit-maximizer, a price increase is a price increase. Drip pricing should not matter. But as the Office of Fair Trading experiment found, firms can manipulate consumer consumption behavior and leave consumers worse off, especially under drip pricing and time-limited offers. Alternatively, companies may reduce the salience of the price increase by reducing product quality or quantity.[74]

Another reason to be cautious, or even skeptical, about consumer surveys is that they may not adequately capture consumer behavior. Consumers, when asked an abstract, and more difficult, question, such as their response to a ten percent price increase, may instead answer a simpler question, such as how much do they like or value the merging parties' products or services.[75]

Finally, for mergers involving ordinary household goods, such as bread or facial tissue, data of past consumer behavior in response to

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Laibson, *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*, 121 Q.J. ECON. 505, 506 (2006); Oren Bar-Gill & Elizabeth Warren, *Making Credit Safer*, 157 U. PA. L. REV. 1, 27–28 (2008).

[73] OFT, *supra* note 13, at 6.

[74] For example, ice cream in the United States was once sold in half-gallon containers. Some companies maintained the price, but shrank the quantity. As one ice cream producer observed: "Many companies are now offering only 48 oz. of ice cream in each container. A true half gallon contains 64 fluid oz. of ice cream (measured by volume). That is a difference of a full pint of ice cream. Consumers get 33% more ice cream from Blue Bell than most of its competitors." *Take Home All You Pay For*, BLUE BELL, http://www.bluebell.com/the_little_creamery/still_a_half_gallon.html.

[75] DANIEL KAHNEMAN, THINKING, FAST AND SLOW 11–12 (2011).

relative changes of price will often be superior to survey data. The agency can examine how relative changes in the price of white bread affect demand for white bread and other types of bread. If firms shroud price increases by needlessly increasing the complexity of price terms, however, then that suggests consumers are already harmed in this market, and competition is not working in a way to deter such behavioral exploitation. Asking how consumers would respond to a hypothetical SSNIP is less relevant.

B. *Prosecution of cartels*

Unlike merger review, the agencies and courts do not have to predict the competitive effects of per se illegal agreements. Courts condemn horizontal agreements to fix prices, allocate bids, or allocate markets, without regard to the cartel members' success.[76] The illegality inheres in the agreement. Courts and agencies have long ago rejected as defenses that the fixed prices were reasonable.[77] Because the agencies and court do not predict the cartel's competitive effects, economic theory generally does not play a significant role in establishing liability in criminal price-fixing trials.

Nonetheless, several assumptions underlie the neoclassical economic thinking on cartel prosecutions, which in turn affect competition policy:

- first, general deterrence of cartels (rather than specific deterrence, retribution, incapacitation, and rehabilitation) is the aim for competition authorities.
- second, executives behave as rational, profit-maximizers, in conducting a cost-benefit analysis to see whether the expected gains from participating in the cartel are worth the costs, which include the magnitude of likely punishment discounted by the probability of cartel prosecution.
- third, to optimally deter cartels, a rational prosecutor would seek, and the court would impose, the optimal penalty, which equals the violation's expected net harm to others (plus enforcement costs) divided by the probability of detection and successful prosecution.

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[76] United States v. Socony-Vacuum Oil Co. Inc., 310 U.S. 150, 218 (1940).

[77] *Id.* at 224 n.59.

Setting the fine at the optimal level, neoclassical theory predicts, would result in the socially optimal level of price-fixing. Despite (1) escalating criminal and civil fines in the United States (and abroad); (2) treble private civil damages; (3) longer jail sentences; and (4) a generous leniency program, the United States has not reached optimal deterrence.[78] Therefore, before the U.S. government responds with greater fines and jail sentences, it makes sense to evaluate the assumptions underlying optimal deterrence theory, and consider how the behavioral economics literature might shed light on achieving general deterrence.

As I discuss elsewhere, dispositional traits and situational factors can affect the managers' decision to join and remain in a cartel.[79] Many conspiracies, including those with eleven or more conspirators, can last years, if not decades.[80] Why are cartels more durable than neoclassical economic theory predicts? One answer may lie in the behavioral economics research: Price fixers, like the test subjects in other experiments, may be more trusting and cooperative than neoclassical theory predicts. As the behavioral experiments show, where trust will lead to more favorable outcomes, people tend to trust at a higher level than if all are operating under a traditional game the-

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[78] John Connor & Robert Lande, *Cartels as Rational Business Strategy: Crime Pays*, 34 CARDOZO L. REV. 427 (2012).

[79] 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., 2011); Maurice E. Stucke, *Morality and Antitrust*, 2006 COLUM. BUS. L. REV. 443 (2006).

[80] Margaret C. Levenstein & Valerie Y. Suslow, *Breaking Up Is Hard to Do: Determinants of Cartel Duration*, 54 J.L. & ECON. 455, 463 (2011) (of eighty-one international cartels found to engage in collusion since 1990, the median and mean duration was 7 and 8.1 years, respectively); John M. Connor, *Cartels and Antitrust Portrayed: Internal Structure—Private International Cartels 1990–2008*, at 4, 8 (Aug. 31, 2009), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1467310 (finding cartels' median and mean duration was fifty-seven and eighty-two months, respectively, and that global cartels lasted fifty-seven percent longer than the average cartel); Margaret C. Levenstein & Valerie Y. Suslow, *What Determines Cartel Success?*, 44 J. ECON. LITERATURE 43, 51–52 (2006) (noting that duration is bimodal, with cartels lasting only one year, and twice as many lasting between four and six years).

ory.[81] Recent studies of cartels have found the striking sophistication of their organizational structure, including compensation schemes to handle variations in demand for each cartel member's products.[82] Such compensation schemes reflect "the level of organizational trust and cohesion necessary to implement such a scheme."[83] Trust then can be either socially beneficial or detrimental, and each individual's level of trust may vary.

Consequently setting the antitrust fine at the optimal amount may be necessary, but not sufficient, to generally deter cartels. To promote general deterrence, competition authorities should consider the situational and dispositional factors that foster price fixing and promote the cartel's durability and success. Thus, after prosecuting a cartel, the Department of Justice, by itself or through a pilot program with social scientists, should interview the price fixers and publicly report the following:

- how were the cartels (including those with many members) formed and enforced?
- were the cartel participants more trusting and cooperative than neoclassical theory predicts? if so, why?
- what steps did the company (especially a recidivist) take to deter antitrust violations, and why was it unsuccessful in promoting an ethical organizational culture?[84]

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[81] Terrance R. Chorvat et al., *Law and Neuroeconomics*, 13 SUP. CT. ECON. REV. 35, 43 (2005); Colin F. Camerer, *Behavioral Game Theory: Predicting Human Behavior in Strategic Situations, in* ADVANCES IN BEHAVIORAL ECONOMICS, *supra* note 70, at 374, 378 (summarizing trust games). Other neuroeconomics literature suggests that some people are more likely to be trustful and tend to cooperate, while others are more likely to behave according to the standard game theory predictions. Chorvat et al., *supra*, at 55.

[82] Levenstein & Suslow, *Breaking Up*, *supra* note 80, at 476; Joseph E. Harrington Jr., *How Do Cartels Operate?, in* 2 FOUNDATIONS AND TRENDS IN MICROECONOMICS 1, 57–62 (2006).

[83] Levenstein & Suslow, *Breaking Up*, *supra* note 80, at 482; Christopher R. Leslie, *Trust, Distrust, and Antitrust*, 82 TEX. L. REV. 515 (2004).

[84] In addition, the Department of Justice should make available a computerized database identifying all civil and criminal antitrust consent decrees, pleas, or litigated actions involving cartel activity. The database should

The aim of collecting the data is to understand why and how the cartel started, why the executives were a part of the conspiracy, what did they consider, and what factors contributed to the cartel's durability (or instability).

IV. LEVEL III: RECONSIDER FUNDAMENTAL ASSUMPTIONS OF COMPETITION THEORY

In Level II, competition authorities consider the implications of behavioral economics on the assumptions underlying specific competition policies (such as merger review and cartel enforcement). In Level III, authorities consider the implications of behavioral economics on fundamental issues, such as (1) what is competition and (2) what are the goals of competition law.

A. Reconsidering competition

Although the concept of competition is central to competition policy and economic thinking in general, a definition of an "effective competitive process" remains elusive.[85] Policymakers can agree that competition policy should promote an effective competitive process, competition on the merits, and fair competition. They can agree on some parameters of an effective competitive process, such as a free-market economy, where private actors provide many, if not most, goods and services. They can agree on the desired competitive effects,

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include certain industry characteristics, such as (1) the number of conspirators; (2) the best estimate of their market shares; (3) the length of the conspiracy; (4) the product or services market in which collusion occurred; (5) the number of competitors who were not formerly alleged to be part of the conspiracy and their market shares; (6) the number of entrants and their market shares during the period of the conspiracy; and (7) the nature of the conspiracy.

[85] I have previously discussed in greater detail the implications of behavioral economics on a theory of competition. *See* Maurice E. Stucke, *What is Competition?, in* THE GOALS OF COMPETITION LAW (Daniel Zimmer ed., 2012); Maurice E. Stucke, *Behavioral Exploitation and its Implications on Competition and Consumer Protection Policies, in* THE PROS & CONS OF CONSUMER PROTECTION (Swedish Competition Authority ed., 2012); Maurice E. Stucke, *Reconsidering Competition,* 81 MISS. L.J. 107 (2011).

such as "low prices, high quality products, a wide selection of goods and services, and innovation."[86]

But the authorities are not necessarily referring to the same theory of competition. For example, the Chicago, post-Chicago, and Populist schools agree on the desired competitive effects, yet have different theories of competition. Moreover even the desired competitive effects do not supply a theory of competition, as the desired effects can conflict. The U.S. Supreme Court, for example, stressed the importance of price competition.[87] Yet the Court accepted higher prices for more services and less intrabrand competition for potentially more interbrand competition.[88] Higher prices at times are needed for innovation.[89]

Consequently, although neoclassical economic theory has informed our theory of competition, no consensus exists on a theory

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[86] European Comm'n, Guidelines on the Assessment of Non-horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings, 2008 O.J. (C 265) 7; N. Pac. Ry. Co. v. United States, 356 U.S. 1, 4 (1958) ("unrestrained interaction of competitive forces will yield the best allocation of our economic resources, the lowest prices, the highest quality, and the greatest material progress"); U.S. DEP'T OF JUSTICE, ANTITRUST ENFORCEMENT AND THE CONSUMER, http://www.justice.gov/atr/public/div_stats/antitrust-enfor-consumer.pdf; FED. TRADE COMM'N, COMPETITION COUNTS: HOW CONSUMERS WIN WHEN BUSINESSES COMPETE, http://www.ftc.gov/sites/default/files/attachments/competition-counts/zgen01.pdf.

[87] Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc., 555 U.S. 438, 451 (2009) ("Low prices benefit consumers regardless of how those prices are set, and so long as they are above predatory levels, they do not threaten competition.") (quoting Atl. Richfield Co. v. USA Petroleum Co., 495 U. S. 328, 340 (1990)); Nat'l Collegiate Athletic Ass'n v. Bd. of Regents of Univ. of Okla., 468 U.S. 85, 107–08 (1984) (restraint "that has the effect of reducing the importance of consumer preference in setting price and output is not consistent with this fundamental goal of antitrust law" and restrictions on "price and output are the paradigmatic examples of restraints of trade that the Sherman Act was intended to prohibit").

[88] Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 895–96 (2007).

[89] Eldred v. Ashcroft, 537 U.S. 186, 215–16 (2003) (need to balance encouraging innovation by rewarding inventors with the right to exclude others for a limited time from using the patented invention with the "avoidance of monopolies which stifle competition without any concomitant advance in the 'Progress of Science and useful Arts'").

of an effective competition process or "competition on the merits."[90] Some consider competition as static price competition migrating toward an idealized end state (the economic model of perfect competition). Others view competition as a dynamic process. Although dynamic efficiencies are generally recognized as very important to economic growth, competition agencies and courts generally lack the tools to assess a restraint's impact on dynamic efficiencies; they focus instead on static price competition and productive efficiencies.[91]

Why the divergence on the basic issue, *what is competition*? One reason is the divergence over the premises of any theory of competition. Competition, like any theory, depends on its premises, the validity of which may not hold true across industries, countries, and time. The Chicago and post-Chicago schools assume that market participants are rational profit maximizers with willpower. Others start with a different premise: Many consumers have biases and heuristics, limited willpower, are concerned about fairness, and are willing to punish unfair behavior even when not in their economic self-interest. Their theory of competition accordingly will differ. Issues of systemic risk, behavioral exploitation, herding, overconfidence bias, the importance of maintaining trial-and-error feedback loops, and competitive diversity increase in importance. Financial regulators are more concerned after the economic crisis how consumer biases, heuristics, and imperfect willpower can distort competition. Firm behavior can also reflect managers' biases and heuristics.

Accordingly, the theory of competition can vary depending on the degree that biases, heuristics, and imperfect willpower affect firms and consumers. One can extend the analysis to the rationality and willpower of intermediaries (such as suppliers, wholesalers, and retailers) and governmental agencies. Several caveats apply. It is an oversimplification to categorize millions of consumers and firms as

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[90] OECD, POLICY BRIEF: WHAT IS COMPETITION ON THE MERITS? 1 (June 2006), http://www.oecd.org/competition/mergers/37082099.pdf (noting term "competition on the merits" has "never been satisfactorily defined," which has "led to a discordant body of case law that uses an assortment of analytical methods," which in turn has "produced unpredictable results and undermined the term's legitimacy along with policies that are supposedly based on it").

[91] *Id.* at 4; *see also* DAVIDSON, *supra* note 65, at 85–86 (intellectual confinement of antitrust to static price competition when dynamic competition provides the greater benefits).

either rational or bounded rational. Under any scenario, some market participants will be relatively more rational and have greater willpower than others. Biases and willpower can increase or decrease over time. People at any moment can act "more or less rationally depending on a host of situational, emotional, and other contingent influences."[92] Nor is behavior consistent. People can behave differently depending on situational factors, such as when they are alone or in different groups. Firms as institutions can have biases and rely on heuristics, although in different ways and degrees than consumers. Firms, at times, can minimize individual biases, but at other times (as with cults, mobs, and "groupthink") can displace independent thinking.

To illustrate how our theory of competition changes once we relax our assumptions of the market participants' rationality and willpower, consider the scenario in which many firms are relatively more rational and have greater willpower than an identifiable segment of consumers. Here firms can compete either to (1) help these consumers find solutions for their biases and imperfect willpower or (2) exploit these consumers. Firms can manipulate consumption decisions by:

- using framing effects and changing the reference point, such that a price change is viewed as a discount, rather than a surcharge[93];
- anchoring consumers to an artificially high suggested retail price, from which bounded rational consumers negotiate[94];
- adding decoy options (such as a restaurant's adding higher priced wine) to steer consumers to higher margin goods and services[95];

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[92] Donald C. Langevoort, *The Behavioral Economics of Mergers and Acquisitions*, 12 TENN. J. BUS. L. 65, 65 (2011).

[93] OFT REPORT, *supra* note 47, ¶ 2.5.

[94] In one experiment, MBA students put down the last two digits of their social security numbers (for example, 14). The students, then participants, monetized the number ($14), and then stated whether they would pay that amount for a series of auctioned items. The students then stated the maximum amount they would be willing to pay for each auctioned product. Students with the highest ending social security numbers (80–99) bid 216% to 346% higher than students with low-end social security numbers (1–20), who bid the lowest. DAN ARIELY, PREDICTABLY IRRATIONAL: THE HIDDEN FORCES THAT SHAPE OUR DECISIONS 25–28 (2008). *See also* KAHNEMAN, *supra* note 75, at 19–28 (discussing anchoring effects generally).

[95] Similarly, people "rarely choose things in absolute terms," choosing instead based on their relative advantage to other things. ARIELY, *supra* note

- using the sunk cost fallacy to remind consumers of the financial commitment they already made to induce them to continue paying installments on items, whose value is less than the remainder of payments;
- using the availability heuristic[96] to drive purchases, such as an airline travel insurer using an emotionally salient death (from "terrorist acts") rather than a death from "all possible causes"[97];
- using the focusing illusion in advertisements (that is, inducing consumers to predict greater personal happiness from consumption of the advertised good and not accounting for their adaptation to the new product)[98];
- giving the impression that their goods and services are of better quality because they are higher priced[99] or based on one advertised dimension[100]; and

94, at 2–6. By adding a third, more expensive choice, for example, the marketer can steer consumers to a more expensive second choice. MIT students, in one experiment, were offered three choices for the *Economist* magazine: (1) Internet-only subscription for $59 (sixteen students); (2) print-only subscriptions for $125 (no students); and (3) print-and-Internet subscriptions for $125 (eighty-four students). When the "decoy" second choice (print-only subscriptions) was removed and only the first and third options were presented, the students did not react similarly. Instead sixty-eight students opted for Internet-only subscriptions for $59 (up from sixteen students) and only thirty-two students chose print-and-Internet subscriptions for $125 (down from eighty-four students).

[96] Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, SCIENCE, Sept. 27, 1974, at 1127 (noting situations where people assess the "frequency of a class or the probability of an event by the ease with which instances or occurrences can be brought to mind").

[97] *See generally* Eric J. Johnson et al., *Framing, Probability Distortions, and Insurance Decisions*, 7 J. RISK & UNCERTAINTY 35 (1993).

[98] KAHNEMAN, *supra* note 75, at 402–07.

[99] Ariely, for example, conducted several experiments that revealed the power of higher prices. ARIELY, *supra* note 94, at 181–86. In one experiment, nearly all the participants reported less pain after taking a placebo priced at $2.50 per dose; when the placebo was discounted to $0.10 per dose, only half of the participants experienced less pain. Similarly, MIT students who paid regular price for the placebo beverage (SoBe Adrenaline Rush) reported less fatigue than the students who paid one-third the regular price for the same drink. SoBe Adrenaline Rush beverage was next promoted as energy for the students' minds, and after drinking the placebo, students had to solve as many word puzzles as possible within thirty minutes. Students who paid regular price for the drink got on average nine correct responses, while students who paid a discounted price for the same drink got on average 6.5 questions right.

[100] OFT REPORT, *supra* note 47, ¶ 3.130.

- seeking to avoid price competition through complex price terms[101] or branding.[102]

Competition here will depend in part on the firms' ability to identify and exploit (or help) consumers. Firms may be unable to identify consumers whose biases, heuristics, and willpower make them particularly vulnerable. But rational firms, even after identifying bounded rational consumers, cannot always exploit them. Many markets, unlike prediction markets, lack a defined end-point. A rational investor could "short" a company's stock to profit when the stock price declines. But rational traders do not know when the speculative bubble will burst. Rational traders, due to investor pressure, can be subject to short-term horizons, and follow the herd for short-term gains.[103] Rational traders may also make more money by creating products that encourage, rather than deter, speculation.[104]

Alternatively, consumers, recognizing their bounded rationality and imperfect willpower, can turn for some decisions to more rational advisors or consumer advocates (such as Which? and Consumers Union). Moreover the window for exploitation can be short-lived. Consumers can make better decisions when they gain experience, quickly receive feedback on their earlier errors, discover their biases and heuristics in their earlier decisions, and take steps to debias.[105]

Competition with bounded rational consumers with imperfect willpower raises several policy issues. The first is behavioral exploitation as a market failure. In competitive markets, one expects that firms will warn susceptible consumers of other firms' attempts to

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[101] *Id.* ¶¶ 3.97, 3.101–02.

[102] Deven R. Desai & Spencer Weber Waller, *Brands, Competition and the Law*, 2010 BRIGHAM YOUNG U. L. REV. 1425 (2010); Amos Tversky & Daniel Kahneman, *Loss Aversion in Riskless Choice: A Reference-Dependent Model*, 106 Q.J. ECON. 1039, 1054–58 (1991).

[103] Andrei Shleifer & Robert W. Vishny, *The Limits of Arbitrage*, 52 J. FIN. 35 (2007).

[104] ANDREI SHLEIFER, INEFFICIENT MARKETS: AN INTRODUCTION TO BEHAVIORAL FINANCE 172 (2000) (citing several examples, including futures contracts on tulips during the Tulipmania of the 1630s).

[105] John A. List, *Does Market Experience Eliminate Market Anomalies?*, 118 Q.J. ECON. 41, 41 (2003).

exploit them. Providing this information can build trust and a competitive advantage.[106] But rather than compete to protect consumers from exploitation, firms can compete in finding cleverer ways to attract and exploit susceptible consumers, such as exploiting consumers' overconfidence and optimism.[107]

Consumers, for example, who are overoptimistic as to their ability and willpower to pay their credit card purchases timely, will underestimate the costs of their future borrowings. So they choose credit cards with lower annual fees (but higher financing fees and penalties) over better-suited products, such as credit cards with higher annual fees but lower interest rates and late payment penalties.[108] For other credit card issuers, it may make sense to exploit consumer biases rather than incur the costs to de-bias.[109] Suppose a credit card issuer incurs the cost to educate consumers of their bounded willpower and overconfidence. Other competitors can free ride on the company's educational efforts and quickly offer similar credit cards with lower annual fees. Alternatively, other firms continue to exploit the overconfident consumers with

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[106] *See* SCFC ILC, Inc. v. Visa USA, Inc., 36 F.3d 958, 965 (10th Cir. 1994) ("If the structure of the market is such that there is little potential for consumers to be harmed, we need not be especially concerned with how firms behave because the presence of effective competition will provide a powerful antidote to any effort to exploit consumers." (quoting George A. Hay, *Market Power in Antitrust*, 60 ANTITRUST L.J. 807, 808 (1992))).

[107] OFT REPORT, *supra* note 47, ¶¶ 3.31, 3.37, 3.43; Bennett et al., *supra* note 13, at 118; Garcés, *supra* note 12, at 150; Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 474 n.21 (1992) (noting that "in an equipment market with relatively few sellers, competitors may find it more profitable to adopt Kodak's service and parts policy than to inform the consumers"); FTC v. R.F. Keppel & Bro., Inc., 291 U.S. 304, 308, 313 (1934) (finding that while competitors "reluctantly yielded" to the challenged practice to avoid loss of trade to their competitors, a "trader may not, by pursuing a dishonest practice, force his competitors to choose between its adoption or the loss of their trade"); Ford Motor Co. v. FTC, 120 F.2d 175, 179 (6th Cir. 1941) (Ford following industry leader General Motors in advertising a deceptive six-percent financing plan).

[108] Bar-Gill & Warren, *supra* note 72, at 46.

[109] For elegant economic models, see Paul Heidhues, Botond Köszegi & Takeshi Murooka, *Deception and Consumer Protection in Competitive Markets*, *in* PROS AND CONS OF CONSUMER PROTECTION, *supra* note 85; Gabaix & Laibson, *supra* note 72, at 517–20.

bounded willpower, who subsidize in part the better terms for the sophisticated consumers.[110] Ultimately, de-biasing reduces the credit card companies' profits, without offering any lasting competitive advantage to the first mover. Consequently, the industry makes more money exploiting consumers' biases. Consumers, overconfident of their financial prowess, will not demand better-suited products. Firms have little financial incentive to help consumers make better choices.[111] Market demand, accordingly, will skew toward products and services that exploit or reinforce consumers' biases and imperfect willpower.

A second policy issue is distinguishing between behavioral exploitation and firms' helping bounded rational consumers. Customers may reign supreme (such as by choosing commitment devices to address their bounded willpower) or be exploited. So the government faces several difficulties. One difficulty is that the government cannot necessarily rely on consumers' choices to infer their utility. If heuristics and biases systematically affect consumer decisionmaking, then consumer choices do not necessarily reflect actual preferences. A second difficulty is that some sophisticated consumers, aware of their bounded willpower, will purchase commitment devices that may appear exploitive to the government. A third difficulty is distinguishing when behavioral exploitation benefits or harms society. At times, exploiting irrationality benefits society.[112]

Finally, how does an agency respond to sustained behavioral exploitation? If many consumers choose poorly, one danger is creeping

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[110] OFT REPORT, *supra* note 47, ¶¶ 3.47–3.52, 4.19 (noting that whenever sophisticated consumers benefit from the exploitation of naïve consumers, firms will have less incentive to de-bias); Gabaix & Laibson, *supra* note 72, at 507–09, 517–20 (discussing and modeling the "curse of debiasing").

[111] *See, e.g.*, HORIZONTAL MERGER GUIDELINES, *supra* note 50, § 7.2 (noting how the market is more vulnerable to coordinated conduct if a firm that first offers a lower price or improved product to customers will retain relatively few customers after its rivals respond).

[112] Rational firms, for example, can dampen investors' speculation (such as buying a company's stock on the hope that past price increases will continue with future price increases). Another form of behavioral exploitation is a predictions market, which typically involves a defined event, such as the winner of the U.S. presidential election, and end date, when all bets are settled. Some may be overly optimistic about their predicted outcome. Rational

authoritarianism, whereby the government by default decides for consumers. In displacing individual autonomy, the government does not help consumers improve their willpower or decisionmaking, which in turn reduces consumer sovereignty and liberty. But a laissez-faire approach, under which the government renounces any intention to regulate, raises another antidemocratic outcome, namely corporate autocracy.

Since consumers can be worse off when the government either acts or fails to act, what should the government do? Behavioral economics offers several additional remedies, some less paternalistic than others, to deter behavioral exploitation while preserving economic liberty and leaving room for innovation that benefits consumers. The behavioral economics remedies include:

- altering existing, or create new, default rules;
- requiring consumers to choose among the options[113];
- educating consumers using framing under prospect theory and the availability heuristic[114]—at times, better disclosure entails providing less, but more important, information;
- setting one option as the default but imposing procedural constraints on opting out;

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investors can exploit this optimism, and the predictions market as a result can yield remarkably accurate predictions. Colin F. Camerer & Ernst Fehr, *When Does "Economic Man" Dominate Social Behavior?*, SCIENCE, Jan. 6, 2006, at 52.

[113] The European Commission, for example, challenged Microsoft for bundling or tying its web browser, Internet Explorer, to its dominant client personal computer operating system, Windows. Press Release, European Comm'n, Antitrust: Commission Welcomes Microsoft's Roll-Out of Web Browser Choice (Mar. 2, 2010), http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/216&format=HTML&aged=0&language=EN. Before the settlement, consumers who used Windows had Microsoft's Internet Explorer as their default web browser. Although consumers could download other browsers, many did not, a function not attributable necessarily to the superiority of Microsoft's browser but perhaps status quo bias. As part of its settlement, Microsoft provided consumers a Browser Choice Screen. Rather than having one Internet browser as the default, computer users choose the browser they want from the competing web browsers listed on the screen.

[114] OECD, *supra* note 41, at 87; Colin Camerer et al., *Regulation for Conservatives: Behavioral Economics & the Case for 'Asymmetric Paternalism'*, 151 U. PA. L. REV. 1211, 1231 (2003) ("Since low probabilities are so difficult to represent

- affording purchasers a cooling-off period[115];
- imposing a behavioral exploitation tax on the firm[116];
- taking preventive measures to help consumers de-bias themselves and improve their willpower, including increasing (1) the supply of de-biasing methods;[117] (2) the demand for de-biasing (for example by imposing procedural constraints—such as required completion of an approved online course that outlines a mortgage's

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cognitively, it may help to use graphical devices, metaphors (imagine choosing one Ping-Pong ball out of a large swimming pool filled with balls), or relative-odds comparisons (winning the lottery is about as likely as being struck by lightning in the next week).").

[115] *See* OECD, *supra* note 41, at 89; Rule Concerning Cooling-Off Period for Sales Made at Homes or at Certain Other Locations, 16 C.F.R. Part 429 (2011); Camerer et al., *supra* note 114, at 1241–44 (collecting federal and state cooling-off statutes); *see also* Truth in Lending (Regulation Z), 12 C.F.R. § 226.15 (2011) (Regulation Z cooling-off period). Consumers in an emotional, impulsive state can make unwise decisions that they later regret. ARIELY, *supra* note 94, at 89–126. From a behavioral economics perspective, the effectiveness of cooling-off periods is mixed. On the one hand, consumers, upon reflection, can reconsider a purchase, especially one involving high-pressure sale tactics. On the other hand, the more time one has to complete a task, the behavioral economics literature suggests, the greater the likelihood one will procrastinate and not complete that task. *See, e.g.*, Dan Ariely & Klaus Wertenbroch, *Procrastination, Deadlines, and Performance: Self-Control by Precommitment*, 13 PSYCHOL. SCI. 219, 219–24 (2002); Amos Tversky & Eldar Shafir, *Choice Under Conflict: The Dynamics of Deferred Decisions*, 3 PSYCHOL. SCI. 358 (1992). For example, a customer's likelihood of redeeming a rebate may be inversely proportional to the rebate period's length. Matthew A. Edwards, *The Law, Marketing and Behavioral Economics of Consumer Rebates*, 12 STAN. J.L. BUS. & FIN. 362, 391–95 (2007); *see also* Virginia Postrel, *The Gift-Card Economy*, THE ATLANTIC, May 2009, http://www.theatlantic.com/magazine/archive/2009/05/the-gift-card-economy/7372/ (noting the longer the expiration period, the less likely one will redeem gift card).

[116] When the estimated social value of the firms' behavior is below its private value, the government can tax the firm the difference. The tax seeks to prevent firms from unjustly enriching themselves from their behavioral exploitation. For example, revenues from payday lending that come from APRs above a certain level would be taxed at higher rates. Credit card revenues earned from late fees would be taxed at higher rates than revenue from annual fees.

[117] Financial literacy efforts have had mixed results. One study of Harvard undergraduate students and MBA students from Wharton, for example, found a "low absolute level of financial sophistication" with subjects basing

risks—before consumers can transact in high-risk areas of behavioral exploitation like subprime lending); and (3) the opportunities to de-bias, such as facilitating timely feedback mechanisms to make consumers aware of their errors and the costs of their poor choices, and strategies to avoid errors (such as providing employees who have not enrolled in a retirement plan a monthly reminder of how much money they have lost to date in matching funds by not contributing to the 401(k) and an easy method to opt in);

- providing consumers, if the market has not, commitment devices; and
- increasing the firms' search costs to identify potential victims.[118]

Consequently, by altering one set of assumptions, namely, the relative rationality of firms and consumers, one can have different conceptions of competition with different policy implications. Thus, the agencies likely will want to undertake more empirical work to understand better the competitive dynamics of particular markets and how legal and informal norms interact to influence behavior and competition generally.

B. *Reconsidering the goals of competition law*

Besides reexamining the assumptions underlying their theory of competition, competition authorities can reconsider their policy goals. The International Competition Network (ICN) completed three surveys of its member competition authorities to identify their countries'

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choices on normatively irrelevant mutual fund attributes. James J. Choi et al., *Why Does the Law of One Price Fail? An Experiment on Index Mutual Funds,* 23 REV. FIN. STUD. 1405 (2010).

[118] One FTC success was enabling consumers to easily opt out of unwanted commercial telephone solicitations. *See* Telemarketing Rules, 15 U.S.C. § 6102 (2006); National Do-Not-Call Registry, 16 C.F.R. § 310.4(b)(1)(iii)(B) (2011). As of September 30, 2008, over 172.5 million telephone numbers were on the do-not-call list. *See also* Do-Not-Call Improvement Act of 2007, Pub. L. No. 110-187, 122 Stat. 633 (2008) (telephone numbers placed on the National Do-Not-Call Registry can remain on it permanently). The government, through a similar common listing service, can enable consumers to opt out of home or mail solicitations (including credit card offerings) or easily block home-shopping cable stations. The government can increase consumers' privacy rights to make it harder for firms to identify especially bounded rational consumers through their purchasing behavior.

antitrust objectives. Thirty of thirty-three countries in a 2007 ICN survey identified promoting consumer welfare as an objective for their monopolization statutes.[119] The European Commission noted how "over the past two decades, its antitrust and merger policy more effectively placed the emphasis on consumer welfare, notably through an increasingly refined economic analysis."[120]

But the convergence is limited. Despite the push for a single economic competition policy goal, no consensus exists in the United States or worldwide on any well-defined goal.[121] Four oft-cited economic goals (ensuring an effective competitive process, promoting consumer welfare, maximizing efficiency, and ensuring economic

[119] INT'L COMPETITION NETWORK (ICN), REPORT ON THE OBJECTIVES OF UNILATERAL CONDUCT LAWS, ASSESSMENT OF DOMINANCE/SUBSTANTIAL MARKET POWER, AND STATE-CREATED MONOPOLIES 9 (2007), http://www.internationalcompetitionnetwork.org/uploads/library/doc353.pdf.

[120] EUROPEAN COMM'N, REPORT FROM THE COMMISSION, REPORT ON COMPETITION POLICY 2010, at 5 (2011).

[121] I discuss in greater detail the failed quest for a single economic antitrust goal in Maurice E. Stucke, *Reconsidering Antitrust's Goals*, 53 B.C. L. REV. 551 (2012), and the implications of behavioral economics on antitrust's goals in Maurice E. Stucke, *The Behavioral Antitrust Gambit*, *in* INTERNATIONAL RESEARCH HANDBOOK ON COMPETITION LAW (Ariel Ezrachi ed., 2013). Scholars, as one recent symposium on the goals of competition law reveals, continue to debate after Robert H. Bork's influential book, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF (1978), over antitrust's goals. Even among those who advocate an economic welfare objective, it is unsettled whether welfare should reflect consumer welfare or total welfare, what those terms mean, and the extent to which it makes any difference. *See, e.g.*, Roger D. Blair & D. Daniel Sokol, *Welfare Standards in U.S. and E.U. Antitrust Enforcement*, 81 FORDHAM L. REV. 2497, 2499 (2013) (arguing that "total welfare rather than consumer welfare . . . should drive antitrust analysis"); Herbert Hovenkamp, *Implementing Antitrust's Welfare Goals*, 81 FORDHAM L. REV. 2471, 2471 (2013) ("One welfare concern that has dominated debates over U.S. antitrust policy over the last several decades is whether antitrust should adopt a 'consumer welfare' principle rather than a more neoclassical 'total welfare' principle."); David A. Hyman & William E. Kovacic, *Institutional Design, Agency Life Cycle, and the Goals of Competition Law*, 81 FORDHAM L. REV. 2163, 2163–64 (2013) ("Post-Chicago School enthusiasts accept the importance of efficiency but argue that the antitrust laws also exist to achieve other economic ends, including the protection of consumer choice and the prevention of unfair transfers of wealth from consumers to producers."); John B. Kirkwood, *The*

freedom[122]) have failed to unify antitrust analysis. No consensus exists on what the four goals mean or how they are to be achieved. For example, the objective of *an effective competitive process* is simply a belief in other objectives, which can conflict. The objective of *promoting consumer welfare,* the ICN surveys reflect, provides little guidance.[123] Most countries, the ICN found, did "not specifically define consumer welfare and appear[ed] to have different economic under-

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Essence of Antitrust: Protecting Consumers and Small Suppliers from Anticompetitive Conduct, 81 FORDHAM L. REV. 2425, 2453 (2013) (addressing and critiquing total welfare standard); Robert H. Lande, *A Traditional and Textualist Analysis of the Goals of Antitrust: Efficiency, Preventing Theft from Consumers, and Consumer Choice,* 81 FORDHAM L. REV. 2349, 2360 n.54 (2013) (noting that Bork's "deceptive use of the term 'consumer welfare,' instead of the more honest term 'total welfare,' was a brilliant way to market the efficiency objective"); Alan J. Meese, *Reframing the (False?) Choice Between Purchaser Welfare and Total Welfare,* 81 FORDHAM L. REV. 2197, 2198 (2013) (noting how the term consumer welfare, while a popular goal, "means different things to different people"); Barak Orbach, *How Antitrust Lost Its Goal,* 81 FORDHAM L. REV. 2253, 2273 (2013) (noting that "[f]or Bork, the phrase 'consumer welfare' meant 'allocative efficiency,' " but a "few years after Bork presented his thesis of the legislative intent of the Sherman Act, the phrase 'consumer welfare' acquired a popular cultural meaning referring to the buyer's well-being: the benefits a buyer derives from the consumption of goods and services, or more casually, the individual's well-being"); Joshua D. Wright & Douglas H. Ginsburg, *The Goals of Antitrust: Welfare Trumps Choice,* 81 FORDHAM L. REV. 2405, 2406 & n.10 (2013) (arguing, on the one hand, that the "promotion of economic welfare as the lodestar of antitrust laws—to the exclusion of social, political, and protectionist goals—transformed the state of the law and restored intellectual coherence to a body of law," while declining, on the other hand, to elaborate "whether the appropriate standard is aggregate economic efficiency, often referred to as the total welfare standard or 'true' consumer welfare (in the economic sense of a consumer surplus) standard" and how policy makers would choose between the two welfare standards without referencing social and political goals) (footnote omitted). *But see* Harry First & Spencer Weber Waller, *Antitrust's Democracy Deficit,* 81 FORDHAM L. REV. 2543, 2544 n.5 (2013) ("We take as a given that antitrust has political goals and reflects political value judgments.").

[122] ICN, *supra* note 119, annex A.

[123] ICN, COMPETITION ENFORCEMENT AND CONSUMER WELFARE—SETTING THE AGENDA 3 (2011) (noting "connection between consumer welfare and the practical enforcement of competition law is not always straightforward" and "there may be a considerable gap between policy statements and practice").

standings of the term."[124] No consensus exists on what *consumer welfare* means, who the consumers are, how to measure consumer welfare, or designing legal standards to further this goal. Consequently, as the ICN found, the "objectives of competition laws vary widely from one jurisdiction to another. . . . [P]arallel objectives, possibly conflicting with that of economic efficiency or consumer welfare, are present in many competition laws."[125]

So how can behavioral economics inform policymakers on the goals of competition law? As an initial premise, competition policy ultimately must improve citizen well-being. If, as a result of a country's competition policy, its citizens' physical and mental health deteriorates, their isolation and distrust increase, and their freedom, self-determination and well-being decrease, then the policy is not worthwhile. So competition and competition policy must promote—or at least not impede—overall well-being.

Accordingly, the issue is how competition law (along with other laws and informal ethical, moral, and social norms) can promote overall well-being. On the one hand, part of competition policy's institutional soundness is its recognition that antitrust cannot cure all societal ills. Competition law is at its strongest when it focuses on preserving an effective competitive process and enforcing norms of free, fair, and open competition.

On the other hand, competition policy is not divorced from subjective well-being. One insight from the behavioral economics' happiness literature is that well-being is promoted along multiple dimensions, including (1) material well-being (income and wealth, housing, and jobs and earnings) and (2) quality of life (health status, work and life balance, education and skills, social connections, civic engagement and governance, environmental quality, and personal security).[126] A competition policy that promotes price competition and

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[124] *Id.* at 9.

[125] ADVOCACY WORKING GRP., ICN, ADVOCACY AND COMPETITION POLICY REPORT 32 (2002), http://www.internationalcompetitionnetwork.org/Outreach Toolkit/media/assets/resources/advocacy_ report.pdf.

[126] OECD, BETTER LIFE INITIATIVE: COMPENDIUM OF OECD WELL-BEING INDICATORS 6 (2011), http://www.oecd.org/document/28/0,3746,en_2649 _201185_47916764_1_1_1_1,00.html.

greater consumer surplus makes sense in developing economies where many consumers cannot afford the most basic needs. After all, if impoverished consumers must choose between milk and bread, then with all else equal, lowering the price of milk and bread significantly benefits consumers' health and well-being.

But if competition policy's sole or primary goal is to maximize consumer surplus in a post-industrial economy where many are materially well-off, then the competition policy has a minor, and at times inconsequential, role in maximizing overall well-being.[127] As the country's living standards increase and its citizens' basic material needs, such as food, clothing and shelter, are met, then the citizens will likely place greater importance on quality-of-life factors associated with well-being, such as work and life balance, social connections, safety, and environmental quality. Material well-being still matters (especially employment) in promoting well-being. Economic growth can also promote other values, such as "openness of opportunity, tolerance, economic and social mobility, fairness, and democracy."[128] But there is less bang (in terms of increased well-being) for that extra buck of consumer surplus.[129]

Such a competition policy is not difficult to imagine. Competition in dispersing political and economic power can increase economic opportunity and personal autonomy,[130] a key predictor of happiness.

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[127] Stucke, *supra* note 56, at 2626–28 (discussing some of the literature on wealth and well-being).

[128] BENJAMIN M. FRIEDMAN, THE MORAL CONSEQUENCES OF ECONOMIC GROWTH *ix* (2005); *see also id.* at 79–102.

[129] Jan Delhey, *From Materialist to Post-materialist Happiness? National Affluence and Determinants of Life Satisfaction in Cross-national Perspective*, 97 SOC. INDICATORS RES. 65, 74–77 (2010) (finding a shift from materialist to post-materialist well-being between poorer and wealthier countries). As countries become wealthier, individual well-being tends to become more post-materialist: "The more widespread post-materialist values are in a society, the more the citizenry values personal autonomy, relative to income, as a source of [subjective well-being]." *Id.* at 73. People derive greater satisfaction from job creativity than income. *Id.* And "[i]n richer countries, personal autonomy drives life satisfaction—relative to income—more strongly." *Id.* at 74.

[130] 21 CONG. REC. 2457 (1890) (Senator Sherman describing how the Act promotes "industrial liberty," which "lies at the foundation of the equality of all rights and privileges").

Citizens can choose to purchase from (and work for) firms that align with their moral and ethical values. We see this with Lifestyles of Health and Sustainability consumers,[131] cultural creatives,[132] and consumers willing to pay more for the increasing number of "fair trade" products.[133] When a firm engages in exploitative, unfair behavior, a competitive market provides alternatives.[134] Other-regarding consumers may want to punish corporate behavior perceived as intentional, unfair, and motivated by greed, by having the choice of taking their business elsewhere.[135] Positive sum competition provides richer social connections as people use their personal "vigor, imagination, devotion, and ingenuity" to help others.[136]

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[131] *Understanding the LOHAS Consumer*, LIFESTYLES OF HEALTH AND SUSTAINABILITY, http://www.lohas.com/Lohas-Consumer; *see also* FTC v. Whole Foods Mkt., Inc., 548 F.3d 1028, 1039 (D.C. Cir. 2008) (FTC's evidence delineating a submarket "catering to a core group of customers who have decided that natural and organic is important, lifestyle of health and ecological sustainability is important") (citation omitted).

[132] Neil D. Hamilton, *America's New Agrarians: Policy Opportunities and Legal Innovations to Support New Farmers*, 22 FORDHAM ENVTL. L. REV. 523, 526 (2011).

[133] M. Todd Henderson & Anup Malani, *Corporate Philanthropy and the Market for Altruism*, 109 COLUM. L. REV. 571, 617 (2009).

[134] F.M. SCHERER & DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 19 (3d ed. 1990) ("When the no-barriers-to-entry condition of perfect competition is satisfied, individuals are free to choose whatever trade or profession they prefer, limited only by their own talent and skill and by their ability to raise the (presumably modest) amount of capital required."); *see also* Ross v. Bank of Am., N.A. (USA), 524 F.3d 217, 223 (2d Cir. 2008) (noting that antitrust injury includes "[c]oercive activity that prevents its victims from making free choices between market alternatives" (quoting Associated Gen. Contractors of Cal., Inc. v. Cal. State Council of Carpenters, 459 U.S. 519, 528 (1983))).

[135] Stucke, *Monopsony*, *supra* note 64, at 1557.

[136] United States v. Topco Assoc., Inc., 405 U.S. 596, 610 (1972) (describing freedom to compete); OECD, HOW'S LIFE? MEASURING WELL-BEING: MEASURING WELL-BEING 14 (2011) ("Not only [do the availability of jobs and earnings] increase people's command over resources, but they also provide people with a chance to fulfill their own ambitions, to develop skills and abilities, to feel useful in society and to build self-esteem.").

Thus one challenge for policymakers going forward is assessing how competition policy can promote overall well-being. In developed countries like the United States, an antitrust goal to maximize consumer surplus will not necessarily increase (and can reduce) overall citizen well-being. To maximize well-being, competition policy must balance material well-being and quality of life factors, such as freedom and self-determination, while not deterring the exercise of compassion and interpersonal relationships. Important political, social, economic, and moral values can reinforce, rather than undermine, any concept of fair competition, which in turn promotes well-being.

V. LEVEL IV: CONSIDERING THE IMPLICATIONS OF BEHAVIORAL ECONOMICS ON CONVERGENCE

As more competition authorities consider the implications of behavioral economics on competition policy under Levels I through III, one issue is how behavioral economics will affect the degree of convergence among the over 100 jurisdictions with competition laws today.

As agencies and courts engage the analysis under Levels I through III, their economic theories will be enriched with the behavioral insights: They will likely acknowledge competition policy's political, social, and moral goals, and additional theories of competition, market failures, and remedies.

But behavioral economics, unlike neoclassical economic theory, will not provide a simple unifying principle. Dispositional and situational factors, which affect human behavior, can vary across regions, time, and experience. One concern is that behavioral economics increases the range of outcomes reached in an antitrust case, and thus injects more unpredictability into competition law. In relaxing the assumptions of market participants' rationality, willpower, and self-interest, policymakers can justify anticompetitive outcomes to protect irrational consumers.

Accordingly, adopting behavioral economics represents a gambit. Policymakers sacrifice the simplicity and organizing principles of rational choice theory, and risk greater divergence as enforcers predict market participants' behavior under various situational and dispositional factors. But the gambit can also provide competition authorities a greater advantage. In acknowledging the complexity of competition,

their limited and incomplete understanding of market behavior and the competitive system, and the predictive shortcomings of price theory, behavioral economics can shift policymakers' mind sets:

> The recognition that simple and fully deterministic rules or equations can generate dynamical patterns which are effectively indistinguishable from random noise has very deep implications for science: It effectively marks the end of the Newtonian dream that knowing the rules will enable prediction; predicting local weather beyond about 10–20 days is not just a problem of computational power, but of the inherent unpredictability of chaotic dynamical systems.[137]

So the ultimate issue under Level IV is whether the agencies and courts should rely on (1) simple (yet unrealistic) assumptions of human and firm behavior, relatively simple theories of static price competition, and a single economic goal that everyone can endorse because it is ill-defined; or (2) simpler rules and legal presumptions (rather than the current rule of reason analysis), given the inherent unpredictability of dynamic competition, and competition policy's inherent economic, social, moral and political objectives.

One cannot have, consistent with the rule of law, a fact-specific effects-based legal standard (such as the rule of reason) and competing policy objectives, theories of competition, and economic theories. An effects-based legal standard is feasible only with a single well-defined objective and a well-defined theory of competition. Convergence on an effects-based analysis will be unsatisfactory, especially as agencies engage in the analysis under Levels I through III. As a former FTC chair said,

> Embedded in [European Union] and U.S. agency evaluations of the highly visible matters . . . are differing assumptions about the adroitness of rivals and purchasers to reposition themselves in the face of exclusionary conduct by a dominant rival, the appropriate tradeoff between short-term benefits of a challenged practice and long-term effects, and the robustness of future entry as a means for disciplining firms that presently enjoy dominance. Putting these and other critical assumptions front and center in the discussion, along with the bases for the assumptions, would advance the transatlantic relationship in the future.[138]

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[137] ROBERT M. MAY, STABILITY AND COMPLEXITY IN MODEL ECOSYSTEMS *xviii* (Princeton Univ. Press 1973) (2001).

[138] William E. Kovacic, Chairman, Fed. Trade Comm'n, Competition Policy in the European Union and the United States: Convergence or Divergence?

Continued reliance on an effects-based legal analysis will not yield greater convergence until enforcers and courts agree on the underlying assumptions of market participant rationality, markets' capacity to self-correct quickly, and the benefits and risks of governmental enforcement. This convergence is unlikely. Some jurisdictions, like the U.K.'s Competition and Markets Authority (formerly the Office of Fair Trading), are already trending toward more accurate assumptions of market participants' behavior.

Thus the implication of behavioral antitrust in Level IV is greater self-actualization. It can pull antitrust from its current effects-based legal analysis toward simpler, ex ante legal rules and presumptions designed to foster a competitive process.

The promise of behavioral economics under Level IV is as an impetus for clearer rules that market participants can internalize and follow. Meaningful convergence will come from increasing the transparency of antitrust's legal standards and bringing them closer to the rule of law ideals. By acknowledging the descriptive limitations of static price competition and the incompleteness of any single competition goal, competition officials can recognize that whatever the conception of competition or antitrust goals the first order of convergence is greater transparency and objectivity of the legal standards.

This is not to say that neoclassical economics falls to the wayside. One potential concern is that the codification of rules and legal presumptions can take on a life of their own irrespective of their economic effects. The legal rules and presumptions, while simple and transparent, can also be counterproductive. Legal reform is often a complex, arduous process that is not guaranteed to deliver significant improvements. Tension may well arise between a system's ability to accommodate new knowledge and to provide legal certainty. The more criteria the enforcer has the harder it is to evaluate whether the conduct is illegal. Consequently, the agencies should use the available empirical economic literature to fashion presumptions of legal or illegal conduct and specific exceptions for the common antitrust restraints, while leaving the effects-based rule of reason for the exceptional cases.

21, Speech at the Bates White Fifth Annual Antitrust Conference (June 2008), www.ftc.gov/speeches/kovacic/080602bateswhite.pdf.

Indeed, with or without behavioral economics, we are moving in this direction.[139] Faced with resource constraints,[140] the United States, like other jurisdictions, will find it harder to justify the protracted, costly rule of reason. Companies will demand legal standards that provide greater transparency, objectivity, accuracy, and predictability than the effects-based standard. They increasingly will demand clearer rules that their employees can easily internalize (reducing compliance costs), that will bind them and their competitors, and that will enable them to reasonably anticipate what actions would be prosecuted so they can channel their behavior in welfare-enhancing directions.

VI. CONCLUSION

Behavioral economics will likely continue its inroads. Other countries will likely add Behavioral Insights Teams or Nudge Units. Behavioral economics will also likely enrich competition policy. Ultimately, with the rise of behavioral economics, policymakers will acknowledge the shortcomings of relying on an effects-based legal standard built on faulty assumptions to promote an ill-defined consumer welfare goal. They will recognize that antitrust enforcers and courts, taken all together, still would not know how to maximize dynamic, allocative, and productive efficiencies or economic welfare in the long run. As a German Bundeskartellamt official said, "[W]e cannot pretend to know what in fact cannot be known."[141]

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[139] ICN, *supra* note 123, at 88 ("A *clearly set* and *uniformly enforced* standard is, therefore, of utmost relevance for enforcement agencies, the business community and final consumers.") (emphasis added); Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc., 555 U.S. 438, 453 (2009) (recognizing the need for simpler antitrust standards "clear enough for lawyers to explain them to clients") (quoting Town of Concord, Mass. v. Boston Edison Co., 915 F.2d 17, 22 (1st Cir. 1990))).

[140] Ed O'Keefe, *Justice Department Lawyers Say They'll Quit if Regional Offices Close*, WASH. POST, Oct. 18, 2011, http://www.washingtonpost.com/politics/justice-department-lawyers-say-theyll-quit-if-regional-offices-close/2011/10/18/gIQA0JzNvL_story.html.

[141] Christian Ewald, *Competition and Innovation: Dangerous "Myopia" of Economists in Antitrust?*, 4 COMPETITION POL'Y INT'L 253, 261 (2008).

So how will behavioral economics enrich, at least initially, competition policy? Most likely as the gap filler described here as Level I. But eventually behavioral economics will spread to Levels II, III and IV and provide the impetus to critically reassess assumptions that very much warrant reassessing.