PROMOTING INNOVATION

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INTRODUCTION

The economist Joseph Schumpeter recognized two essential facts of modern capitalism: the sudden displacement of the old by the new, a process he eloquently termed "creative destruction"; and the primacy of innovation over incremental improvements in allocative efficiency to long-run economic growth.[1] Examples of creative destruction are easy to come by: In the early 20th Century the automobile decimated the blacksmith and carriage-maker trades; more recently email has upended the economics of the postal service, Craigslist has devastated newspaper classified ads, online shopping has imperiled bricks-and-mortar retail and the smartphone has relegated former mobile handset market leaders, such as Nokia and Blackberry, to obscurity.

The twin Schumpeterian insights that innovation is the key to growth and that creative destruction is a vital source of innovation are now well accepted.[2] How these insights should be incorporated into laws regulating the market place, such as antitrust and intellectual property, is far less clear. Antitrust minimalists and skeptics tend to equate Schumpeter with *laissez faire*.[3]

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1 JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM AND DEMOCRACY (3d ed. 1950).

2 Herbert Hovenkamp, *Competition for Innovation*, at *5 *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2008953; Tim Wu, *Taking Innovation Seriously: Antitrust Enforcement if Innovation Mattered Most*, 78 ANTITRUST L.J. 313 (2012); Joseph Brodley, *The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress*, 62 N.Y.U. L. REV. 1020, 1026 (1987); Robert M. Solow, *Technical Change and the Aggregate Production Function*, 39 REV. ECON. STAT. 312 (1957).

3 See, e.g., Alan Devlin, *Antitrust As Regulation*, 49 SAN DIEGO L. REV. 823, 844 (2012); Thomas J. Horton, *The Coming Extinction of Homo Economicus and the Eclipse of the Chicago School of Antitrust: Applying Evolutionary Biology to Structural and Behavioral Antitrust Analyses*, 42 LOY. U. CHI. L.J. 469, 479–81 (2011); Timothy K. Kuhner, *Consumer Sovereignty Trumps Popular Sovereignty: The Economic Explanation for Arizona Free Enterprise v. Bennett*, 46 IND. L. REV. 603, 637 (2013); Arthur M. Diamond, Jr., *Creative Destruction: The Essential Fact About Capitalism* 31 (June 6, 2007) (unpublished manuscript), available at http:// www.artdiamond.com/DiamondPDFs/CreativeDestructionEssentialFact03.pdf.

After all, if even the most entrenched market behemoths are vulnerable to seismic shifts in technology, are not all supposed monopolies merely fleeting?

We disagree. This view misreads Schumpeter and misunderstands markets and business strategy. Modern businesses are well aware of the threat of disruptive outsiders and, left unchecked, will do their utmost to prevent future waves of creative destruction from threatening the status quo. We propose thinking of creative destruction and competition policy as a two-stage process rather than a single event where the victor enjoys the spoils of innovation indefinitely without legal constraints. Instead, competition law as we currently understand it would remain in place while being somewhat more forgiving as to the acquisition of market power, yet still vigilant in policing the maintenance of such power. We focus on historical, current, and hypothetical examples from US and EU competition and intellectual property law to show how contemporary law has already incorporated many of these insights and the law can maximize consumer welfare by doing so more thoroughly. Under such a two-step approach, some areas of antitrust and IP law would expand, some would contract, but all areas of the law would more clearly promote innovation and help create real Schumpeterian antitrust.

I SCHUMPETER AND CREATIVE DESTRUCTION

Joseph Schumpeter was one of the most prominent economists of the 20th century. Born in Austria, he began his professional career as an economist with a series of economic histories of European industry and a prolific outpouring of other theoretical work.[4] He briefly served as Minister of Finance in the 1919 Austrian government.[5] In 1932, Schumpeter left Europe for good, and joined the faculty of Harvard University and continued his long and fruitful career until his death in 1950.[6]

He is best known for his 1947 work *Capitalism Socialism and Democracy*.[7] Schumpeter famously wrote:

> The fundamental impulse that sets and keeps the capitalist engine in motion comes from the new consumers' goods, the new method of production or transportation, the new markets, the new forms of industrial organization that capitalist enterprise creates….The opening up of new markets, foreign or domestic, and the organizational development from the craft shop and factory to such concerns as U.S. Steel illustrate the same process of industrial mutation -- if I may use the biological term – that incessantly revolutionizes the economic structure *from within*, incessantly destroying the old one, incessantly creating a new one. This process of Creative Destruction is the essential fact about capitalism…In other words, the problem that is usually being visualized is how capitalism administers existing structure, whereas the relevant problem is how it creates and destroys them…But in capitalist reality as distinguished from its textbook picture, it is not [price competition] which counts but the competition from the new commodity. The new technology, the new source of supply, the new type of organization… — competition which commands a decisive

[4] THOMAS K. MCGRAW, PROPHET OF INNOVATION: JOSEPH SCHUMPETER AND INNOVATION 67–71 (2007).

[5] *Id.* at 98.

[6] *Id.* at 205.

[7] Schumpeter, *supra* note 1.

cost or quality advantages and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives.[8]

Schumpeter coined the phrase "creative destruction" to describe the nature of competition and innovation in the 19th and 20th markets that he studied. He argued that the process of creative destruction typically involved a powerful incumbent firm being overwhelmed by new forms of innovation radically changing the nature of competition. Newly successful firms in turn would eventually be overwhelmed by later waves of creative destruction, and so on.

Schumpeter saw that creative destruction was essential to capitalism itself and a far more significant source of economic growth than the incremental improvements to resource allocation under the more familiar notion of price competition within markets. More controversially, he argued that a substantial degree of size and monopoly power was conducive to innovation more generally. In Schumpeter's view, the prospect of market dominance was a powerful incentive and dominance itself provided the resources for investment in further innovation. Thus Schumpeter argued that size and monopoly should not automatically be feared or condemned, but were necessary conditions and incentives for the type of creative destruction that was a natural attribute of capitalism.[9]

Over the past sixty years, scholars have debated whether Schumpeter was correct descriptively or normatively and whether competition or monopoly is better suited to the promotion of innovation. Most prominently, Nobel Laureate Kenneth Arrow argued that competitive markets were a more reliable generator of innovation than those characterized by substantial monopoly power.[10] The Schumpeter-Arrow debate has generated a vast literature on the nature of innovation and the role of competition and market power.[11] But it is a debate we intend to circumvent on the grounds that the answer is probably contingent on particular industry characteristics and the precise degree of industry concentration at issue.[12] Assuming, as Schumpeter argued, that dominance is vulnerable to creative destruction and the dominant firms are motivated to continue to innovate because of the threat of creative destruction, what then is the role for competition law seeking to promote innovation?

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[8] Id. at 83–84. (Emphasis in original, footnotes omitted).

[9] Id. at 84.

[10] KENNETH J. ARROW, ESSAYS IN THE THEORY OF RISK BEARING 144, 157 (3d ed. 1957).

[11] There are also numerous other ways of conceiving of the process of innovation and the best ways to promote it. *See* Michael E. Porter, *The Competitive Advantage of Nations*, HARV. BUS. REV. 73, 75 (1990) (discussing how information plays a large role in the process of innovation); CLAYTON M. CHRISTENSEN, THE INNOVATOR'S DILEMMA: THE REVOLUTIONARY BOOK THAT WILL CHANGE THE WAY YOU DO BUSINESS (Harper Bus. 2011) (1997) ("disruptive technology" can harm, rather than help, existing businesses).

[12] For the general argument that there is an inverted U-shaped relationship between industry concentration and innovation see Philippe Aghion, Nick Bloom, Richard Blundel, Rachel Griffith & Peter Howitt, *Competition and Innovation, An Inverted U-Relationship*, 120 Q. J. ECON. 701 (2005); Phillippe Aghion, Ufuk Akcigit, and Peter Howitt, *What do We Learn from Schumpeterian Growth Theory?*, PIER Working Paper 13-026, available at http://ssrn.com/abstract=2274704.

What exactly do we mean by innovation? There are literally hundreds of definitions. Schumpeter used one geared to new processes and products in his discussion of creative destruction set forth above.[13] The Oslo manual of the OECD defines innovation as "the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations."[14] For the purposes of designing and enforcing competition law we think a straight-forward definition is that innovation is "any change in the status quo that (i) allows one to do something one could not do before or (ii) allows one to do something already possible while using fewer resources than were required before."[15]

This essay focuses on how to set priorities for competition law and policy to promote innovation by seeking to bar dominant firms from engaging in the types of behavior that are most likely to prevent future waves of creative destruction from threatening their dominance. Such strategies can prevent the next big idea from succeeding, limit the disciplining effect of later innovation, and allow a dominant firm to abuse its power to the detriment of society.

While there is a tendency to equate a love for Schumpeter with an equal passion for a *laissez faire* legal system,[16] that would be a mistake. First, this is not a fair reading of Schumpeter's own work. The bulk of his writings consisted of historical analysis of economic thought and market behavior in the various industries and economic cycles that he studied. He typically avoided prescribing economic or legal programs for governments.[17] He was not always opposed to state intervention in the economy, but was most concerned about the importance of innovation and avoiding reflexive attacks on big business per se. Schumpeter's views evolved over time; there were times he was critical of monopoly, opposed governmental entry barriers, and found inequality of opportunity unacceptable. Second, although the force of creative destruction may be irresistible over the long run, there is much that incumbent firms can do in the short to medium term to suppress disruptive innovation. Schumpeter himself recognized that

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[13] SCHUMPETER, CAPITALISM, *supra* note 8.

[14] OECD/Eurostat, OSLO MANUAL: GUIDELINES FOR COLLECTING AND INTERPRETING INNOVATION DATA 46 (3d ed. 2005), available at http://www.oecd-ilibrary.org/science-and-technology/oslo-manual_9789264013100-en.

[15] David McGowan, Innovation and Liability for Contributory Copyright Infringement, 8 NW. J. TECH. & INTELL. PROP. 38 (2009).

[16] Keith W. Hylton & Haizhen Lin, *Innovation and Optimal Punishment, with Antitrust Implications*, 10 J. COMP. L. & ECON. 1 (March 2014); Daniel A. Crane, *Optimizing Private Antitrust Enforcement*, 63 *Vand. L. Rev*. 675, 688 (2010); Ignacio de Leon, *Latin American Competition Policy: From Nirvana Antitrust Policy to Reality-Based Institutional Competition Building*, 83 CHI-KENT L. REV. 39, 58 (2008)(contrasting Schumperterian theory with antitrust policy); Diamond, *supra* note __; Raymond Dhih Ray Ku, *Grokking Grokster*, 2005 WIS. L. REV. 1217, 1278 (2005); Glen O. Robinson, *On Refusing to Deal with Rivals*, 87 CORNELL L. REV. 1177, 1180 (2002); F.M. Scherer, *Antitrust, Efficiency, and Progress*, 62 N.Y.U. L. REV. 998, 1001 (1987)(under Schumpeter antitrust may not "particularly important);Ward S. Bowman, Jr., *Toward Less Monopoly*, 101 U. PA. L. REV. 577, 623 (1953).

[17] McGraw, *supra* note 4, at 179.

> [T]here are means available to the successful entrepreneur – patents, 'strategy', and so on – for prolonging the life of his monopolistic or quasi-monopolistic position and for rendering it more difficult for competitors to close up on him.[18]

Our evolving experience over more than century of antirust and competition laws in the United States, and more than half a century in the European Union has shown the wisdom of leaving room for innovation but continuing to address concerted and individual attempts to block innovation from rivals.

II. REAL SCHUMPETERIAN ANTITRUST

If laissez faire is not the answer, what is? A growing body of commentators seek to identify a vision for competition policy that rewards innovation, innovators, and entrepreneurs but which does not allow successful firms to block subsequent innovation that may threaten them in the future. Jonathan Baker, Tim Wu, and Herbert Hovenkamp among others have written eloquently in this vein.[19]

The key for competition law purposes is to look at the process of innovation and creative destruction as a two-stage sequence rather than a single-stage operation. Taking Schumpeter seriously means designing a legal and regulatory system which maximizes the incentives and opportunities for challengers to innovate to displace incumbents while minimizing incentives and opportunities for incumbents (who may have once been challengers) from engaging in exclusionary conduct that degrades the opportunities and incentives for future challengers to dislodge them. This is particularly important given the tendency of incumbents to exploit their current advantages or engage in limited evolutionary innovations to maintain that advantage as opposed to the tendency of challengers to seek revolutionary changes to upend the incumbents.[20] Maintaining openness and opportunity at both stages of the game should permit entrepreneurs and innovators to flourish and create appropriate rewards and incentives for both while maximizing societal benefit. As Professor Waller has written elsewhere:

> While Judge Learned Hand was undoubtedly correct when he wrote in *United States v. Aluminum Co. of America* that '[t]he successful competitor, having been urged to compete, must not be turned upon when he wins.' It is equally important that we do not allow the current frontrunner in a race to declare permanent victory at the moment of his choosing.[21]

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[18] JOSEPH A. SCHUMPETER, HISTORY OF ECONOMIC ANALYSIS 897-98 (Elizabeth Boody Schumpeter ed. 1954); JOSEPH A. SCHUMPETER, BUSINESS CYCLES: A THEORETICAL, HISTORICAL, AND STATISTICAL ANALYSIS OF THE CAPITALIST PROCESS 67 (1939)(how a monopolist can avoid future creative destruction).

[19] Tim Wu, The Master Switch: The Rise and Fall of Information Empires (2011); Tim Wu, *Taking Innovation Seriously: Antitrust Enforcement If Innovation Mattered Most*, 78 ANTITRUST L.J. 313 (2012); Hovenkamp, *Schumpeterian Competition, supra* note _; Jonathan B. Baker, *Beyond Schumpeter vs. Arrow: How Antitrust Fosters Innovation*, 74 ANTITRUST L.J. 575 (2007).

[20] CHRISTENSEN, *supra* note 11.

[21] Spencer Weber Waller, *Antitrust and Social Networking*, 90 N.C. L. REV. 1771, 1804 (2012).

Adding this innovation lens to competition policy doesn't affect all facets of competition law. It primarily, but not exclusively, affects unilateral conduct cases. However, it does suggest a new way to look at certain concerted action and merger cases. It may require somewhat more leniency in attempted monopolization cases but it definitely demands continued vigilance in monopoly maintenance cases and other competition cases where future innovation is threatened. An innovation-based competition may also require a careful coordination of competition policy with sectorial regulation, intellectual property law, access to infrastructure, and other non-competition areas of the law.[22]

Finally, there are good reasons to maintain antitrust enforcement in other areas of the law which have nothing to do with innovation. Hard-core cartels and mergers likely to raise prices or decrease output harm consumers regardless of their effect on innovation. But taking Schumpeter seriously does mean prioritizing innovation while shifting focus from collusion to exclusion.[23]

A. Innovation and Unilateral Conduct Cases

The Schumpeterian prescription for antitrust law is far from simple. Schumpeter convincingly argued that innovation is the key to long-run economic growth and that innovation is closer to a process of punctuated equilibrium than to steady incrementalism. Antitrust law should promote creative destruction by reducing artificial barriers to entry wherever possible. However, this does not translate to a reflexive preference for the outsider at the expense of current market leaders. In the language of our two-stage analysis, Schumpeter convincingly argued the prospect of dominance at Stage II is the very thing that encourages investment at Stage I. Schumpeter further reasoned that dominant firms could be an important source of innovation in light of their greater resources as long as they were motivated by a fear of creative destruction.

United States antitrust law appears to have absorbed these insights and is quite solicitous of innovation by dominant firms, but not to the point of permitting transparent attempts to extinguish new sources of creative destruction in Stage II. The 2004 Supreme Court decision in *Trinko*, clearly illustrates the Court's appreciation of the links between success in Stage II added incentive in Stage I. In *Trinko*, the Court dismissed a private class action complaint alleging that the incumbent phone company had deliberately interfered with competitor's access to both new and existing customers.[24] The Court noted that to the extent that interconnection was mandated by the Telecommunications Act of 1996, the plaintiffs would be limited to whatever remedies were provided by that regulatory scheme. The Court also questioned the applicability of the essential facilities doctrine as granting any additional antitrust rights or remedies where access was part of such a regulatory scheme. Writing on behalf of the Court, Justice Scalia stated in classic Schumpeterian terms:

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[22] *See e.g.*, SUSAN CRAWFORD, CAPTIVE AUDIENCE: THE TELECOM INDUSTRY AND MONOPOLY POWER IN THE NEW GILDED AGE (2013); WU, *supra* note 19.

[23] *See generally* Jonathan B. Baker, *Exclusion As a Core Competition Concern*, 78 ANTITRUST L.J. 527 (2013).

[24] Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 US 398 (2004).

> The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system. The opportunity to charge monopoly prices-at least for a short period-is what attracts "business acumen" in the first place; it induces risk taking that produces innovation and economic growth. To safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive *conduct.*[25]

The Court thus adopted one of Schumpeter's central premises: punishing large successful firms reduces the incentives for all firms and their willingness to take risks.

Classic Sherman Act Section 2 cases such as *Lorain Journal v. U.S.*, *MCI v. AT&T*, and *U.S. v. Microsoft* all tell coherent Schumperterian stories about incumbents who were attacked not for how they achieved their dominance but rather how they sought to quash or delay later innovation which threatened that dominance. These cases present a vision of antitrust law that goes well beyond laissez faire, and for good reason.

In *Lorain Journal*, an incumbent newspaper was dominant in both advertising and readership in Lorain County, Ohio.[26] This dominance was threatened by the entrance of a new radio station whose listening area overlapped with most of the readership of the defendant newspaper. To combat the rise of this form of new media, the newspaper informed advertisers that they could no longer advertise in the paper if they also advertised on the radio station. This tactic was successful since many advertisers still needed the newspaper to reach the bulk of their customers with print ads for grocery stores, car dealerships, department stores and the like. While this case is universally beloved for different reasons by nearly all antitrust scholars of every ideological persuasion,[27] it also suggests why Schumperterian antirust can be one of vigilance, rather than laxness, even in the area of unilateral conduct.

A similar dynamic premises virtually the entire regulatory and antitrust saga of the break-up of the Bell system. The FCC forced the old Bell System to allow the connection of innovative equipment such as the Carter Hush-a-Phone, and eventually a plethora of differently designed and functional handsets produced by outside vendors.[28] It was the private treble damage litigation brought by MCI which effectively put an end to AT&T's refusal to interconnect its local loop with MCI's microwave long distance service.[29] And finally, it was the Justice Department's monopolization case and eventual consent decree which resulted in the divestiture and structural separation of the Bell System into regional regulated common carriers for local phone service and unregulated long distance providers and equipment makers to remove the incentives to interfere with the innovative services and products of competitors.[30]

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[25] *Id.* at 407.

[26] Lorain Journal Co. v. United States, 342 U.S. 143 (1951).

[27] ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 344-45 (2d ed. 1993).

[28] *In re* Use of the Carterfone Device in Message Toll Tel. Serv., 13 F.C.C.2d 420 (1968).

[29] MCI Commc'ns Corp. v. Am. Tel. & Tel. Co., 708 F.2d 1081 (7th Cir. 1983).

[30] See United States v. Am. Tel. & Tel. Co., 552 F. Supp. 131, 135–144 (D.D.C. 1982).

The long-running Microsoft antitrust litigation also reflects the Schumpeterian tolerance for the creation of monopoly but not its abuse. The government's case against Microsoft and the D.C. Circuit's 2001 *Microsoft* opinion illustrate the type of Schumpterian antitrust policy currently in vogue in the United States.[31] The Department of Justice made no effort to challenge Microsoft's acquisition of monopoly power in the market for personal computer operating system. Both this broad monopolization and the earlier, more narrowly-focused government cases were focused on monopoly maintenance claims. The D.C. Circuit even went out of its way to praise Microsoft, noting: "It is certainly true that Windows may have gained its initial dominance in the operating system market competitively – through superior foresight or industry."[32] It is equally likely that Microsoft achieved market power based on the combined effect of IBM's decision to get out of the software business, sell its DOS program to Bill Gates's fledging company, and the rise of the ubiquitous IBM clone running first MS-DOS and later Windows. However, neither the "right place right time" story, nor the superior skill story, raise cause for concern under the current stance of competition law toward innovation and creative destruction.

The government's case focused instead on Microsoft's reaction to the threat of creative destruction posed by the Netscape internet browser and the Java software platform. These innovations threatened to overturn the status quo in the software industry in which an application program had to be written for a particular operating system (OS). Both Netscape and Java had the potential to disrupt and eventually destroy Microsoft's OS dominance by providing an alternative software platform that would enable application software to run on any OS or potentially without a full function OS at all.

The government did not take issue with the fact that Microsoft had obtained a dominant position or profited from network effects that reinforced its dominance. Instead, the government's Section 2 case focused on Microsoft's effort to maintain its dominance in operating systems, fend off highly disruptive innovations, and exclude nascent rivals from the market.

The government prevailed in *U.S. v Microsoft* in the district court on most of its theories of unlawful monopoly maintenance and obtained both structural and behavioral relief as a remedy.[33] The Supreme Court declined to hear the direct appeal under the Expediting Act, and the D.C. Circuit heard the case *en banc*. The Court of Appeals issued a nuanced unanimous *per curiam* opinion affirming most, but not all, of the government's claims and reversing the grant of structural relief. The issue of innovation was front and center in the discussion of both unlawful conduct and remedy. The opinion reflects a balanced Schumpeterian view in three ways.

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[31] United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001).

[32] *Id.* at 56.

[33] United States v. Microsoft Corp., 87 F. Supp. 2d 30 (D.D.C. 2000) (holding for the government on most theories of unlawful monopoly maintenance); United States v. Microsoft Corp., 97 F. Supp. 2d 59 (D.D.C. 2000) (ordering structural and behavior remedies).

The court gave great deference to product design decisions and came close to granting per se legality to such decisions (and the bundling allegations involved) in order to allow defendants to innovate in the dynamic software industry.[34] Similarly, the court tortured existing tying doctrine to carve out a new rule of reason test for software tying in order to not second guess what are separate and new products being unlawfully tied together by a dominant firm and what are new features of existing products that would serve the needs of consumers and promote innovation.[35]

Second, *Microsoft* illustrates that there are limits to the dominant firm behavior in Stage II when it comes to unjustified acts of exclusion. Even with this innovation lens, the Court found that numerous acts and practices of Microsoft violated Section Two of the Sherman Act. For example, the Court affirmed the trial court's decision that Microsoft violated the Sherman Act when it deliberately intermingled the computer code for the operating system and the web browser in such a way that the computer functioned below par if users operated any web browser other than Microsoft's Internet Explorer. In addition, users could not remove Internet Explorer from the hardware without crippling the entire OS. All these were illegal since Microsoft could offer no procompetitive business justification and all evidence pointed to the only explanation as a long term scheme to prevent current or future competitive threats from gaining traction in the market.

Similarly, Microsoft distributed and promoted its own version of Java software to application developers. Despite promising that the Microsoft type of Java was "pure" and would run on any operating system or software platform, the Microsoft Java was polluted and would only function in conjunction with a Microsoft Windows operating system. In the absence of any non-exclusionary justification, this too was condemned as illegal monopoly maintenance because it harmed rather than helped the process of innovation.

Third, regardless of what the rule of reason case law says about balancing procompetitive and anticompetitive effects, the court did not engage in such balancing; it deferred to the incumbent's non-pretextual claims of innovation. This pattern repeats throughout the opinion. The court used a rule of reason type methodology to require proof of exclusionary effect whether the specific tactic was a form of exclusive dealing, deceptive conduct, or other behavior. If the government failed to show such exclusionary effect it lost. If the government established such anticompetitive harm the court only then required the defendant to establish some legitimate procompetitive justification. Where it did so it prevailed, where it failed it was found to have engaged in unlawful monopoly maintenance. On no occasion did the Court ever proceed to the balancing of pro and anti-competitive effects as called for in the normal Rule of Reason or the D.C. Court's own test laid out in the opinion.[36] Nor did the court allow the government to seek

[34] *Microsoft Corp.*, 253 F.3d at 65 ("[C]ourts are properly very skeptical about claims that competition has been harmed by a dominant firm's product design changes. . . . Judicial deference to product innovation, however, does not mean that a monopolist's product design decisions are per se lawful.").

[35] *See generally id*. at 84–95.

[36] In general courts rarely engage in this balancing process under the Rule of Reason. Michael A. Carrier, *The Real Rule of Reason: Bridging the Disconnect*, 1999 B.Y.U. L. REV. 1265; Michael A. Carrier, *The Rule of Reason: An Empirical Update for the 21st Century*, 16 GEO. MASON L. REV. 827 (2009).

liability based on the cumulative effect of each act, but rather required a separate consideration of each alleged violation on its own merits.

The *Microsoft* case illustrates the deferential approach to innovation by dominant defendants. However, that deference is by no means a free pass for conduct aimed at strangling potential sources of creative destruction in their infancy. The D.C. Circuit reversed liability on bundling and tying theories. Microsoft lost each count where the evidence showed that it had interfered with the innovative efforts of others. In contrast, it won the handful of counts where it could show some legally and factually plausible claim that its conduct represented its own innovation for the benefit of its customers and not just a scheme to protect itself from the next wave of innovation.

Current U.S. enforcement policy regarding unilateral conduct is also broadly consistent the Schumpeterian focus on innovation. Most of the important cases and investigations have not attacked innovation by a challenger in Stage I but have emphasized attacking conduct by dominant firms to maintenance their dominance and interfere with later waves of innovation by new challengers. Three important developments emphasize the growing importance of innovation in the Section 2 context. First, the government has abandoned (once common) criminal enforcement in Section 2 cases.[37] Second, the scope and invocation of attempted monopolization has been substantially reduced.[38] Finally, agency guidelines now focus explicitly on innovation as grounds for enforcing or refraining from enforcement depending on the circumstances of the case.[39]

B. IP, Antitrust, and Schumpeter

The intersection of IP and Antitrust is often seen as a point of tension: IP rights, so the story goes, offer incentives for innovation and thus promote dynamic efficiency. On the other hand, Antitrust law concerns itself with static efficiency and consumer welfare.[40] However, Herbert Hovenkamp argues that the patent-antitrust conflict may be "readily exaggerated."[41] Hovenkamp suggests that there are in fact only a "small number of cases in which both a

[37] *See* SPENCER WEBER WALLER, THURMAN ARNOLD: A BIOGRAPHY 91-105 (2005)(describing aggressive use of criminal monopolization in the 1940s).

[38] Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447 (1993).

[39] *E.g.*, U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust Guidelines for Collaborations Among Competitors § 3.32(c) (2000); U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines § 6.4 (2010), available at http://www.justice.gov/atr/public/guidelines/hmg-2010.html#2f [hereinafter 2010 Merger Guidelines].

[40] See e.g. SCM Corp. v. Xerox Corp., 645 F.2d 1195, 1203 (2d Cir. 1981) ("While the antitrust laws proscribe unreasonable restraints of competition, the patent laws reward the inventor with a temporary monopoly that insulates him from competitive exploitation of his patented art.").

[41] Herbert J. Hovenkamp, *Restraints on Innovation*, 29 CARDOZO L. REV. 247, 247 (2007). See also Mark A. Lemley, Industry-Specific Antitrust Policy for Innovation, 2011 Colum. Bus. L. Rev. 637, 637 (2011 Milton Handler Lecture) ("The premise that intellectual property law promotes dynamic efficiency while antitrust law concentrates on static welfare is wrong, or at least oversimplified.")

plausible antitrust claim and a countervailing IP policy are present."[42] Many of the apparent conflicts vanish once it is understood that IP rights – although they create exclusive rights sometimes termed monopolies – do not automatically create the kind of market power that raises competition law concerns.

The scope of genuine conflicts also recedes once pre-textual arguments that IP rights provide businesses with a cloak of invincibility for anti-competitive practices are rejected. There is no IP justification for making a false claim of patent infringement, thus Walker Process claims present no conflict between the goals of IP and antitrust law.[43] Likewise, IP rights might be the reason for deceiving a standards-setting organization or trying to dishonor a FRAND licensing commitment, but they cannot seriously be taken as a justification for such conduct.

Nor are IP settlements immune from antitrust review. The U.S. Supreme Court's recent decision in *Federal Trade Commission v. Actavis Inc*., instructs lower courts to apply the rule of reason to reverse-payment settlements—payments from brand-name drug manufacturers to generic drug manufacturers to delay competition. The *Actavis* court recognized that such payments can have significant anticompetitive effects, show market power, and be a surrogate for a patent's weakness.[44]

However, even if the set of conflicts at the intersection of IP and Antitrust is narrower than first conceived, it still exists in relation to essential facilities and similar related claims. In this respect, the European Union has been far more active than the U.S. The European Court of Justice (ECJ) has held that the existence of intellectual property rights is not a competition law issue but their exercise may be.[45] Compulsory licensing may be required under "extraordinary circumstances" and access to intellectual property has been granted under an EU version of the essential facilities doctrine.[46]

The ECJ has used these principles to address competition issues that have arisen as a result of overly broad national intellectual property rights. In the *Magill* case, the ECJ used competition law to compel access to lists of television programming so that a non-broadcaster could enter the market and publish a *TV Guide* type publication with listings for all networks in a single integrated format. Such programming information would not be copyrightable subject matter in the U.S.,[47] but in Europe competition law intervention was required to allow third

[42] *Id.*

[43] Walker Process Equip., Inc. v. Food Mach. & Chem. Corp., 382 U.S. 172 (1965) ("the enforcement of a patent procured by fraud on the Patent Office may be violative of § 2 of the Sherman Act provided the other elements necessary to a § 2 case are present.")

[44] F.T.C. v. Watson Pharm., Inc., 677 F.3d 1298, 1309 (11th Cir. 2012), rev'd and remanded sub nom. F.T.C. v. Actavis, Inc., 133 S. Ct. 2223, 2236-37 (2013)

[45] Deutsche Gramaphone, 1971 E.C.J. 487, ¶13; Grundig/Consten, 1966 E.C.J. 299, 344-46.

[46] Spencer Weber Waller & William Tasch, *Harmonizing Essential Facilities*, 76 ANTITRUST L.J. 741 (2010).

[47] See Feist Pub. Inc. v. Rural Telephone Serv. Co. Inc., 499 U.S. 340 (1991).

parties to offer novel program information products resisted by the incumbents.[48] This is a result consistent with a Schumpeterian, innovation-centered, competition policy. A Schumpeterian competition policy also might have condoned an otherwise problematic joint venture by the incumbents to offer the same type of new integrated program guide.[49] The *Magill* formulation for abuse of a dominant position required that a refusal to license prevented the appearance of a new product for which there was customer demand, that such refusal was not objectively justified, and that the refusal reserved to the right holder a "secondary market." The 2005 *IMS Health* case blurs the last element, holding that the introduction of a new product or service is not necessary, but, that mere price competition is not enough. The test is still fundamentally about innovation, but it is unclear exactly what counts as innovation.[50] More recently, the Court of First Instance decision in *Microsoft* further muddied the waters by again diluting the standard for the EU essential facilities without a clear ruling on whether the new entrant was seeking to bring new and innovative services to the market.[51] While there are other reasons that explain the more robust version of the EU essential facilities doctrine, it has its greatest legitimacy when it links access to infrastructure to the needs of downstream innovation.[52] A more explicitly Schumpterian focus could help clarify the application of the essential facility doctrine to IP in Europe.[53]

C. Sherman Act Section 1 and Innovation

Section 1 of the Sherman Act deals with anticompetitive agreements rather than unilateral behavior. Much of Section 1 enforcement involves non-Schumperterian matters such as traditional hard-core cartels which are per se unreasonable as well as other less suspect agreements which are analyzed more deeply on a case-by-case basis under the rule of reason. Nonetheless, Section 1 enforcement is an important tool when groups of erstwhile competitors conspire to fend off disruptive innovation.

One of the best historical examples of an agreement between competitors challenged because of its effects on innovation is *Allied Sheet & Tube v. Indian Head*.[54] Manufacturers of steel conduit used in house wiring in buildings and homes confronted a competitive challenge from newer forms of conduit made from plastic. The plastic conduit was cheaper, lighter, and

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[48] See, Valentine Korah, *Symposium: the Federal Circuit and Antitrust: The Interface between Intellectual Property and Antitrust: The European Experience*, 69 Antitrust L.J. 801, 814 (2002) (arguing that *Magill* must be understood as a way of dealing where a grant of intellectual property rights is questionable in the first place).

[49] See also Broad. Music, Inc. v. Columbia Broad. Sys., Inc., 441 U.S. 1 (1979) (holding blanket licensing did not constitute per se illegality when the licenses themselves were the new product being sold).

[50] Case T-184/01, IMS Health, Inc., v. Comm'n of European Cmtys., 2005 E.C.R. II-819.

[51] Case T-201/04, Microsoft Corp. v. Commission of the European Communities, (C.F.I. 2007), available at http://curia.europa.eu/juris/celex.jsf?celex=62004TJ0201&lang1=en&type=TXT&ancre=.

[52] Brett M. Frischmann & Spencer Weber Waller, *Revitalizing Essential Facilities*, 75 ANTITRUST L. J. 1 (2008).

[53] Waller & Tasch, supra note 46.

[54] Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492 (1988).

more flexible. The incumbent steel conduit manufacturers banded together to deny the plastic conduit certification at the next drafting and voting cycle of the industry building and fire codes. The steel conduit companies simply packed the relevant meetings with friends and family who narrowly defeated an initiative to change the existing codes to allow the use of plastic conduit. Because these private codes were the routinely adopted verbatim into law for state and local governments, they effectively barred plastic conduit from the market. While there were complicated issues of the application of the *Noerr-Pennington* doctrine to the eventual adoption of the private codes by government that occupied much of the Court's opinion,[55] the Court was clear on prohibiting the combined use of public and private entry barriers to stymie an innovative product from reaching the market.[56]

Another more recent cases presenting a Schumpeterian case for antitrust enforcement is the *Apple e-books* case now on appeal.[57] The *e-books* case was a successful civil *per se* Section 1 case by the Antitrust Division against the major book publishers and Apple. The government's theory, which prevailed at trial, was that in connection with the launch of its iPad tablet computer, Apple facilitated a horizontal conspiracy by the book publishers regarding both the method used to price e-books and the amount charged for such books.[58]

Amazon was the first mover in the e-books market with the 2007 launch of its Kindle e-book reader. By 2009, Amazon had a 90% market share in e-books and an equally strong position in e-book readers. Amazon had traditionally purchased e-books at wholesale from the publishers. To build demand for e-books, Amazon routinely priced e-books at $9.99 or less, a figure well below the prevailing hardback and paperback prices in most cases. This pricing did not affect the wholesale price Amazon paid to the publishers – they still made a profit on each e-book "sold" to Amazon – but Amazon lost money on most e-books as part of a strategy to build demand for the e-book format and it made profits on the e-reader devices it sold.[59]

Under this model, e-books flourished while traditional books declined. While the Amazon wholesale model was profitable for the book publishers, they were terrified for the future on two accounts. First, the e-books threatened to destroy the traditional model of the book industry which normally published best-sellers and prestige titles first in hard cover at $30 or more, and then in trade and mass-market paperback formats at decreasing price points. E-books would destroy this crude form of price discrimination if consumers abandoned hardcover books for the new medium, especially if Amazon used its growing dominance to eventually force down the wholesale price of e-books.

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[55] *Id.* at 504.

[56] For another example of the misuse of standards to block innovative new entrants see Am. Soc. of Mech. Engineers, Inc. v. Hydrolevel Corp., 456 U.S. 556 (1982).

[57] United States v. Apple Inc., 952 F. Supp. 2d 638, 658–61 (S.D.N.Y. 2013).

[58] *Id.* at 648.

[59] *See generally* BRAD STONE, THE EVERYTHING STORE: JEFF BEZOS AND THE AGE OF AMAZON 24-57, 278 (2013).

In response to this threat to the status quo, five major publishers agreed collectively, with the coordination of Apple, to switch to an agency model where the publishers would set the retail price of e-books and provide Apple with a 30% commission for each e-book sold.[60] The publishers further collectively refused to do business with Amazon under the old wholesale price model until Amazon switched to an agency-pricing model as well.[61] Not surprisingly, once Apple began selling e-books and Amazon agreed to the publishers' demands, the price of e-books increased.[62] The government settled with all the publishers and went to trial against Apple. The court held that the horizontal agreement by the publishers facilitated by Apple was unlawful per se, imposed various types of injunctive relief, and appointed an outside monitor to ensure compliance. The case is now on appeal.[63]

The case is unusual and surprising from a number of perspectives. Some commentators have criticized the government's failure to challenge Amazon's dominance in the e-books market, which they see as provoking the publishers into defensive price-fixing.[64] A handful of commentators have even sought to portray the publishers and Apple as the true innovators being unfairly penalized by antitrust constraints.[65]

None of these critiques hold up in a two-stage Schumpeterian analysis of innovation. First, it was Amazon who was the initial and successful innovator in the e-books market. If Amazon has separately monopolized the market for e-book readers or e-books through unlawful conduct, or unlawfully sought to prevent subsequent waves of innovation from threatening that dominance, the government has the tools of Section 2 of the Sherman Act to deal with those issues in a way that does not limit Amazon from continuing to innovate in the e-books space.

While Apple's iPad is innovative, the horizontal agreement by the publishers and Apple as to e-book distribution is not really innovation at all. Rather it is merely the offering of an existing product (e-books) at a higher price through an existing non-innovative pricing formula (agency pricing). As Christopher Sagers has noted: "[I]t is hard to imagine an efficiency enhancing rationale for a horizontal agreement that does literally nothing other than raise retail prices."[66] Moreover, the government's decision not to bring criminal charges against Apple or the publishers reflects a certain leniency that may well have been motivated by recognition of the need not to squelch Apple's innovation in hardware.

[60] United States v. Apple Inc., 952 F. Supp. 2d 638, 658–61 (S.D.N.Y. 2013).

[61] *Id.* at 670–73, 679–82.

[62] *Id.* at 682.

[63] United States of America v. Apple, Inc., Docket No. 14-00060 (2d Cir. Jan 17, 2014) (Notice of Appeal).

[64] John B. Kirkwood, *Collusion to Control a Powerful Customer: Amazon, E-Books, and Antitrust Policy*, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2399575.

[65] Geoffrey A. Manne & William Rinehart, *The US e-books Case Against Apple: The Procompetive Story*, CONCURRENCES 45 (No. 3-2012).

[66] Christopher Sagers, *Apple, Antitrust, and Irony*, forthcoming.

The *e-books* case is a textbook illustration of how antitrust enforcement can foster innovation and support a Schumpeterian vision of creative destruction not just once but in subsequent stages in an industry. E-books were a significant threat to the publishers long established business model of time-delayed physical distribution. The publishers had become accustomed to their critical role in production, inventory management, and distribution of physical books and to their ability to extract consumer surplus through price discrimination. These advantages were all threatened by e-books distributed through either dedicated e-book readers or through digital applications on general purpose devices such as tablets, smart phones and laptops. The publisher's agreement was merely a counter-strategy by the older incumbents to maintain their print-based model as long as possible, or to bend Amazon into changing its innovative model to become part of the chain of discounting and price discrimination in different print and electronic formats over various periods of time following publication. Either way, fans of Schumpeter should rejoice rather than bemoan the limited but successful use of antitrust to stop a fading incumbent industry from ganging up on an innovator well on its way to destroying old products, pricing patterns, and old methods of distributions.

D. Mergers and Innovation

Protecting and promoting innovation plays an important role in merger enforcement. The 2010 Horizontal Merger Guidelines explicitly discuss the role of innovation in merger analysis and reflect both Arrow's view that competition is a spur to innovation and Schumpeter's view that increased size may well enable innovation that would not otherwise take place:

> *Competition often spurs firms to innovate.* The Agencies may consider whether a merger is likely to diminish innovation competition by encouraging the merged firm to curtail its innovative efforts below the level that would prevail in the absence of the merger. That curtailment of innovation could take the form of reduced incentive to continue with an existing product-development effort or reduced incentive to initiate development of new products.
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> The first of these effects is most likely to occur if at least one of the merging firms is engaging in efforts to introduce new products that would capture substantial revenues from the other merging firm. The second, longer-run effect is most likely to occur if at least one of the merging firms has capabilities that are likely to lead it to develop new products in the future that would capture substantial revenues from the other merging firm. The Agencies therefore also consider whether a merger will diminish innovation competition by combining two of a very small number of firms with the strongest capabilities to successfully innovate in a specific direction.
>
> The Agencies evaluate the extent to which successful innovation by one merging firm is likely to take sales from the other, and the extent to which post-merger incentives for future innovation will be lower than those that would prevail in the absence of the merger. *The Agencies also consider whether the merger is likely to enable innovation that would not otherwise take place, by bringing together complementary capabilities that cannot be otherwise combined or for some other merger-specific reason.*[67]

In deciding whether or not to challenge a merger, the Antitrust Division and the Federal Trade Commission will generally consider any claimed efficiencies and innovations that are

[67] 2010 Merger Guidelines, *supra* note 39, at § 6.4. (emphasis added)

verifiable, merger specific, and sufficient to overcome any predicted anticompetitive effects of the merger or acquisition.[68] The Guidelines caution that projected efficiencies will rarely be sufficient to justify a merger to monopoly or nearly so. In reality, they often function more as a tie-breaker for the agencies and the court in close cases where anticompetitive harm is limited and efficiencies are substantial.[69]

A merger policy informed by creative destruction should take into account the risks that a merger will decrease incentives to innovate by removing the threat of outside disruption. It should also recognize that an increased capacity for innovation is one of the most important precompetitive efficiencies that may justify increased industry concentration. Obviously, these propositions are somewhat conflicting and do not accommodate any categorical acceptance or rejection of mergers. This tension is particularly apparent in cases where a potentially dominant firm has a plausible verifiable claim to be innovating through acquisition.

One example of a prominent case which might have come out differently with a more explicit innovation focus is the *F.T.C. v. H.J. Heinz Co.,* baby-food merger case.[70] Here, Heinz acquired Beechnut to attempt to form a more vibrant and innovative firm to compete more effectively with the dominant firm, Gerber. The merger would have combined Beechnut's more innovative recipes with Heinz's newer, more efficient, and underutilized manufacturing plant.

The district court denied the FTC's request for a preliminary injunction citing the substantial potential for the pro-competitive innovations and efficiencies argued by the defendants.[71] On appeal, the D.C. Circuit reversed on two grounds. The D.C. Circuit found that the merger amounted to a merger to monopoly for the second slot for baby-food on supermarket shelves and that the resulting efficiencies were not as great as claimed, and in the case of the better recipes of Beechnut not merger specific, and thus not relevant to the analysis.[72] Even accepting the traditional merger analysis of the court, the proposed merger may well have unleashed an innovative new firm capable of launching a wave of creative destruction to an otherwise staid market.

In contrast to the baby-food case, the government's opposition to H&R Block's acquisition of TaxAct seems justified on innovation grounds. Here, the government successfully challenged the acquisition of the leading provider of free software for preparation of tax returns, TaxAct, by a leading tax preparation firm, H&R Block.[73] The government's interest in this case

[68] *Id.* at § 10.

[69] *Id.* *See also* F.T.C. v. H.J. Heinz Co., 246 F.3d 708, 720 (D.C. Cir. 2001) (stating proof of "extraordinary efficiencies" is necessary in merger cases with high market concentration); United States v. Oracle Corp., 331 F. Supp. 2d 1098, 1175 (N.D. Cal. 2004) (seeking efficiencies that are "cognizable," "substantiated," and "verifiable"); U.S. Dep't of Justice & Fed. Trade Comm'n & U.S. Dep't of Justice, Commentary on the Horizontal Merger Guidelines §4 (2006), available at http://www.justice.gov/atr/public/guidelines/215247.htm#42.

[70] F.T.C. v. H.J. Heinz Co., 246 F.3d 708 (D.C. Cir. 2001).

[71] F.T.C. v. H.J. Heinz Co., 116 F. Supp. 2d 190 (D.D.C. 2000).

[72] Id. at 720.

[73] *U.S. v. H & R Block, Inc,* 831 F.Supp 2d 27 (2011).

was not because of TaxAct's share of the tax preparation market as a whole, but rather its position as a "maverick" in that market. Section 2.15 of the Guidelines state:

> The Agencies consider whether a merger may lessen competition by eliminating a "maverick" firm, i.e., a firm that plays a disruptive role in the market to the benefit of customers. For example, if one of the merging firms has a strong incumbency position and the other merging firm threatens to disrupt market conditions with a new technology or business model, their merger can involve the loss of actual or potential competition… .

A maverick is in essence a disruptive innovator or a current or likely source of creative destruction in that industry. The firm may play the role of a maverick through its pricing, its service, its willingness to introduce new products, services, or methods of distribution.[74] TaxAct was considered the maverick because it offered a larger selection of features in its free tax return software and that following the acquisition H&R Block would be less likely to introduce new features for the free version of its software. In all likelihood, H&R Block would roll back existing features of the free product following the acquisition to nudge customers toward the premium software package.

A Schumpeterian perspective also provides a framework to assess the issue of innovation through acquisition. The acquisition of start-ups and new entrants by dominant established firms poses difficult questions from the perspective of fostering innovation for both challengers and incumbents. Consider Facebook's recent acquisitions of Instagram and WhatsApp and Google's acquisitions of YouTube, ITA and Waze. Reflexive opposition to such acquisitions would be a mistake. Challengers need the incentive of acquisition (in addition to initial public offerings) as part of the inducement to innovate in the first place. In addition, incumbents often have difficulty continuing to innovate beyond sustaining innovations in their existing fields of dominance. For example, Google had its own video service before it bought YouTube in 2006, but that smaller firm had four times as many users and a strong brand. Finally, incumbents often have resources beyond the capabilities of new entrants to fully bring the innovation to market. Google, for its part was in a much better position to face down YouTube's mounting legal challenges and develop more cooperative relationships with content providers.

At the same time the agencies and courts need the skill and the will to carefully scrutinize such acquisitions when the predominant motive or likely effect is the removal of a disruptive innovator and the maintenance or extension of the existing dominance. Would the result of the Microsoft litigation really have been any different if it had simply acquired Netscape and Sun Microsystems, rather than excluding them from the market through the means they ultimately chose?

Facebook's acquisition of Instagram is a case in point. When Facebook offered close to $1billion for the photo-sharing service in 2012 it was difficult to see how a company with a handful of employees and no revenue could be worth that much. Instagram had quickly built up

[74] For example, the Justice Department challenged the ATT-T-Mobile merger primarily because of T-Mobile's innovative marketing strategies. The merger was ultimately abandoned by the parties. See Michael J. De la Merced, *AT&T Ends $39 Billion Bid for T-Mobile*, Dealbook, Dec. 19, 2011, available at http://dealbook.nytimes.com/2011/12/19/att-withdraws-39-bid-for-t-mobile/?_php=true&_type=blogs&_r=0.

a user base of over 30 million users, and although the service was not a general-purpose social network, it would only have taken a few extra functions to make it one. One could speculate that Facebook was willing to pay so much for Instagram simply to stop it from falling into the hands of rivals, especially Twitter and Google.[75] Likewise, one could speculate that Google's recent billion dollar acquisition of the Israeli traffic and navigation app Waze may have had as much to do with keeping decent mapping technology away from Apple and Facebook as to supplement Google's own mapping data. Suspicion alone does not justify scuttling a merger, but it certainly warrants investigation.

To preserve the proper incentives for both challengers and incumbents the agencies and the courts must use the innovation lens when applicable to judge both legality and the proper remedy (structural versus behavioral) to judge such acquisitions. One of the most complex examples of the role of innovation came in the 2010 Google-ITA acquisition. ITA was the developer of the QPX software which was the industry standard for airline pricing and comparison systems. ITA's software was the basis for most of the leading internet travel sites such as Expedia, Travelocity, Kayak, and TripAdviser. Prior to the acquisition Google was not in the on-line travel space, although it was of course the leading internet search engine and seller of on-line advertising. Google's strategy was to use the acquisition to launch its own on-line travel aggregation site.

The Justice Department's antitrust challenge to the acquisition focused squarely on innovation. The complaint alleged:

> The proposed merger will give Google the means and incentive to use its ownership of QPX to foreclose or disadvantage its prospective flight search rivals by degrading their access to QPX, or denying them access to QPX altogether. As a result, the proposed merger is likely to result in reduced quality, variety and innovation for consumers of comparative flight search service.[76]

The eventual settlement and consent decree also focused on innovation. Under the consent decree Google was required to honor all existing licenses of its now rivals, negotiate extension of such licenses on similar terms to those in effect prior to the merger, and negotiate other terms of the extensions that were fair, reasonable, and non-discriminatory ("FRAND"). Similarly, all new licenses and upgrades had to be on FRAND terms. Moreover, the merged entities were required to continue investing in the development of a next generation software system called InstaSearch that ITA was working on at the time of the acquisition and license that new product on FRAND terms.[77]

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[75] Twitter had reportedly offered $500 million for Instagram. Ankur Kapoor, *Why The FTC Is Investigating The Facebook/Instagram Deal*, *Forbes*, May 22, 2012 (http://www.forbes.com/sites/ericsavitz/2012/05/22/why-the-ftc-is-investigating-the-facebookinstagram-deal/).

[76] Complaint, United States v. Google Inc., Case No. 1:11-cv-00688, par. 5 (D.D.C. Apr. 2011).

[77] Final Judgment, United States v. Google Inc., Case No. 1:11-cv-00688, par.IV.B (D.D.C. July 2011). The terms of the consent decree are discussed at greater length in Spencer Weber Waller, *Access and Information Remedies in High-Tech Antitrust*, 8 J. COMP. L. & ECON. 575, 581–84 (2012).

III. A MATTER OF PRIORITIES MORE THAN DOCTRINE

As Herbert Hovenkamp and others have noted, if innovation produces the greatest impact on economic growth and development, then restraints on innovation produce the greatest economic harm and should be the priority for antitrust enforcement.[78] Operationalizing this principle is challenging, particularly in decentralized enforcement systems like the United States.

The first step is prioritizing innovation for both federal enforcement agencies not just in their case investigations but in their competition advocacy as well.[79] Innovation should be, and already is, a priority in the selection of the major recent unilateral conduct cases. Prioritizing innovation in Section 1 enforcement probably requires slightly de-emphasizing cartel enforcement in small and local industries which do not raise important innovation issues and reallocating resources toward criminal and civil Section 1 cases such as e-books and other restraints on innovations. Similarly, in merger cases innovation issues will, at the margin, help guide the exercise of prosecutorial discretion toward the elimination of mavericks and away from legitimate merger-specific innovations. More extensive use of closing statements when innovation concerns lead away from enforcement or toward unusual behavioral consent decrees should be the norm rather than exception.

Innovation should be front and center in competition advocacy as well. This is the principal method by which competition agencies can guide the sound development of regulatory policy at the federal, state, and local level. Such advocacy may yield even greater returns to innovation than the episodic enforcement of antitrust law.

A recent example of FTC action in local transportation markets is illustrative. Uber, Lyft, Sidecar, and other web-based car service matching networks have sprung up in many metropolitan areas offering an application allowing consumers to see available taxis and private drivers in their immediate area and book a point-to-point ride for a metered fare over their cell phone and receive an estimated pick up time from the driver. These matching services are used by licensed taxis and car services as an additional source of fares to cruising the streets or relying on radio dispatch, they are also used by private drivers—a new source of supply for local transportation markets.

Uber and the like have produced fierce opposition from existing licensed cab and limousine companies who argue that the new competitors are exploiting customers with premium pricing during high demand periods and failing to conduct background checks or require commercial licenses and adequate insurance for the drivers in the new networks. While some of these concerns are valid, most of the underlying opposition is economic in nature and resulted in outright bans, requirements to operate as licensed taxis, or additional tight regulation of these new services in many cities.

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[78] Hovenkamp, *supra* note 20 at 8–9 (discussing how antitrust enforcement should be wary that a *"restraint* on innovation can do much more harm" than price fixing and other inefficiencies).

[79] See Disruptive Innovation Part 2: What Role for Regulators and Competition Policy? (Feb. 7, 2014), available at http://judoeconomics.wordpress.com/2014/02/07/disruptive-competition-part-2-what-role-for-regulators-and-competition-policy/.

The FTC's response has been a series of thoughtful comments submitted to the local taxi and limousine commissions. The comments argue for the minimal regulation necessary to satisfy health and safety concerns but warn against overregulation which protect incumbents from innovative new forms of competition.[80]

Competition advocacy is more easily scalable than enforcement. The FTC can submit comments and testify around the country cost-effectively since the restraints produced by the incumbent taxi industry are fairly consistent nationwide. Promoting innovation should be given priority where the agencies have to make tough resource and strategy choices.

Guiding the exercise of agency resources is relatively easy in comparison to private enforcement beyond direct agency control. Courts must take private cases as they come and cannot pick and choose their agenda or priorities. However, they can use plausible innovation claims as more than a tie-breaker and at the same time insist on the substantiation of such claims by the parties. This means dominant firms do not get a free pass merely because they can articulate such a claim when the challenger can demonstrate harm to disruptive innovation challenging that innovation. But it also means that challengers do not automatically prevail with rhetoric alone in the face of plausible claims that they are seeking to duplicate rather than supplant the dominant firm.

CONCLUSION

Innovation is a process that does not end. In the long run innovation is the most important driver of both competition and economic growth. Despite nearly universal agreement on this premise, the competition policy community is still seeking to come to grips with what this means for the rules and enforcement of competition law. We offer an unconventional interpretation of Schumpeter's pioneering work on this issue not just to validate much of current antitrust law and enforcement but to offer suggestions as to how to better focus on innovation as a competition issue.

[80] See e.g., FTC Staff Submits Comments to Chicago City Council on Proposed Regulation of Transportation Network Providers, available at http://www.ftc.gov/news-events/press-releases/2014/04/ftc-staff-submits-comments-chicago-city-council-proposed.