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ANTITRUST IN ATTENTION MARKETS: OBJECTIONS AND RESPONSES

John M. Newman*

The modern antitrust enterprise finds itself under attack. Critics complain that enforcement agencies have done nothing to stem an ever-rising tide of market concentration and corporate power. At the center of this critique lies Silicon Valley, home of a new generation of tech giants.

Actual examination of agency actions suggests that these recent criticisms are somewhat overblown. Antitrust agencies, particularly the Federal Trade Commission, have brought a surprising variety of cases involving nascent markets. But there does remain a gaping void in the enforcement record: attention markets, in which individuals pay attention to advertisements in exchange for access to desired products and services.

This symposium contribution contends that attention markets represent the largest sector of the modern economy to have gone unnoticed by antitrust regulators. If it is to fulfill its congressional mandate, the antitrust enterprise must begin paying attention to attention markets. A number of objections to this straightforward point have been raised, but each collapses under close scrutiny. This article catalogues and refutes each of those objections, and concludes with a call to action: the ongoing lack of enforcement in attention markets risks delegitimizing the entire antitrust project.

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I. INTRODUCTION

Orthodox antitrust has attracted a great deal of critical attention in recent years, much of it prompted by the rise of a new generation of Silicon Valley giants. A number of commentators from across the political spectrum have aligned around the position that antitrust enforcers have done too little to protect competition in digital markets.¹ Many of these critiques imply that enforcers have done nothing at all.²

But U.S. enforcement agencies have, in fact, filed a surprising number and variety of actions in digital markets. The Federal Trade Commission (“FTC”), for example, challenged Nielsen’s acquisition of Arbitron on the unusual grounds that the deal would have combined two “potential” competitors—neither firm had entered the relevant market, but (per the FTC’s complaint) both were planning to do so in the near future.³ The FTC also recently challenged CDK Global’s proposed purchase of a nascent rival, Auto/Mate, alleging that the acquisition

1. See, e.g., Lina M. Khan, Note, *Amazon’s Antitrust Paradox*, 126 YALE L.J. 710 (2017); Jonathan Tepper, *The Conservative Case for Antitrust*, AM. CONSERVATIVE (Jan. 28, 2019), <https://www.theamericanconservative.com/articles/the-conservative-case-for-antitrust-jonathan-tepper/>; *The Next Capitalist Revolution*, THE ECONOMIST, Nov. 15, 2018, at 13; Matt Stoller, *The Return of Monopoly*, NEW REPUB. (July 13, 2017), <https://newrepublic.com/article/143595/return-monopoly-amazon-rise-business-tycoon-white-house-democrats-return-party-trust-busting-roots>.

2. Matt Stoller, *The Return of Monopoly*, NEW REPUB. (July 13, 2017), <https://newrepublic.com/article/143595/return-monopoly-amazon-rise-business-tycoon-white-house-democrats-return-party-trust-busting-roots>; Jonathan Tepper, *The Conservative Case for Antitrust*, AM. CONSERVATIVE (Jan. 28, 2019), <https://www.theamericanconservative.com/articles/the-conservative-case-for-antitrust-jonathan-tepper/>.

3. Complaint at 3, *In re Nielsen Holdings N.V., and Arbitron Inc.*, No. C-4439 (F.T.C. Feb. 24, 2014), <https://www.ftc.gov/system/files/documents/cases/140228nielsenholdingscmpt.pdf>.

would have combined an actual competitor with a nascent competitor.⁴ Finally, the agencies have successfully challenged a number of deals involving digital markets (FanDuel-DraftKings, H&R Block-TaxAct, Bazaarvoice-PowerReviews⁵) under the more traditional theory that the transactions would have combined actual, head-to-head rivals.⁶

If enforcers have been at least somewhat active and successful in digital markets, what has provoked the recent outcry? Despite the commendable efforts that have been undertaken, a gaping void in enforcement remains. A massive subset of the digital economy—markets that involve attention capture and exchange—has escaped enforcement altogether. This article describes how and why antitrust appears to have failed in this area, emphasizes the growing importance of attention rivalry, identifies the most common objections to antitrust enforcement in attention markets, and responds to those objections. It concludes with a call to action: digital attention merchants⁷ have enjoyed *de facto* immunity from antitrust laws for too long. Intervention is essential, not only on its own merits, but also to preserve, in troubled times, the ongoing legitimacy of the antitrust enterprise.

4. Complaint at 4, *In re* CDK Global, Inc., No. 9382 (F.T.C. Mar. 26, 2018), https://www.ftc.gov/system/files/documents/cases/docket_no_9382_cdk_automate_part_3_complaint_redacted_public_version_0.pdf.

5. John M. Newman, *Antitrust in Digital Markets*, 72 VAND. L. REV., 47 (forthcoming 2019) [hereinafter Newman, *Digital Markets*].

6. As to conduct, the DOJ also brought a high-profile case against Apple and several e-book publishers. See *United States v. Apple*, 791 F.3d 290, 321, 339 (2d Cir. 2015) (upholding the lower court's decision that the challenged conduct was *per se* illegal). And, although the case did not directly involve digital markets, the DOJ filed a complaint in 2010 against six Silicon Valley firms that had entered into a series of agreements not to poach each other's employees. See Press Release, U.S. Dep't of Justice, "Justice Department Requires Six High Tech Companies to Stop Entering into Anticompetitive Employee Solicitation Agreements" (Sept. 24, 2010), <https://www.justice.gov/opa/pr/justice-department-requires-six-high-tech-companies-stop-entering-anticompetitive-employee>. The relevant market(s) at issue were labor markets, not digital markets. See Complaint, *United States v. Adobe Sys., Inc.*, No. 1:10-cv-01629, 2010 WL 11417874, at ¶ 14 (D.D.C., Sept. 24, 2010) (contrasting the defendants' conduct with what occurs "[i]n a well-functioning labor market"). The FTC opened, but subsequently closed in 2013, an investigation into Google's search-related practices. *The FTC Report on Google's Business Practices*, WALL ST. J. (Mar. 24, 2015), <http://graphics.wsj.com/google-ftc-report/>; FED. TRADE COMM'N, GOOGLE INC. (2013), <https://www.ftc.gov/enforcement/cases-proceedings/closing-letters/google-inc>.

7. This term appears to have been coined by TIM WU, *THE ATTENTION MERCHANTS: THE EPIC SCRAMBLE TO GET INSIDE OUR HEADS* (2016).

II. THE RISE (AND RISE) OF ATTENTION RIVALRY

It is increasingly well-accepted—by everyone from advertisers⁸ to rhetoricians⁹ to theologians¹⁰—that attention is valuable. The potential supply of attention is finite, limited by both the total number of humans and by our individual ability to focus on a given phenomenon.¹¹ Despite these upper bounds, in an information-poor environment, attention is relatively abundant; there is more than enough to go around.¹² Pre-digital society left humans hungry for ways to expend their abundant supply of attention.¹³ So long as information remains scarce, attention remains abundant. And where attention is abundant, it will be of little interest to economics, concerned as that discipline is with the allocation of scarce resources. By extension, it will also be of little interest to modern antitrust law, a discipline heavily reliant on economic theories and concepts.

But a shift to an information-*rich* society tends to cause a corresponding shift to an attention-*scarce* society. Nobel Laureate Herbert Simon posited that “the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes. What information consumes is . . . the attention of its recipients.”¹⁴ In point of fact, Simons’ statement was not quite accurate. Humans constantly engage in a process of screening and filtering: first selecting a set of items to be processed and rejecting others from that set, before actually devoting our limited mental resources to actual processing.¹⁵ Thus, a wealth of information will not *necessarily* cause a scarcity of attention. If humans are able to screen and reject enough of the stock of

8. Who, in 2016, spent nearly \$200 billion in the United States alone. See *Statistics & Facts on the U.S. Advertising Industry*, STATISTA, <https://www.statista.com/topics/979/advertising-in-the-us/> (last visited Jan. 23, 2019).

9. See, e.g., Richard A. Lanham, *The Economics of Attention*, 2 MICH. Q. REV. (Spring 1997).

10. See, e.g., Jasper L. Tran, *The Right to Attention*, 91 IND. L.J. 1023, 1029 (2016) (“The most desired gift of love is not diamonds or roses or chocolate. It is focused attention.”) (quoting RICK WARREN, *THE PURPOSE DRIVEN LIFE* 127 (2002)).

11. See, e.g., Jasper L. Tran, *The Right to Attention*, 91 IND. L.J. 1023, 1031 (2016) (“Both time and attention are scarce commodities.”). This author uses the term “phenomenon” here in a Kantian sense, to be distinguished from noemena.

12. See Josef Falkinger, *Limited Attention as the Scarce Resource in an Information-Rich Economy*, IZA Discussion Paper No. 1538, at 4-5 (Mar. 2005).

13. See DOUGLAS L. WILSON, *HONOR’S VOICE: THE TRANSFORMATION OF ABRAHAM LINCOLN* 105 (1999) (describing Lincoln’s walking twenty miles each way to borrow and return books); Herbert A. Simon, *Designing Organizations for an Information-Rich World*, COMPUTERS, COMMUNICATIONS, AND THE PUBLIC INTEREST 44 (M. Greenberger ed. 1971) (“Our attitudes toward information reflect the culture of poverty. We were brought up on Abe Lincoln walking miles to borrow (and return!) a book and reading it by firelight.”).

14. Simon, *supra* note 13, at 40.

15. See Falkinger, *supra* note 12, at 6.

information, our attention can (in theory) remain abundantly available for the actual processing of select pieces of information. But our screening and filtering ability, like the rest of our cognitive functions, is limited.¹⁶ Once the available supply of information exceeds this natural upper bound, the inverse relationship between supply of information and supply of attention envisioned by Simons will hold true.¹⁷

Like other scarce resources, the marketplace value of a given unit of attention can fluctuate. Where the value of a resource increases, profit-seeking firms will compete more vigorously to capture that resource.¹⁸ This dynamic is of obvious interest to the antitrust enterprise. Two factors in particular—greater scarcity and technological change—can tend to increase the value of attention over time, thereby incentivizing attention-seeking firms to compete more vigorously to acquire it.

A. The Scarcity of Attention

Attention has become relatively scarce. Firms require the attention of trading partners—they must be *perceived by* counterparties—in order to participate in markets at all.¹⁹ The less attention is available, the more difficult it will be for a given firm to attract it. At the same time, the market value of a given unit of attention increases, because the overall supply of attention is finite.²⁰ Thus, increases in information will (*ceteris paribus*) increase the value of attention and the degree of attention rivalry.²¹

For an antitrust enterprise concerned with safeguarding competition, a vital question emerges: has an age of information abundance arrived, bringing with it the corollaries of heightened attention scarcity and attention rivalry?²² If attention rivalry has become

16. Ioannis Lianos, Digital Value Chains and Capital Accumulation in 21st Century Digital Capitalism: A Legal Institutionalism Perspective and Implications for Competition Law, at 37-39 (unpublished manuscript) (on file with author).

17. See generally Herbert A. Simon, *Designing Organizations for an Information-Rich World*, COMPUTERS, COMMUNICATIONS, AND THE PUBLIC INTEREST 44 (M. Greenberger ed. 1971).

18. ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS 21-25 (Sally Yagan et al. eds., 7th ed. 2012) (describing the fundamentals of microeconomics).

19. *Id.* at 7-8.

20. See Lianos, *supra* note 16, at 37-39.

21. This should be understood as a macro-level statement. As to a given product, increased information may or may not change where consumers direct their attention. For a thorough discussion of firm level efforts to attract consumers' attention, see Pedro Bordalo et al., *Competition for Attention*, 83 REV. ECON. STUDIES 481 (2016).

22. Of course, this is a somewhat simplified version of the relevant question(s). Concepts like "abundance" and "scarcity" are best understood not as binaries—it is naïve to speak of a resource as if it is, or is not, definitely "abundant" or "scarce"—but rather as relative terms. It is useful to speak of a resource as "abundant" in relation to a different resource, or to

a significant type of marketplace activity, the antitrust enterprise must at least consider whether it is now deserving of more institutional attention.

We might begin to answer this question by considering advances in information technology. For untold millennia, information was relatively scarce.²³ But the Internet—“the world’s largest copying machine”²⁴—is drastically lowering the marginal costs of reproducing and distributing information. Viewed through this lens, the convergence of digital computing and networking was perhaps the single most important event in the evolution of IT.²⁵ Prescient observers recognized early on that the digital firehose of information threatened to consume massive amounts of attention.²⁶

To get a sense for the magnitude of the increase, we can consider two sources of information that commonly consume attention: creative content and advertisements. The supply of creative content available for consumption has increased exponentially in recent years. In 2012, Spotify launched its popular online music streaming service with an on demand library of some 15 million songs.²⁷ Just ten years earlier, acquiring a similar library would have cost each individual consumer at least \$30 million, according to one estimate.²⁸ The quantity of audiovisual content available has similarly surged: users upload 400 hours of video content to YouTube each minute, and viewers collectively watch more than 1 billion hours of YouTube videos each day.²⁹ Similar

the same resource at a different point in time. Thus, the relevant question is more accurately (but less compellingly) whether information has become *relatively* abundant, thereby causing attention to become *relatively* scarce—and attention competition to become *relatively* important. Even more narrowly, we ought to care about whether attention competition has become *important enough* that the antitrust enterprise ought to sit up and take notice.

23. See generally WU, *supra* note 7 (describing how the progression from print, to broadcast media, to personal computers and mobile phones eventually devoured nearly every available piece of human attention).

24. Lena Groeger, *Kevin Kelly’s 6 Words for the Modern Internet*, WIRED (June 22, 2011), <https://www.wired.com/2011/06/kevin-kellys-internet-words/>.

25. See Damon C. Andrews & John M. Newman, *Personal Jurisdiction and Choice of Law in the Cloud*, 73 MD. L. REV. 313, 322 (2013) (“The importance of the dawn of the Network Era for content, communication, and now computing, cannot be overstated.”).

26. See, e.g., Ellen P. Goodman, *Media Policy Out of the Box: Content Abundance, Attention Scarcity, and the Failures of Digital Markets*, 19 BERKELEY TECH. L.J. 1389, 1467 (2004) (arguing that information abundance had already led to attention scarcity as early as 2004 and that the resulting overload was producing market failures in digital contexts); Today, *Flashback! The Internet in 1995*, YOUTUBE (June 13, 2014), <https://www.youtube.com/watch?v=95-yZ-31j9A> (“I have no desire to be a part of the Internet because I feel like I’m so inundated with information all the time that I . . . don’t want more.”).

27. Doug Gross, *Myspace Gains 1 Million Users, Touts More Music than Spotify*, CNN (Feb. 13, 2012, 11:14 AM), https://articles.cnn.com/2012-02-13/tech/tech_social-media_myspace-millionnew-users_1_myspace-specific-media-spotify?s=PM:TECH.

28. John M. Newman, *Copyright Freeconomics*, 66 VAND. L. REV. 1409, 1438 (2013).

29. Kit Smith BRANDWATCH, *46 Fascinating and Incredible YouTube Statistics* (Jan. 4, 2019), <https://www.brandwatch.com/blog/39-youtube-stats/>.

examples abound: Open Library's collection of millions of zero-price e-books,³⁰ SSRN's open-access library of scholarly papers,³¹ and so forth.

Supply of advertisements has similarly skyrocketed. In 2007, one market research firm estimated that city dwellers experienced 5,000 ads per day, a figure that had more than doubled over the preceding thirty years.³² In 2015, a skeptical marketer attempted to count how many ads he "actually" experienced over the course of a single day—but quickly abandoned the experiment, exhausted, having counted 487 unique exposures before breakfast.³³

B. Demand-Side Innovation

Changes in technology can also increase the value of a given unit of attention, thereby incentivizing more robust attention rivalry. Recent advances in the ability to target advertisements represent one such development. Advances in digital data collection, storage, and analysis have allowed firms to more narrowly—and effectively—deliver targeted advertisements to individuals. These advances have made ads "more effective at generating both clicks and conversions," i.e., at attracting users to click on ads and buy the advertised products.³⁴ This increased effectiveness has increased the value (to advertisers) of ad placements.³⁵ And the more valuable the resource, the harder firms will compete to possess it.³⁶

This demand-side innovation has yielded a marked increase in competition for attention. A variety of symptoms suggest this conclusion. The total number of ads delivered to consumers has risen sharply.³⁷ In a process dubbed "ad creep," advertisements have advanced further and further into formerly ad-free environments and

30. Accessible Book, OPEN LIBRARY, http://openlibrary.org/subjects/accessible_book (last visited Oct. 30, 2018).

31. A platform on which this article is, in fact, available. See SSRN, <https://www.ssrn.com/index.cfm/en/> (last visited Aug. 15, 2019).

32. Louise Story, *Anywhere the Eye Can See, It's Likely to See an Ad*, N.Y. TIMES (Jan. 15, 2007), <https://www.nytimes.com/2007/01/15/business/media/15everywhere.html>.

33. Ron Marshall, *How Many Ads Do You See in One Day?*, RED CROW MKTG. INC. (Sept. 10, 2015), <https://www.redcrowmarketing.com/2015/09/10/many-ads-see-one-day/>.

34. Rebecca Walker Reczek et al., *Targeted Ads Don't Just Make You More Likely to Buy They Can Change How You Think About Yourself*, HARV. BUS. REV. (Apr. 4, 2016), <https://hbr.org/2016/04/targeted-ads-dont-just-make-you-more-likely-to-buy-they-can-change-how-you-think-about-yourself>.

35. See, e.g., Laurie Burkitt, *Behavioral Ads Offer a Windfall for Marketers, Publishers*, FORBES (Mar. 24, 2010), <https://www.forbes.com/2010/03/24/behavioral-targeted-ads-advertising-ftc-privacy-cmo-network-ads.html#5bc77b2c6042>.

36. See, e.g., PINDYCK & RUBINFELD, *supra* note 18, at 8-9.

37. See Story, *supra* note 32, and accompanying text; see Marshall, *supra* note 33, and accompanying text.

spaces.³⁸ Entry and product launches in attention-centric markets appear to have risen in recent years. The number of mobile applications available on the Apple App Store, for example, rose from 800 to 2.2 million in under a decade; another 3.6 million are available via Google Play.³⁹

Firms competing to attract investors regularly tout their power and ability to exploit attention. Facebook's COO, for example, once boasted to investors that the firm's control of multiple digital platforms facilitated its power over its users: "[we] can take targeting and the ability to target across Audience Network, Facebook, and Instagram and drive people all the way down the funnel."⁴⁰ Google's CEO similarly touted his firm's ability to attract users' attention in order to resell it to advertisers:

Our proposition to marketers . . . is simple and is resonating Our mobile properties, like Search, YouTube, Maps, and Google Play are where people turn when they are actively interested in something They are super-attentive and engaged This matters for marketers because those . . . moments when people are actively interested and attentive are the perfect time for a brand to place their ads.⁴¹

These competitive efforts have paid off handsomely. The market value of firms whose primary source of revenue is attention has grown considerably in recent years—in fact, the combined value of Alphabet and Facebook alone was more than \$1.3 trillion as of May 2018.⁴²

III. ANATOMY OF AN ANTITRUST FAILURE

Attention plays an ever increasingly vital role in modern economies. Markets in which firms act as “attention merchants”—intermediaries that extract attention from natural persons to use internally or sell to third parties—have exploded in number, variety, and

38. See, e.g., MARK BARTHOLOMEW, *ADCREEP: THE CASE AGAINST MODERN MARKETING* (2017); MATTHEW B. CRAWFORD, *THE WORLD BEYOND YOUR HEAD: ON BECOMING AN INDIVIDUAL IN AN AGE OF DISTRACTION* (2016).

39. *Number of Apps Available in Leading App Stores as of 3rd Quarter 2018*, STATISTA, <https://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/> (last visited Jan. 23, 2019).

40. Facebook, Inc., Second Quarter 2016 Results Conference Call, 18 (July 27, 2016), https://s21.q4cdn.com/399680738/files/doc_financials/2016/q2/FB-Q216-Earnings-Transcript.pdf (emphasis added).

41. Digital Commerce 360, *Googles advertising revenue jumps 18.1% in Q3* (Oct. 27, 2016), <https://www.digitalcommerce360.com/2016/10/27/googles-advertising-revenue-jumps-181-q3/>.

42. *The 100 Largest Companies in the World by Market Value in 2018*, STATISTA <https://www.statista.com/statistics/263264/top-companies-in-the-world-by-market-value/> (last visited Jan. 23, 2019).

size. Industry insiders and defendant-friendly commentators frequently claim these nascent markets are naturally competitive and self-correcting, such that antitrust intervention is unnecessary.⁴³ But real-world evidence tends to undercut such claims.

Many digital markets exhibit highly concentrated structures, with a single dominant firm possessing a massive share.⁴⁴ These shares are often quite durable,⁴⁵ undercutting the oft-heard trope that “competition is just a click away” in digital markets.⁴⁶ Respected foreign enforcers, most notably within the EU, have identified instances of anticompetitive conduct in digital attention markets.⁴⁷

43. See, e.g., Geoffrey A. Manne & Joshua D. Wright, *Google and the Limits of Antitrust: The Case Against the Case Against Google*, 34 HARV. J. L. & PUB. POL’Y 171, 195 (2011) (quoting with approval a website’s claim that “as Google so often asserts, . . . competition really is ‘just a click away’ for a significant number of users” (internal quotation marks omitted)); Richard A. Posner, *Antitrust in the New Economy*, 69 ANTITRUST L.J. 925, 940 (2001) (concluding that “the states [should be] stripped of their authority to bring antitrust suits”); Adam Kovacevich, *Google’s Approach to Competition*, GOOGLE PUB. POL’Y BLOG (May 8, 2009), <https://publicpolicy.googleblog.com/2009/05/googles-approach-to-competition.html> (“Competition is just one click away.”).

44. Various industry sources have identified Google as owning between 91% and 97% of the “search” or “search engine” market. See *Search Engine Market Share Worldwide: June 2017-June 2018*, STATCOUNTER, <http://gs.statcounter.com/search-engine-market-share#monthly-201706-201806>; David McLaughlin, *Forget Consumer Welfare. This Antitrust Movement Targets Power*, BLOOMBERG (Jan. 17, 2018), <https://www.bloomberg.com/news/articles/2018-01-17/forget-consumer-welfare-this-antitrust-movement-targets-power-instead> (97.1%). By 2017, Amazon controlled 83% of U.S. e-book sales. See Newman, *Digital Markets*, *supra* note 5, at 7. As of February 2018, Facebook, Instagram, and Messenger represented the three largest mobile social-networking apps in the United States; all are owned by Facebook. See *Most Popular Mobile Social Networking Apps in the United States as of May 2018 by Monthly Users (in Millions)*, STATISTA, <https://www.statista.com/statistics/248074/most-popular-us-social-networking-apps-ranked-by-audience/> (last visited Jan. 23, 2019). As of 2016, Google’s Android represented 87.5% of all smartphone OSs being used worldwide. See Arjun Kharpal, *Google Android Hits Market Share Record with Nearly 9 in Every 10 Smartphones Using It*, CNBC (Nov. 3, 2016), <https://www.cnbc.com/2016/11/03/google-android-hits-market-share-record-with-nearly-9-in-every-10-smartphones-using-it.html>. In the market for digital real-estate portals, Zillow Group self-professedly enjoys shares of 67% across all platforms and 78% of mobile users. See John M. Newman, *Complex Antitrust Harm in Platform Markets*, ANTITRUST CHRON. (May 2017) (identifying the FTC’s unconditional clearance of the Zillow-Trulia acquisition as a likely false negative).

45. See Newman, *Digital Markets*, *supra* note 5, at 5.

46. See sources cited, *supra* note 43.

47. See Press Release, Bundeskartellamt, *Bundeskartellamt Forbids Facebook to Merge User Data from Various Sources*, (Feb. 7, 2019), https://www.bundeskartellamt.de/SharedDocs/Meldung/DE/Pressemitteilungen/2019/07_02_2019_Facebook.html?jsessionid=150293B9ECA12757335989A66E51A893.1_cid371?nn=3591568; Press Release, Eur. Comm’n, “Antitrust: Commission Fines Google € 4.34 Billion for Illegal Practices Regarding Android Mobile Devices to Strengthen Dominance of Google’s Search Engine,” July 18, 2018, http://europa.eu/rapid/press-release_IP-18-4581_en.htm [hereinafter EC, *Google Shopping*]; Press Release, Eur. Comm’n, “Antitrust: Commission Fines Google € 2.42 Billion for Abusing Dominance as Search Engine by Giving

Yet the U.S. antitrust enterprise has largely ignored competition for attention. The most frequently criticized non-actions—including the FTC’s unconditional clearance of Facebook’s acquisitions of Instagram and WhatsApp, as well as the FTC’s closure of its Google investigation despite evidence of anticompetitive behavior⁴⁸—all took place in the context of attention markets. The Department of Justice (“DOJ”) has adopted a similarly hands-off approach, dating at least as far back as its wholesale failure to investigate attention-market harms during the broadcast-radio merger wave of the late 1990s.⁴⁹ To date, neither the FTC nor the Department of Justice (“DOJ”) has taken significant action in a zero-price attention market. Against the backdrop of attention scarcity and increasing rivalry, their collective failure to act presents a puzzle.

A growing number of critics suggest that society at large lacks an adequate understanding of, account for, and ability to direct and regulate human attention.⁵⁰ To the extent that is true, perhaps it ought not to be surprising that antitrust doctrine and commentary are similarly deficient in this area. Though a small handful of antitrust scholars have recently begun to grapple with the importance of attention, it remains something of a “blind spot” for courts and enforcers.⁵¹

Moreover, as I have explained elsewhere, the historical development of modern antitrust law and economics is at least partly to blame.⁵² During the mid-twentieth century, a group of economists developed a novel set of tools to be used for analyzing industrial organization.⁵³ The tools themselves were fairly simple—for example, the idea that the relationship between price and quantity in a given

Illegal Advantage to Own Comparison Shopping Service,” June 27, 2017, http://europa.eu/rapid/press-release_IP-17-1784_en.htm.

48. See *The FTC Report on Google’s Business Practices*, WALL ST. J. (Mar. 24, 2015), <http://graphics.wsj.com/google-ftc-report/>.

49. See John M. Newman, *Antitrust in Zero-Price Markets: Foundations*, 164 U. PA. L. REV. 149, 190-92 (2015) [hereinafter Newman, *Foundations*].

50. See, e.g., MATTHEW CRAWFORD, *THE WORLD BEYOND YOUR HEAD: ON BECOMING AN INDIVIDUAL IN AN AGE OF DISTRACTION* (2015); ASTRA TAYLOR, *THE PEOPLE’S PLATFORM: TAKING BACK POWER AND CULTURE IN THE DIGITAL AGE* (2014); Tim Wu, *As Technology Gets Better, Will Society Get Worse?*, NEW YORKER (Feb. 6, 2014), <https://www.newyorker.com/tech/annals-of-technology/as-technology-gets-better-will-society-get-worse>.

51. See, e.g., Tim Wu, *Blind Spot: The Attention Economy and the Law*, ANTITRUST L.J. (forthcoming),

https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=3030&context=faculty_scholarship; John M. Newman, *Antitrust in Zero-Price Markets: Applications*, 94 WASH. U. L. REV. 149 (2016) [hereinafter Newman, *Applications*]; Newman, *Foundations*, *supra* note 49; David S. Evans, *The Economics of Attention Markets* (Oct. 31, 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3044858.

52. See Newman, *Foundations*, *supra* note 49.

53. Newman, *Foundations*, *supra* note 49, at 196.

market can be described by a downward sloping demand curve.⁵⁴ Prices played such a central role in formulating and applying these tools that the resulting approach became known as “price theory.”⁵⁵ This methodological dependence on prices naturally and inevitably led to a rather singular focus on price competition in actual investigations and litigation.⁵⁶ Yet many attention exchanges lack obvious prices.⁵⁷

If attention were relatively abundant, this error would be relatively harmless. But the rapid increase in the supply of available information, coupled with demand-increasing innovations, has led to a society that increasingly appears to exhibit attention scarcity. As a result, competition for attention has intensified. The stakes have grown considerably higher. Nonetheless, there are those who argue vigorously against any antitrust interventions into attention markets. The following discussion identifies, then responds to, their arguments.

IV. ANTI-ENFORCEMENT OBJECTIONS AND RESPONSES

A small but growing number of scholars and commentators urge increased antitrust oversight of attention exchanges. Proponents of the defendant-friendly status quo have raised various explicit and implicit objections to these calls for increased enforcement. The following discussion identifies and responds to each of their objections.

A. “We Are Already Doing Enough.”

The first group of objections centers on the notion that current enforcement practices and tools are sufficient to address potential harms in attention markets. Two arguments fall into this category. The first is that understanding the impact of Big Data on market structure and performance is enough to allay concerns regarding anticompetitive conduct in attention markets. The second is that assessing the potential for harm to innovation will adequately address the possibility of harm in attention markets. Both arguments are well intentioned, but both miss the forest for the trees.

1. *Paying Attention to Big Data Is Sufficient.*

Perhaps the single most striking aspect of competition in digital markets is the massive shift away from users paying for products with

54. Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925, 928 (1979).

55. *Id.*

56. See Newman, *Foundations*, *supra* note 49, at 196; Khan, *supra* note 1, at 720 (“[One] consequence of the shift away from structuralism was that consumer prices became the dominant metric for assessing competition.”).

57. See Lianos, *supra* note 16.

fiat currency. Instead, we frequently pay with our personal information and attention to advertisements. Curiously, antitrust and competition analysts have had a great deal to say about information—but almost nothing to say about attention.

Much of the ongoing debate over the current state of antitrust policy has centered on the rise of so called “Big Data.” Conferences,⁵⁸ symposia,⁵⁹ panel discussions,⁶⁰ client alerts,⁶¹ and dozens of books and articles⁶² all focus on data-related practices and their implications for antitrust law. Pro-interventionists point to Big Data as a crucial competitive advantage and barrier to entry;⁶³ the anti-enforcement crowd argues in response that data is nonrivalrous and that its collection and exploitation is generally efficient.⁶⁴ Despite this scholarly *sturm und drang*, it seems a foregone conclusion that Big Data will impact enforcement efforts—the question on the minds of many U.S.

58. See, e.g., Conference, *Antitrust, Privacy, and Big Data* (Feb. 3, 2015), <https://www.concurrences.com/en/conferences/antitrust-privacy-big-data-82922>.

59. See, e.g., Symposium, *Privacy Regulation and Antitrust*, 20 GEO. MASON L. REV. (Jan. 17, 2013), <http://georgemasonlawreview.org/archives/vol-20-no-4-summer-2013/>.

60. See, e.g., Conference, *2018 Antitrust and Competition Conference-Digital Platforms and Concentration* (Apr. 19-20, 2018), <https://research.chicagobooth.edu/stigler/events/single-events/antitrust-competition-conference-digital-platforms-concentration>.

61. See, e.g., *Exploring the Contrasting Views About Antitrust and Big Data in the U.S. and E.U.*, HOGAN LOVELLS (Sept. 27, 2018), <https://www.hoganlovells.com/en/publications/exploring-the-contrasting-views-about-antitrust-and-big-data-in-the-us-and-eu>.

62. See generally MAURICE E. STUCKE & ALLEN P. GRUNES, *BIG DATA AND COMPETITION POLICY* (2016); Daniel L. Rubinfeld & Michal S. Gal, *Access Barriers to Big Data*, 59 ARIZ. L. REV. 339 (2017); Ramsi A. Woodcock, *Big Data, Price Discrimination, and Antitrust*, 68 HASTINGS L.J. 1317 (2017); Daniel Sokol & Roison Comerford, *Antitrust and Regulating Big Data*, 23 GEO. MASON L. REV. 1129 (2016); Inge Graef, *Market Definition and Market Power in Data: The Case of Online Platforms*, 38 WORLD COMPETITION: L. & ECON. REV. 473 (2015); Nathan Newman, *Search, Antitrust, and the Economics of the Control of User Data*, 31 YALE L.J. ON REG. 401 (2014); James C. Cooper, *Privacy and Antitrust: Underpants Gnomes, the First Amendment, and Subjectivity*, 20 GEO. MASON L. REV. 1129 (2013); Geoffrey A. Manne & Ben Sperry, *The Problems and Perils of Bootstrapping Privacy and Data into an Antitrust Framework*, CPI ANTITRUST CHRON. (May 2015); Maurice E. Stucke & Allen P. Grunes, *No Mistake About It: The Important Role of Antitrust in the Era of Big Data*, ANTITRUST SOURCE (Apr. 2015); Darren S. Tucker & Hill B. Wellford, *Big Mistakes Regarding Big Data*, ANTITRUST SOURCE (Dec. 2014); Jens Prüfer & Christoph Schottmüller, *Competing with Big Data*, Feb. 16, 2017, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2918726; David A. Balto & Matthew Lane, *Monopolizing Water in a Tsunami: Finding Sensible Antitrust Rules for Big Data*, (Mar. 23, 2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2753249; Anja Lambrecht & Catherine E. Tucker, *Can Big Data Protect a Firm from Competition?*, (Dec. 18, 2015), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2705530; Andres V. Lerner, *The Role of 'Big Data' in Online Platform Competition*, (Aug. 27, 2014), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2482780.

63. See Stucke & Grunes, *supra* note 62, at 6-7.

64. See Manne & Sperry, *supra* note 62, at 8-11.

practitioners is not whether some jurisdiction will intervene, but rather “which jurisdiction will strike first?”⁶⁵ In somewhat typical fashion, this debate has to some degree overlooked the European Union, where regulators have already recognized that consumers frequently pay with their personal information,⁶⁶ that such data can be used for product improvements⁶⁷ and/or targeted advertising,⁶⁸ that the need to amass data can serve as a barrier to entry,⁶⁹ and that a monopolist might extract supracompetitive levels of personal information instead of raising prices to users.⁷⁰

This outpouring of intellectual effort stands in stark contrast to the near total silence regarding attention. Only a tiny handful of legal scholars and economists have weighed in on the role antitrust ought to play in attention-centric markets.⁷¹ Enforcement agencies have initiated no meaningful activity focused on attention rivalry. If a single panel (let alone conference) has been devoted to competition for attention, this author is not aware of it.

Comparing the relative amounts of attention that have been paid to these two aspects of competition suggests an implied objection to the entire notion of antitrust enforcement in attention markets. The Big Data crowd appears to believe that information, not attention, is far more important to competition analysis—that properly understanding data related business strategies is the key to a properly functioning digital antitrust enterprise. Consider one commentator’s take on digital markets:

The race to accumulate data is already on, and is currently headed by giants such as Google and Facebook and, in China, Baidu and

65. Teleconference, *Big Data Antitrust Risks Which Jurisdiction Will Strike First?*, AM. BAR ASS’N, (July 24, 2018) (describing a July 2018 panel discussion on “Big Data Antitrust Risks.”).

66. EUROPEAN COMM’N, *The Relevant Product Markets, in Antitrust Procedure* 29 (June 27, 2017),

http://ec.europa.eu/competition/antitrust/cases/dec_docs/39740/39740_14996_3.pdf

(“[E]ven though users do not pay a monetary consideration for the use of general search services, they contribute to the monetization of the service by providing data with each query.”).

67. *Id.*

68. *Id.* at ¶ 204, n.129.

69. *Id.* at ¶ 286.

70. See, e.g., Bundeskartellamt, *supra* note 47.

71. Gieuseppe Colangelo & Mariateresa Maggolino, *Data Protection in Attention Markets: Protecting Privacy Through Competition?*, 8 J. EUR. COMPETITION L. & PRAC. 363 (2017); Wu, *Blind Spot*, *supra* note 51; Newman, *Applications*, *supra* note 51; Newman, *Foundations*, *supra* note 49; David S. Evans, *The Economics of Attention Markets*, (Oct. 31, 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3044858; David S. Evans, *Attention Rivalry Among Online Platforms*, (Jan. 2, 2013), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2195340.

Tencent [M]any of these companies . . . capture our attention . . . , and then they resell our attention to advertisers. Yet their true business isn't merely selling ads. Rather, by capturing our attention they manage to accumulate immense amounts of data about us, which are worth more than any advertising revenue.⁷²

Under this view, Big Data is the forest, and attention but a tree. Tech companies seek our attention only in order to better capture our data. Under this view, paying attention to attention markets would amount to a waste of time and resources.

But this view gets it all backwards: firms generally do not seek attention in order to acquire data—instead, they frequently seek data in order to acquire attention. Much of the recent uptick in demand for personal data represents what an economist would call “derived demand.”⁷³ The Big Data crowd would have us focus on the derived demand, while ignoring the more fundamental market forces at play. Cooper amusingly compares their misguided vision to that of the “Underpants Gnomes” in an eponymous episode of the TV show *South Park*.⁷⁴ In the episode, the Gnomes hatch a plan to strike it rich. Step one of the plan is to steal civilians’ underpants. Step two is—well, the Gnomes do not actually have a step two. But step *three* is profit! Big Data alarmists seem to envision a similar strategy on the part of Silicon Valley giants. Step one, collect data. Step two, _____? Step three, profit!⁷⁵

In the marketplace, personal data is primarily harvested for two reasons.⁷⁶ First, firms collect data to satiate advertisers’ desire to deliver personalized ads.⁷⁷ Such ads are more effective than generalized ads at

72. Yuval Noah Harari, *Why Technology Favors Tyranny*, THE ATLANTIC, (Oct. 2018), <https://www.theatlantic.com/magazine/archive/2018/10/yuval-noah-harari-technology-tyranny/568330/>.

73. For an example of a resource as to which demand is derived from demand for some other resource, consider urban residential land: buyers’ demand for such land is derived from their demand for housing. See, e.g., Richard F. Muth, *The Derived Demand for Urban Residential Land*, 8 URBAN STUDIES 243, 243 (1971) (considering urban residential land as a resource whose demand is derived from some other resource: buyers’ demand for land is derived from their demand for housing).

74. James C. Cooper, *Privacy and Antitrust: Underpants Gnomes, the First Amendment, and Subjectivity*, 20 GEO. MASON L. REV. 1129, 1135 (2013).

75. *Id.*

76. There are scattered other uses, of course—data is valuable to many entities, including governments, financial institutions attempting to assess credit or insurance risk, and political parties.

77. See Cooper, *supra* note 74, at 1136 (“The publisher hopes to enhance its revenue by using the additional data to . . . sell[] more finely targeted ads.”); see also Catherine E. Tucker, *The Economics of Advertising and Privacy*, 30 INT’L J. INDUS. ORG. 326 (2012) (discussing the attractiveness of personalization to advertisers); *United States v. AT&T, Inc.*, 310 F. Supp. 3d 161, 181-83 (D.D.C. 2018), *aff’d*, 2019 WL 921544, No. 18-5214 (2d Cir. Feb. 26, 2019)

driving consumer behavior—as Facebook put it, driving us “all the way down the funnel.”⁷⁸ As a result, such ads tend to be more valuable to advertisers. Here, the demand for personal data is obviously derived from the demand for attention to advertisements.

Second, firms collect data to improve the quality of their own products, a practice that dates back to the dawn of consumer research as an identifiable discipline in the early twentieth century.⁷⁹ To the extent a resulting quality increase allows a firm to charge higher prices for its product, this second use of data can be an end in itself. But if the firm employs the zero-price, ad-supported business model that is ubiquitous in business-to-consumer digital markets, then even this second use represents derived demand—it is derived from the incentive to attract more attention, again in order to sell more (or more valuable) ads.

To get a rough sense of just how much more substantial attention-seeking is than pure data-harvesting, one might examine the annual revenues of each industry’s largest players. Acxiom, a data broker, is (or at least was at one time) generally regarded as having the largest commercial collection of consumer data in the world.⁸⁰ Its annual revenues during the 2017-18 fiscal year were just over \$900 million.⁸¹ While not inconsiderable, Acxiom’s haul pales in comparison to Google’s ad revenue in 2017, which totaled more than \$95 billion,⁸² a figure more than 100 times larger than Acxiom’s. And, of course, much of Acxiom’s income was from sales to attention-seeking advertisers—it, too, was spurred by demand for attention.⁸³

Thus, we see that focusing exclusively—or even primarily—on data and privacy concerns is a mistake. It is as if antitrust analysts in the

(defendants’ including, as a key part of claimed efficiencies, increased ability to target advertisements).

78. See Facebook, Inc., *supra* note 40.

79. As early as the 1950s, consumer research was identifiable as a distinct scholarly field, with about ten academic articles on the topic being published each year. James G. Helgeson et al., *Consumer Research: Some History, Trends, and Thoughts*, in *HISTORICAL PERSPECTIVE IN CONSUMER RESEARCH: NATIONAL AND INTERNATIONAL PERSPECTIVES* (Jagdish N. Sheth & Chin Tiong Tan eds., 1985).

80. Natasha Singer, *Mapping, and Sharing, the Consumer Genome*, N.Y. TIMES (June 16, 2012), <https://www.nytimes.com/2012/06/17/technology/acxiom-the-quiet-giant-of-consumer-database-marketing.html>.

81. *Acxiom Corp. (ACXM) SEC Filing 10-K Annual Report for the Fiscal Year Ending Saturday, Mar. 31, 2018*, LAST10K (May 25, 2018), <https://www.last10k.com/sec-filings/acxm/0000733269-18-000016.htm>.

82. *Google’s Ad Revenue from 2001 to 2017 (in Billion U.S. Dollars)*, STATISTA, <https://www.statista.com/statistics/266249/advertising-revenue-of-google/>. Facebook raked in another \$39.9 billion during the same period. *Facebook’s Advertising Revenue Worldwide from 2009 to 2018 (in Million U.S. Dollars)*, STATISTA, <https://www.statista.com/statistics/271258/facebooks-advertising-revenue-worldwide/>.

83. See ACXIOM DATA FAQ, <https://www.acxiom.com/about-us/privacy/acxiom-data-faq/> (last visited August 1, 2019).

1990s, confronted by the explosive rise of personal computers, had concluded that the most important facet of industry competition was mousepads. Focusing solely on mousepads, demand for which is derived from the demand for PCs, would have overlooked the forest for a tree. And it would have caused enforcers to overlook Microsoft's monopolistic conduct in the far more important desktop computer operating system market.⁸⁴ Likewise, focusing solely on data and privacy concerns would unavoidably lead to false negatives.

Moreover, the competitive dynamics surrounding data and privacy are, for lack of a better word, messy. It is not clear that consumers regularly exhibit noticeable negative responses to increased levels of data-harvesting or that a dominant market position will generally allow a firm to extract more data from a given user than a smaller rival employing a similar business model could extract.⁸⁵ Evidence is somewhat mixed regarding the relationships among firm size, market concentration, and data extraction.⁸⁶ Although certainly possible in theory, it is difficult to establish as an empirical matter that data overcharges are occurring due to lack of competition.⁸⁷ The same cannot be said for attention competition, where enforcers' failure to act has already caused clear, measurable welfare harms.⁸⁸

2. *Paying Attention to Innovation Is Not Sufficient.*

Where once U.S. enforcers seemed to ignore attention markets entirely, they now employ a slightly more evolved approach. In the past, antitrust agencies often explicitly ignored the zero-price side of platform

84. See generally *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001).

85. See generally Patricia A. Norberg et al., *The Privacy Paradox: Personal Information Disclosure Intentions Versus Behaviors*, 41 J. CONSUMER AFFAIRS 100 (2007) (describing a widely discrepancy between stated and revealed preferences regarding privacy).

86. Compare Gregory Day & Abbey Stemler, *Supracompetitive Privacy*, 107 IOWA L. REV. (forthcoming 2019) (describing empirical findings indicating a positive correlation between market concentration and lax privacy practices), with Lorien Sabatino & Geza Sapi, *Online Privacy and Market Structure: Theory and Evidence* (DICE Discussion Papers 308, 2019) (presenting empirical data indicating that large firms tend to offer more robust privacy protections than small firms).

87. This is not to say that data is irrelevant to antitrust and competition law analyses; as noted above, data can serve as a significant barrier to entry, can be exchanged as currency (therefore bringing the relevant markets within the scope of the antitrust laws), etc. And the Bundeskartellamt's actions against Facebook (currently still at a preliminary stage) may prove informative. See generally Giuseppe Colangelo & Mariateresa Maggolino, *Data Accumulation and the Privacy-Antitrust Interface: Insights from the Facebook Case for the EU and the U.S.* (STAN. L. SCH. & UNIV. OF VIENNA SCH. OF LAW. TLLF Working Paper No. 31/2018, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3125490.

88. Newman, *Foundations*, *supra* note 49, at 192-95; see also Maurice E. Stucke & Allen P. Grunes, *Why More Antitrust Immunity for the Media Is a Bad Idea*, 105 NW. U. L. REV. 1399, 1411-12 (2011).

business models altogether.⁸⁹ More recently, enforcers have begun embracing at least the possibility of harm in zero-price markets. Post-review statements suggest that the agencies now consider one type of harm—harm to innovation—when reviewing questionable deals involving zero-price markets. Thus, for example, the FTC cleared Zillow’s acquisition of its largest rival, Trulia, because “there was insufficient evidence . . . that the combined company would have a reduced incentive to innovate . . . on the consumer side . . . of the platform.”⁹⁰ Somewhat similarly, the DOJ cleared Expedia’s \$1.3 billion acquisition of Orbitz in part because “the online travel business is rapidly evolving.”⁹¹

This is a welcome development. In fact, one might even conclude that the current approach is sufficient—that looking for harm to innovation is enough to avoid false positives. But the “innovation only” approach would be sufficient only if (1) regulators are readily able to identify mergers that will likely harm innovation, and (2) the set of mergers that will likely harm innovation is coextensive with the set of mergers that will cause other types of harm. Since the latter is presently unanswerable due to a lack of data, let us focus on the first.

Unfortunately, *ex ante* prediction of harm to innovation is quite difficult. Typical merger reviews and litigation center on structural market analysis, testimony from market participants (especially customers of the merging parties), and internal documents from the parties themselves. While each of these are useful means of analyzing the likelihood of overcharges or output reductions, they are unlikely to yield much useful evidence regarding harm to innovation for two reasons.

First, there is a lack of robust support for a structural approach to predicting innovation harms.⁹² Courts and enforcers are quite willing to

89. See Newman, *Foundations*, *supra* note 49, at 188.

90. Zillow, Inc./Trulia, Inc., FTC File No. 141-0214, *Statement of Commissioner Ohlhausen, Commissioner Wright, and Commissioner McSweeney Concerning Zillow, Inc./Trulia, Inc.*, (Feb. 19, 2015), https://www.ftc.gov/system/files/documents/public_statements/625671/150219zillowmko-jdw-tmstmt.pdf.

91. Press Release, U.S. DEP’T OF JUSTICE, *Justice Department Will Not Challenge Expedia’s Acquisition of Orbitz*, (Sept. 16, 2015), <https://www.justice.gov/opa/pr/justice-department-will-not-challenge-expedias-acquisition-orbitz>.

92. Compare, e.g., Philippe Aghion et al., *Competition and Innovation: An Inverted U Relationship*, IFS Working Papers No. 02/04, at 47 (2004), <https://www.econstor.eu/bitstream/10419/71449/1/342482874.pdf> (concluding that empirical evidence generally supports an inverted-U-shaped relationship between concentration and innovation), with Chiara Peroni & Ivete S. Gomes Ferreira, *Competition and Innovation in Luxembourg*, 12 J. IND. COMPETITION & TRADE 93 (2012) (describing empirical results that do not support the inverted-U theory of the concentration-innovation relationship).

presume anticompetitive coordinated effects based purely on structural evidence indicating high levels of market concentration.⁹³ But they see much more reticent to presume that, for example, a four-to-three merger will reduce incentives to innovate.

Second, customers may occasionally express concerns about harm to innovation, but those concerns will likely be rare and inchoate. Customer concerns (or lack thereof) lie at the core of many agency reviews—a lack of concern is frequently grounds for closing down an investigation.⁹⁴ But harm to innovation is likely not foremost in the minds of most customers, who tend to be more concerned with short-run price effects. And customers typically have much less information regarding pipeline innovations than they do about the prices they pay for current products. Thus, any R&D related concerns customers might express may often appear to be less than reliable.

As a result, enforcers are left to rely primarily on the merging parties' own documents. But such documents (which are often quite fruitful for other purposes) will almost never indicate a likelihood of harm to innovation. What CEO would try to pitch a proposed merger or acquisition to her board of directors by claiming that the deal would allow the surviving firm to “stop innovating”?

Without econometric data or structural presumptions, and without the types of real-world evidence that often shed light on harmful effects, contemporary analysts are generally unlikely to identify harm to innovation as part of merger reviews. Of course, complaints challenging mergers may allege harm to innovation in addition to the more traditional theories of harm.⁹⁵ But the received wisdom is that such allegations do not lie at the core of agency decision making and instead reflect the typical “laundry list” approach to complaint drafting in the post-*Twombly* era.⁹⁶ Tellingly, enforcers have never challenged a merger in a zero-price market based on a standalone theory of harm to innovation.

If enforcers cannot readily predict harm to innovation, it should come as no surprise when agency investigations fail to conclude that

93. See, e.g., *United States v. H & R Block, Inc.*, 831 F. Supp. 2d 27 (2011).

94. See, e.g., Adam Putz, *M&A 101: What Antitrust Law Means for Mergers and Acquisitions*, PITCHBOOK (June 13, 2018), <https://pitchbook.com/news/articles/ma-101-what-antitrust-law-means-for-mergers-and-acquisitions> (“What single factor more than any other will keep a transaction from securing antitrust clearance? Companies should seek to understand how their customers will view a potential transaction. Favorable customer views may help on the margins, but negative reactions will almost certainly raise concerns at the Agencies, and cause deeper investigations and increase the likelihood of a challenge.”).

95. Complaint at 3, *United States v. AT&T, Inc.*, 916 F.3d 1029 (D.C. Cir. 2019) (No. 1:17-cv-02511).

96. See generally *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544 (2007) (heightening the pleading requirements for plaintiffs in federal courts).

such harm is likely to occur. And if enforcers do not look for other types of harm, it should come as no surprise when no deals are challenged. Focusing on harm to innovation is a step in the right direction—but focusing *exclusively* on harm to innovation is tantamount to a policy of non-enforcement.

It is also not sufficient to ask, as DOJ recently did, whether the merged firm would likely impose positive prices on what had formerly been a zero-price market.⁹⁷ Raising prices from zero to a positive sum is a singularly unattractive way for firms to exercise market power.⁹⁸

Instead, the antitrust enterprise ought to begin looking for attention-cost increases, which are much more analogous to the traditional price and output effects that generally form the core of actual agency investigations and litigation. Post-merger, will the firm have an increased incentive and ability to display advertisements to consumers? To be clear, this is not the same as asking whether the post-merger firm will have an increased ability to *target* advertisements.⁹⁹ The proper question is whether combining two firms will increase the merged firm's ability to extract users' attention by eliminating a competitive constraint. From this perspective, Facebook's acquisition of Instagram (for example) may have been less benign than it must have appeared to the FTC at the time. As Facebook's COO put it, the deal allowed the merged firm to target users across platforms in order to "drive them all the way down the funnel."¹⁰⁰ Unlike harm to innovation, this type of overcharge based harm maps rather neatly onto the basic microeconomic graphs and models that underlie much of antitrust in practice. A monopolist or cartel can raise its "price" (which here takes the form of attention costs), thereby reducing output and harming welfare.¹⁰¹ For the antitrust enterprise to become serious about attention markets, it must consider seriously the possibility and likelihood of attention-based harm.

B. "We Are Incapable of Doing More."

The second category of anti-enforcement objections reflects a more pessimistic view: current antitrust law and economics do not allow for

97. See Press Release, *supra* note 91 ("[W]e uncovered no evidence in our investigation that the merger is likely to result in new charges being imposed directly on consumers for using Expedia or Orbitz.").

98. See Newman, *Applications*, *supra* note 51, at 74-77 (describing the power of the "Zero-Price Effect" on consumers).

99. This was one of the arguments successfully made by AT&T and TimeWarner in defense of their merger. See generally Chris Sagers, "The Worst Opinion in Living Memory: AT&T/Time Warner and America's Broken Merger Law" (Mar. 27, 2019), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3346431.

100. Facebook, Inc., *supra* note 40, at 16.

101. See Newman, *Foundations*, *supra* note 49, at 174-75.

increased oversight of attention markets. One of the two primary objections that fall into this category is that, as markets are currently defined, all firms competing for attention participate in the same massive market and, as a result, all lack market power. The second is that the current antitrust toolkit is not supple enough for use in attention markets.

1. Attention Is (Only) a Medium of Exchange

It is not uncommon to encounter arguments that all attention-seeking firms compete with each other in one massive, fragmented market—and that, as a result, none of them should face antitrust liability.¹⁰² In other words, because Google, Facebook, CNN, Fox News, and the Dallas Cowboys all compete to attract eyeballs, they all must compete in the same relevant market.¹⁰³ The practical upshot is, yet again, non-enforcement of the antitrust laws, because each rival's individual share of this massive “market” would be miniscule.

Such arguments exhibit such obvious flaws that they almost do not deserve our attention. Yet the frequency with which they are made demands at least a cursory response. The error on display is fundamental: mistaking the medium of exchange for the metes and bounds of the market. One might just as well argue that movie theaters, grocery stores, nightclubs, and clothing designers all compete for money, and therefore must participate in the same relevant market. But no serious analyst would make such a claim.¹⁰⁴

102. See, e.g., David S. Evans, *Attention Rivalry Among Online Platforms 1-2* (Univ. of Chi. Inst. for L. & Econ. Olin Res. Paper No. 627, 2013), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2195340 (arguing that “attention rivals” like search platforms, social networks, news providers, video hosts, etc., all “compete with each other for the limited time of consumers”); *Id.* at 3 (concluding that “[c]ompetition in fact appears to be quite robust ‘in the market’”). As a policy matter, Evans urges a “strong presumption that attention seekers compete for procuring attention regardless of the products and services they offer for doing this.” *Id.* This is supposedly warranted because “attention seekers are price takers in terms of what they pay to secure attention.” *Id.*

103. Facebook arguably impliedly made a similar argument in response to the Bundeskartellamt's recent decision prohibiting certain of its data-collection practices. In a blog post disagreeing with the decision, Facebook included a graphic that (again, arguably) implied that Facebook competes with Twitter, LinkedIn, TicketMaster, Airbnb, TripAdvisor, Tinder, Yelp, Reddit, and others. See John Newman, *The Bundeskartellamt's Facebook Decision: Good, Bad, and Ugly*, REVUE CONCURRENTIALISTE (Feb. 11, 2019), <https://leconcurrentialiste.com/2019/02/11/bundeskartellamt-facebook/> [hereinafter Newman, *Bundeskartellamt*].

104. Of course, defendants and defendant-friendly commentators often make claims that are only slightly less absurd. The Competitive Enterprise Institute, for example, argued recently that even a market definition as broad as “concerts” would be overly narrow—“[c]oncerts are one form of entertainment” that “compete[s] with movies, plays, ballgames, bars, restaurants, and countless other activities.” Ryan Young, *Top Ten Antitrust Targets*, COMPETITIVE ENTER. INST. (Dec. 10, 2018), <https://cei.org/blog/top-ten-antitrust-targets>

In fact, the term “attention markets” itself—though useful shorthand—is something of a misnomer. The proper test for defining antitrust markets is what customers view as “reasonably interchangeable.”¹⁰⁵ Thus, there may well be a market for “general internet search services,” since to users social networking is likely not a reasonable substitute for search.¹⁰⁶ If so, we would not call this relevant market “attention to general internet search services,” just as we would not refer to the beer market as the market for “money paid for beer.”¹⁰⁷ The antitrust enterprise does not treat the medium of payment as a constitutive element of market definition. Consequently, the observation that “everyone competes for eyeballs” is a non-sequitur, irrelevant to the task of antitrust market definition.¹⁰⁸

2. *The Current Toolkit Is (Or at Least Can Be) Adequate*

Defenders of the status quo—typically quick to promote the use of analytical tools like the SSNIP (“small but significant and non-transitory increase in price”) test¹⁰⁹—are surprisingly willing to admit the limitations built into such tools when arguing against antitrust enforcement in attention-based markets. The contemporary antitrust toolkit is largely organized around prices, a feature lacking in many modern markets.¹¹⁰ Thus, the argument runs, our familiar tools are thus not up to the task currently required of them.

Confronted by such lacunae, analysts are faced with a choice: either attempt to update the toolkit or admit defeat and leave the novel problem unaddressed. Status quo defenders have chosen the latter, reasoning that we cannot go where our tools will not take us. But is simply throwing up one’s hands in defeat a valid option? And, in any event, is the underlying descriptive claim—that antitrust lacks the tools to oversee attention-based markets—accurate?

As to whether simply accepting defeat is a viable option, it bears emphasizing that antitrust courts and enforcers have been tasked with a

(“Not only are these [activities] fun, they also sap the strength of a possible antitrust case . . .”).

105. See, e.g., *United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1966).

106. EC, *Google Shopping*, *supra* note 47.

107. See, e.g., Complaint, *United States v. Anheuser-Busch InBev SA/NV*, No. 1:16-cv-01483, at 8 (D.D.C. July 20, 2016) (“Beer is a relevant product market . . .”).

108. Newman, *Bundeskartellamt*, *supra* note 103.

109. See, e.g., Gregory J. Werden, *The Relevant Market: Possible and Productive*, ANTITRUST L.J. ONLINE (2014), https://www.americanbar.org/content/dam/aba/publishing/antitrust_law_journal/at_alj_werden.pdf.

110. Michal S. Gal & Daniel L. Rubinfeld, *The Hidden Costs of Free Goods: Implications for Antitrust Enforcement*, 80 ANTITRUST L.J. 521, 548-49 (2016) [hereinafter Gal, *Free Goods*].

broad congressional mandate: to protect “trade” and “commerce” in the United States.¹¹¹ Attention-based markets undoubtedly fall within this broad ambit.¹¹² Though they often lack obvious prices, they are nonetheless an increasingly important component of modern economies.¹¹³ Like any other type of market, they present opportunities for the creation, enhancement, and abuse of market power—precisely the evils that antitrust laws are intended to remedy.¹¹⁴ In the face of a congressional mandate to combat such evils, it is not permissible for enforcers to refuse their task on the grounds that their favorite tools are out of date.¹¹⁵

More fundamentally, the antitrust enterprise does not lack the requisite tools to oversee attention-based markets. Price-centric frameworks like the SSNIP test for market definition can sometimes be modified for use in zero-price markets.¹¹⁶ Digital attention markets may be particularly viable candidates for SSNIP variants like the “SSNIC” or “SSNDQ” tests proposed by commentators.¹¹⁷ Such markets greatly facilitate A/B testing (or “split testing”), in which two or more variants of a product or webpage are delivered to users at the same time for the purpose of testing user reactions.¹¹⁸ One could easily envision the results of an A/B test focused on changes in advertising loads being used by antitrust analysts to define a relevant market.

Moreover, U.S. courts, including the United States Supreme Court, have long employed alternative factors, such as products’ functional characteristics to good effect.¹¹⁹ The flexibility offered by such

111. *E.g.*, 15 U.S.C. § 1 (“Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States . . . is declared to be illegal.”).

112. *See* Newman, *Foundations*, *supra* note 49, at 173-74.

113. *Id.*

114. *Id.*

115. *Cf., e.g.*, *Morgan v. United States*, 304 U.S. 1, 14 (1938) (“The vast expansion of . . . administrative regulation in response to the pressure of social needs is made possible under our system by adherence to the basic principle[] that the Legislature shall appropriately determine the standards of administrative action . . .”). The author thanks Prof. David S. Romantz for direction to this line of authority.

116. Gal, *Free Goods*, *supra* note 110, at 548-49; Newman, *Applications*, *supra* note 51, at 66, 70.

117. Gal, *Free Goods*, *supra* note 110, at 548-49; Newman, *Applications*, *supra* note 51, at 66, 70. An alternative label for the SSNIC variant is “A-SSNIPS,” proposed by Wu. *See* Wu, *supra* note 51, at 29.

118. *See* Ron Kohavi & Stefan Thomke, *The Surprising Power of Online Experiments*, HARV. BUS. L. REV. (Sept.-Oct. 2017) (“Today, Microsoft and several other leading companies—including Amazon, Booking.com, Facebook, and Google—each conduct more than 10,000 online controlled experiments annually, with many tests engaging millions of users.”).

119. *See generally* *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001); *see generally* *United States v. Grinnell Corp.*, 384 U.S. 563 (1966).

alternatives makes them much more robust in the face of ever-evolving business structures and strategies—sometimes, the old ways are the best.¹²⁰ Antitrust in general would benefit from moving beyond its current obsession with so called “quantitative” evidence. With the role of juries in antitrust trial having been greatly diminished, the old concern that laypersons would be misled by “smoking gun” documents has faded.¹²¹ And quantitative data is perhaps even easier to massage and manipulate than real-world documents and testimony.¹²² Numbers can be used to tell many stories. Anyone who has observed a modern antitrust trial has seen two highly credentialed economists manage to reach opposite conclusions—each somehow managing to favor the position of the client paying his astronomical fees—using the same underlying data.¹²³

The objection that the antitrust toolkit is not supple enough to address attention markets is based on a faulty premise: that so called “quantitative” tools are the only one’s modern analysts possess. Using real-world documents and testimony to analyze which firms a defendant actually competes with will quite often yield more accurate results than attempting to shoehorn modern digital markets into the narrow confines of hyper-technical, price-centric analytical tools (SSNIP-based market definition in particular). The antitrust toolkit is more robust than a handful of price-centric tests of recent invention and, at least in this context, dubious value.

C. “*Doing More Would Do More Harm Than Good.*”

The third, and perhaps most serious, category of objections to antitrust oversight posits that increased scrutiny would do more harm than good. The first predicts that antitrust enforcement would chill capital market activity so badly that the resulting drag on the economy

120. Cf. SKYFALL (Eon Prods. 2012).

121. See generally Geoffrey A. Manne & E. Marcellus Williamson, *Hot Docs vs. Cold Economics: The Use and Misuse of Business Documents in Antitrust Enforcement and Adjudication*, 47 ARIZ. L. REV. 609 (2005).

122. See, e.g., Jesse Eisinger & Justin Elliott, *These Professors Make More Than a Thousand Bucks an Hour Peddling Mega-Mergers*, PROPUBLICA (Nov. 16, 2016), <https://www.propublica.org/article/these-professors-make-more-than-thousand-bucks-hour-peddling-mega-mergers>. (“[A] ProPublica examination of several marquee deals found that economists sometimes salt away inconvenient data in footnotes and suppress negative findings, stretching the standards of intellectual honesty to promote their clients’ interests.”)

123. See *id.* (“‘This is not the scientific method,’ said Orley Shenfelter, a Princeton economist known for analyzing the effects of mergers . . . ‘The answer is known in advance, either because you created what the client wanted or the client selected you as the most favorable from whatever group was considered.’”). The author uses the masculine pronoun in this context advisedly—virtually all of the highly paid economists who regularly testify in antitrust trials appear to be men.

would more than offset any gains to be had from increased competition. The second suggests that enforcement would prevent firms from achieving a particular type of efficiency, one that depends on leveraging established firms' expertise in production and distribution.

1. Enforcement Would Not Substantially Chill Capital Markets

It is not uncommon to encounter hand wringing over the possibility that antitrust enforcement in attention markets would chill capital investment activity.¹²⁴ But there is no evidence that such a chilling effect has ever occurred. Given the relatively toothless nature of modern U.S. antitrust law, particularly when it comes to attention markets, it seems highly unlikely that venture capitalists give serious thought to potential antitrust liability.¹²⁵

If anything, it is the *lack* of antitrust enforcement that appears most likely to chill capital markets. The mere presence of Google or Facebook in a market can stifle innovation in that market.¹²⁶ Angel and seed investment activity in the United States has declined since 2015, both in terms of overall deal value and (more precipitously) number of deals closed.¹²⁷ Recent empirical research indicates that after Google vertically integrates into the market for an app that runs on its Android mobile OS, the developers of existing apps in that market reduce their efforts to innovate.¹²⁸ Even *The Economist*, long a bastion of undiluted *laissez faire* capitalism, has expressed concern over the "kill zones" that surround digital giants.¹²⁹

124. See, e.g., Robert Litan, *Talk of Breaking Up 'Big Tech' Is Misguided, Premature*, THE HILL (Oct. 24, 2018), <https://thehill.com/opinion/finance/412943-talk-of-breaking-up-big-tech-is-misguided-premature> (arguing that venture capitalists "insist" on startups' having plans to be acquired by a large tech platform); see also Robert Litan & Hal Singer, *Are Google's Search Results Unfair or Deceptive Under Section 5 of the FTC Act?* (May 8, 2012), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2054751. Litan and Singer acknowledged that Google funded their paper. *Id.* at 1.

125. See, e.g., Michael A. Carrier, *The Real Rule of Reason: Bridging the Disconnect*, 1999 B.Y.U. L. REV. 1265, 1348 (reporting that defendants won 96% of rule-of-reason cases over a ten-year period). Even criminal cartel prosecutions appear to be in steep decline, though that may reflect simply the normal ebb and flow of cartel work. See Kadhim Shubber, *US Antitrust Enforcement Falls to Slowest Rate Since 1970s*, FIN. TIMES (Nov. 27, 2018), <https://www.ft.com/content/27a0a34e-f2a0-11e8-9623-d7f9881e729f>.

126. See, e.g., Newman, *Digital Markets*, *supra* note 5.

127. See Panel 4: *What Are the Goals of Antitrust? What Should They Be?*, MASONLEC <https://vimeo.com/256528231> (video at 32:29) (remarks of Hal Singer).

128. Wen Wen & Feng Zhu, *Threat of Platform-Owner Entry and Complementor Responses: Evidence from the Mobile App Market* (HARV. BUS. SCH., Working Paper No. 18-036, at 19, 2017). The author thanks Hal Singer for the central insight, as well as the pointer to Wen and Zhu's work.

129. *American Tech Giants Are Making Life Tough for Startups*, THE ECONOMIST (June 2, 2018), <https://www.economist.com/business/2018/06/02/american-tech-giants-are-making-life-tough-for-startups>.

2. Incumbents Do Not Always Offer a Better Path to Market

One of the more interesting critiques of increased antitrust enforcement in attention markets—indeed, in any high-technology or dynamic market—is that it may prevent firms from achieving certain efficiencies. Essentially, the argument is that incumbent firms tend to be relatively poor at developing new products, but relatively good at developing innovative ways of producing or delivering products. Startups, on the other hand, tend to be good at product innovation—for many, that is their *raison d'être*—but relatively bad at actual production and distribution. Thus, an incumbent's acquisition of a startup may efficiently allow the incumbent to leverage its own unique advantages to capitalize on the startup's area of strength, while also representing a liquidity event for the startup's founders.¹³⁰ This is an intriguing insight, and one not yet well recognized by the antitrust community.¹³¹

It would, however, be a mistake to conclude from this that, as a general policy matter, antitrust should adopt a hands-off approach to attention markets. Many attention markets, at least those featuring online product delivery, do exhibit a degree of startup and acquisition activity. But it does not follow that, as to a given acquisition, allowing the dominant incumbent to be the acquirer is necessary to achieve process efficiencies or allow for entrepreneurial exit. As an initial matter, some other, non-dominant (yet established) firm might do so without any attendant risks of enhancing or entrenching market power. To the extent analysts should begin taking the entrepreneurial exit explanation into account, they must also begin considering the availability of less restrictive alternatives. But that is a narrow point; let us broaden the lens for a moment.

Antitrust discourse in general tends to lack a robust account of the incentives underlying mergers and acquisitions. Instead, the prevailing view is Manichean: mergers are generally “good” (undertaken to achieve productive efficiencies), but occasionally “bad” (intended to increase market power).¹³² Entrepreneurial exit is only one of the many possible

130. See D. Daniel Sokol, *Vertical Mergers and Entrepreneurial Exit*, 70 FLA. L. REV. 1357, 1372-74 (2018).

131. See *id.* at 1371-72.

132. The descriptive claim that most mergers are procompetitive may well be incorrect. See Bruce A. Blonigen & Justin R. Pierce, *Mergers May Be Profitable, but Are They Good for the Economy?*, HARV. BUS. REV. (Nov. 15, 2016), <https://hbr.org/2016/11/mergers-may-be-profitable-but-are-they-good-for-the-economy>. The authors described the results of a recent study as follows:

On average, we find that mergers do not have a discernible effect on productivity and efficiency. Specifically, we do not find evidence for plant-level productivity changes, nor do we find evidence for the consolidation of administrative activities that is often cited as a way in which mergers yield lower costs through economies

drivers for acquisition activity that have gone largely overlooked by the antitrust enterprise. The “hubris hypothesis” provides another: many acquisitions appear to be the result of managers’ desire to engage in empire building¹³³ or simply pad their own pockets.¹³⁴ Such acquisitions have at their core a classic principal-agent problem.¹³⁵ Managers (agents of shareholders) are able to use mergers and acquisitions to enrich themselves at shareholders’ expense.¹³⁶ Of course, where this results in an unjustifiably high acquisition price, one side effect is that the target firm’s shareholders may benefit. As a result, the hubris hypothesis is not mutually exclusive of the entrepreneurial exit narrative: an acquirer’s overbidding may naturally incentivize a startup’s founder(s) to take the bid. But on the whole, a transaction driven by managerial hubris will tend to destroy, rather than create, societal value.

Moreover, it is quite possible that allowing incumbents to buy up rival startups and trading partners will cause dynamic harm in the medium to long run, even if such acquisitions yield the types of process efficiencies that underlie the entrepreneurial exit narrative. Startups often have unique firm cultures, managerial visions, and ways of approaching traditional market problems. They are, in antitrust parlance, particularly likely to play the role of “maverick” in an industry, continuing to disrupt the status quo even after their initial, breakthrough product innovations.¹³⁷ Allowing such valuable players to be subsumed into the relatively stale environs of an incumbent may cause society to lose out on what might be called “innovations along the way.” To illustrate, consider an alternate universe in which Yahoo was allowed to acquire Google in the year 2000. It is impossible to know with absolute certainty what the world would look like today had Yahoo, instead of Google, been at the helm of Internet search for the past two decades—but most observers would likely agree that in such a world, society would almost certainly have missed out on more than a few innovations along the way.

of scale. We also don’t find evidence that merged firms are more likely to close down less-efficient plants. By contrast, we find substantial average increases in the amount that firms mark up prices over cost following a merger, ranging from 15% to over 50%

Id.

133. See CLAIRE HILL, BRIAN JM QUINN & STEVEN DAVIDOFF SOLOMON, *MERGERS AND ACQUISITIONS: LAW, THEORY, AND PRACTICE* 15 (2016).

134. See Yaniv Grinstein & Paul Hribar, *CEO Compensation and Incentives: Evidence from M&A Bonuses*, 73 J. FIN. ECON. 119, 119 (2004).

135. *Id.*

136. *Id.*

137. See U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, *HORIZONTAL MERGER GUIDELINES*, at 3-4 (2010).

Thus, while the antitrust community would do well to develop a more thorough understanding of capital markets and incentives, it would also be well advised to avoid pursuing an even more *laissez-faire* stance. In fact, to the extent a broad policy shift is warranted, it may well be in the opposite direction. We ought to recall the many empirical studies indicating that “mergers actually reduce the real profitability of acquired business units”¹³⁸ without creating value for acquirers or their shareholders.¹³⁹ The common assumption that most merger and acquisition activity is “procompetitive” may be out of step with reality. If anything, a more robust account of merger incentives may counsel in favor of more active enforcement, rather than an even more defendant-friendly version of the status quo.

V. CONCLUSION

Attention exchange has come to play an increasingly vital role in our economy, one that antitrust can ill afford to ignore. The current policy of non-enforcement has allowed massive societal harms to go unchecked; it has also left the entire antitrust enterprise vulnerable to critical attack. Focusing solely on the subset of economic activity that maps neatly onto price-centric models and tools is increasingly untenable. If antitrust is to play a meaningful role in the modern world—if it is to fulfill its congressional mandate to protect trade and commerce—the antitrust enterprise must begin to pay attention to attention markets.

138. Richard E. Caves, *Mergers, Takeovers, and Economic Efficiency*, 7 INT. J. IND. ORG. 151, 167 (1989).

139. See, e.g., Ulrich Steger & Christopher Kummer, *Why Merger and Acquisition (M&A) Waves Reoccur-The Vicious Circle from Pressure to Failure*, 24 STRATEGIC MGMT. REV. 44 (2008) (“[M]ost M&As are considered to be unsuccessful.”).