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Taking Innovation Seriously: Antitrust Enforcement If Innovation Mattered Most

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TAKING INNOVATION SERIOUSLY:
ANTITRUST ENFORCEMENT IF INNOVATION
MATTERED MOST

TIM WU*

For decades now, experts and scholars have agreed that if maximizing consumer welfare is the point of antitrust law, then the protection and promotion of innovation should be an important and perhaps the paramount goal of antitrust enforcement. It has, after all, been more than sixty years since Joseph Schumpeter argued that innovation and economic growth are essentially the same thing.¹

There is very little continuing debate among economists as to whether static or dynamic efficiency is more important over the long run. “Innovation efficiency or technological progress,” wrote Joe Brodley back in 1987, summarizing economic research, “is the single most important factor in the growth of real output in . . . the industrialized world.”² According to Herbert Hovenkamp, “there seems to be broad consensus that the gains to be had from innovation are larger than the gains from simple production and trading under constant technology.”³

Yet all too often this is exactly where the discussion ends. Nearly everyone agrees with these points. But if a law is capable of giving lip service to an idea, it has often done just that. Far from becoming central to the law’s mission, the use of the law to promote innovation has actually retreated. Instead,

* Isidor and Seville Sulzbacher Professor, Columbia Law School, and former Senior Advisor to the Federal Trade Commission and chair of its Platform Policy Working Group. I thank the members of that group and Rob Davis, Ed Felten, Scott Hemphill, Herbert Hovenkamp, Susan DeSanti, Howard Shelanski, Kathryn Judge, Linda Holleran, Joe Farrell, and Shane Avidan. The views expressed in this essay are my own, and do not represent those of any current or former employer.

¹ See JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM, AND DEMOCRACY* 63–120 (1942).

² Joseph F. Brodley, *The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress*, 62 N.Y.U. L. REV. 1020, 1026 (1987).

³ Herbert Hovenkamp, *Antitrust and Innovation: Where We Are and Where We Should Be Going*, 77 ANTITRUST L.J. 749, 751 (2011).

“in contemporary antitrust discourse” writes Jonathan Baker, “price fixing, market division and other forms of collusion are placed at the core of competition policy.”⁴ The Supreme Court’s last two decades of jurisprudence, have, for example, generally made it more difficult to use the antitrust law to promote innovation, not easier.

Now is a particularly important time to consider the relationship between antitrust and innovation. Within the last two years, both the Justice Department and Federal Trade Commission have accumulated an entire docket of antitrust investigations related to the Internet and other high-tech industries. The list of publicly disclosed investigations is lengthy, and includes major players like Google, Apple, Facebook, and Twitter.⁵ The nation’s antitrust enforcement authorities are taking a look at the state of competition on the Internet, an inquiry that puts into clear focus the need for antitrust to take seriously its relationship with innovation policy.

That is the occasion for the question at the center of this essay. The question is: How would the enforcement of antitrust look if the promotion of innovation were its paramount concern? (This is, I hasten to point out, a slightly distinct question from how the law of antitrust would look). In this essay, following a discussion of the relevant writings, I discuss three large areas where the enforcement of the law would be distinctly different.

I. BACKGROUND

It is not as if antitrust scholars or enforcers simply ignore innovation. But current analysis of the topic suffers from several endemic weaknesses.

Too much of the work in this area begins and ends with the relationship between the antitrust laws and the patent laws.⁶ This is a natural way to approach the problem if one sees innovation as the exclusive domain of patent, and protecting competition as the sole goal of the antitrust laws. Were the world actually like that, the only problem would be simply making sure the one law doesn’t get in the way of the other.

⁴ Jonathan B. Baker, *Exclusion as a Core Competition Concern*, 78 ANTITRUST L.J. (forthcoming 2013).

⁵ See Edward Wyatt & Miguel Helft, *F.T.C. Is Said Near a Move on Google*, N.Y. TIMES, June 21, 2011; Thomas Catan & Nathan Koppel, *Regulators Eye Apple Anew*, WALL ST. J., Feb 18, 2011.

⁶ A sample of the writings on the relationship includes WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW*, ch. 14 (2003); William F. Baxter, *Legal Restrictions on Exploitation of the Patent Monopoly: An Economic Analysis*, 76 YALE L.J. 267, 313 (1966); Robin Feldman, *Patent and Antitrust: Differing Shades of Meaning*, 13 VA. J.L. & TECH. 5 (2008); Louis Kaplow, *The Patent-Antitrust Intersection: A Reappraisal*, 97 HARV. L. REV. 1813, 1818–20 (1984).

It is by now obvious that this is much too narrow a way to frame the problem. As Mark Lemley writes, “The premise that intellectual property law promotes dynamic efficiency while antitrust law concentrates on static welfare is wrong, or at least oversimplified.”⁷ There is good reason to think that industry structure is at least as important for innovation as the intellectual property laws. At a minimum, it is clear that high barriers to entry in a given industry, whether maintained by a monopoly or an oligopoly, can discourage product innovation by new firms.⁸ This leads to the conclusion that it is essential to consider antitrust as an innovation regime independent of any discussion of the patent system.

To be sure, there is good scholarship that has gone beyond the simple patent-antitrust divide. Herbert Hovenkamp’s recent work (some with Christina Bohannon) also powerfully makes the case that restraint of innovation should be a central concern of the antitrust laws.⁹ Among others, Jon Baker’s work has focused on market structure as well, pointing out that promoting rivalrous competition is itself a means of serving innovation.¹⁰ Joe Farrell’s work is in this camp, and he also pointed out when he was at the Justice Department, that a focus on pricing can sometimes serve as synecdoche, or a proxy, for innovation concerns.¹¹

But there are further problems. Even within the antitrust scholarship that goes beyond the patent-antitrust relationship, we face a serious failure to explain what kind of innovation antitrust should try to encourage. Rather, the concept is left vague. To be sure, innovation is by its nature a diffuse concept, but the vagueness indicates the persistent, silent grip of older thinking. Here the older theory is the centralized innovation models prevalent in the mid-20th century. When speaking of promoting innovation, scholars or enforcers some-

⁷ Mark A. Lemley, *Industry-Specific Antitrust Policy for Innovation*, 2011 COLUM. BUS. L. REV. 637, 637 (2011 Milton Handler Lecture).

⁸ See, e.g., Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, in 1 INNOVATION POLICY & THE ECONOMY 119, 120 (Adam B. Jaffe, Josh Lerner & Scott Stern eds., 2000) (describing problems arising from patent accumulation); Mark A. Lemley, *Ten Things to Do About Patent Holdup of Standards (and One Not To)*, 48 B.C. L. REV. 149 (2007). This is why some economists have suggested replacing patents’ exclusionary side with a monetary grant, leaving the incentive to invent while removing its exclusionary effect. Steven Shavell & Tanguy Van Ypersele, *Rewards Versus Intellectual Property Rights*, 44 J.L. & ECON. 525 (2001).

⁹ See CHRISTINA BOHANNAN & HERBERT HOVENKAMP, CREATION WITHOUT RESTRAINT: PROMOTING LIBERTY AND RIVALRY IN INNOVATION (2012); Herbert Hovenkamp, *Restraints on Innovation*, 29 CARDOZO L. REV. 247 (2007); Herbert Hovenkamp, *Competition for Innovation*, COLUM. BUS. L. REV. (forthcoming 2012) (2012 Milton Handler Lecture).

¹⁰ Jonathan B. Baker, *Beyond Schumpeter vs. Arrow: How Antitrust Fosters Innovation*, 74 ANTITRUST L.J. 575, 588–601 (2007).

¹¹ Joseph Farrell, Deputy Assistant Att’y Gen., Antitrust Div., U.S. Dep’t of Justice, Speech Before the National Economists’ Club: Thoughts on Antitrust and Innovation, (Jan. 25, 2001), available at <http://www.justice.gov/atr/public/speeches/7402.htm>.

times seem have in mind the supporting the large industrial laboratories that were once the face of industrial innovation, like the Bell Laboratories, supported by monopoly profits. While this form of innovation can be important, it is essential that enforcement policy also encourage small-firm, decentralized innovation that proceeds in an evolutionary rather than planned fashion.¹² Decades of innovation theory have suggested the importance of this latter type, yet this fact can be forgotten.¹³

A final problem with existing scholarship is that it focuses too much on the substance of the law, as compared to the enforcement policy of the two federal agencies that have the power to set competition policy (the Justice Department, the Federal Trade Commission, and state antitrust officials).¹⁴ The substance of the law obviously matters. But how the law is enforced plays a major role in determining how antitrust sets innovation policy. For that reason, due to comparative neglect of the topic, the main focus of this essay is enforcement policy.

II. EXCLUSION

To return to the main question that informs this essay, then, if innovation mattered most, how would enforcement be different?

Perhaps the most obvious point is that law enforcement would be primarily concerned with the exclusion of competitors. It would even care more about exclusion than colluding to raise prices.¹⁵ For, while price fixing has been described as the “supreme evil” of the antitrust law,¹⁶ from the perspective of innovation promotion, exclusion is the real supreme evil. It is exclusion, whether practiced by a monopolist or an oligopoly, that restricts or raises the price by which new ideas (embodied in products) get to enter the market. For

¹² See, e.g., RICHARD R. NELSON & SIDNEY G. WINTER, *AN EVOLUTIONARY THEORY OF ECONOMIC CHANGE* (1982).

¹³ Cf. Baker, *supra* note 10.

¹⁴ The literature on what the goals of antitrust have been and should be is understandably vast. A few of the major works on the topic include HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE*, ch. 2 (2005) (providing a survey of views); HANS B. THORELLI, *THE FEDERAL ANTITRUST POLICY: ORIGINATION OF AN AMERICAN TRADITION* (1954) (assessing the reasons for the passage of the Sherman Act); Robert H. Bork, *The Goals of Antitrust Policy*, 57 *AM. ECON. REV.* 242 (May 1967) (maximizing consumer welfare ought to be the goal of antitrust); Eleanor M. Fox, *The Modernization of Antitrust: A New Equilibrium*, 66 *CORNELL L. REV.* 1140, 1140–41 (1981) (stressing goals other than efficiency).

¹⁵ Collusion to exclude competitors would be a concern, and, of course, high prices can be a sign of exclusion. For another recent argument that exclusion should be “central” to antitrust, see Jonathan Baker, *Exclusion as a Core Competition Concern*, *ANTITRUST L.J.* (forthcoming); see also C. Scott Hemphill & Tim Wu, *Parallel Exclusion*, *YALE L.J.* (forthcoming 2012).

¹⁶ *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 408 (2004).

an innovation-centered antitrust law, that is a dynamic problem even worse than consumers paying high prices.

The Justice Department's suit against AT&T is the prototype of an enforcement action taken against exclusionary behavior. By the 1960s and into the 1970s, a range of new firms were eager to enter American communications, with innovations ranging from the mundane (silly-looking telephones and attachments) to the radically transformative (like the home modem and dial-up computer networking). AT&T, however, did everything it could to make it expensive or impossible for these would-be entrants to get started, even after being ordered to desist by regulatory authorities. The firm employed tactics like stalling, blocking the emergence of standards, and punishing customers who did business with AT&T's competitors.¹⁷

The Justice Department's successful enforcement action against AT&T therefore is a model of an exclusion-target lawsuit.¹⁸ It also shows how important it is to take the long view when it comes to enforcement policy. In the short run, the effects of the AT&T lawsuit were ambiguous because the breakup produced chaos and led some prices to go up while others went down. By purely price-based metrics, the effects of the AT&T lawsuit were positive, although perhaps not overwhelmingly so. But we must take the longer view to understand the full effects of the lawsuit. Over the long run, the telecommunications market went from stagnancy to vibrancy, and, even more importantly, actually spawned many new markets, including markets like on-line auctions, search advertising, or social networking that were never dreamed of by enforcers.

The AT&T case demonstrates a more general point: the problem of exclusive conduct is that it slows or blocks *external* product innovation, and, as I will suggest, is therefore particularly invidious. External innovation consists of the market entry of a new product developed by a firm outside the market or a startup. This is often a small firm, but not always. Examples include the small competitors to AT&T described above, but also larger firms like Apple's entrance into the mobile telephone market in 2008 with its iPhone. Such external innovation is to be contrasted with internal innovation, which refers to a firm already in a given market introducing an improved product, like R.J. Reynolds Tobacco introducing a better-tasting cigarette.

¹⁷ Some of these tactics are documented in *MCI Communications Corp. v. AT&T*, 462 F. Supp. 1072 (N.D. Ill. 1978).

¹⁸ *United States v. AT&T*, 552 F. Supp. 131 (D.D.C. 1982) (Modification of Final Judgment). I am not suggesting that the legal process was efficient, of course. The case first started in 1949, ending in an initial consent decree in 1956, then coming back to life in 1974, and finally ending in 1982 in the district court. *Id.* at 136. Follow-on appeals and a further review of the Order continued until 1991.

Both internal and external innovation are important, to be sure. But, as the innovation and business literatures suggest, while both are important, external innovation is more important, for two reasons. First, external innovation is more likely to be of a “disruptive” nature—a giant leap forward, so to speak.¹⁹ There are a number of well-studied reasons for this. When a dominant firm innovates it is most likely to follow the path it has already blazed, lest it lose the value of its existing investments. It may also be exposed to the demands of existing consumers for incremental improvement, or face serious cognitive challenges in trying to imagine something different than its current course. “[K]nowledge and habit once acquired,” wrote Schumpeter in his youth, “becomes as firmly rooted in ourselves as a railway embankment in the earth.”²⁰

Second, while internal innovation can be important, and even disruptive (consider, for example, IBM’s development of the Personal Computer in the early 1980s), it is critical to understand that internal innovation can depend on the existence of an external challenge. That is to say, established firms tend to innovate when they actually face a challenge from a startup or an outsider. This is well demonstrated by the personal computer example. In the 1970s IBM’s dominant computer was the larger mainframe computer, which served an entire enterprise at once; its “personal” computers were priced out of the reach of normal people. IBM might very well have stuck to that model, if not faced by an external threat from startups like Commodore, Atari, Apple, Tandy, and Texas Instruments; it was the external challenge that forced it to develop an effective personal computer.

In more recent times, we might ask if Google would have continued to improve its search engine or developed Google+ if not facing serious challenges from Microsoft or Facebook, respectively. As Kenneth Arrow pointed out long ago, absent an external threat, a monopolist often has less to gain from innovation, because it already controls the market.²¹ This isn’t to say that an incumbent monopolist will never innovate—it might want to cut its own costs, for example, or produce better products to encourage customers to upgrade. However, free from any serious external pressure to do so, innovation can become a form of altruism, as opposed to a necessity.²² All this suggests

¹⁹ CLAYTON M. CHRISTENSEN, *THE INNOVATOR’S DILEMMA: WHEN NEW TECHNOLOGIES CAUSE GREAT FIRMS TO FAIL* xviii–xx (1997).

²⁰ JOSEPH A. SCHUMPETER, *THE THEORY OF ECONOMIC DEVELOPMENT* 84 (Redvers Opie trans., 1934) (1911).

²¹ Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in *THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS* 609, 619 (Richard Nelson ed., 1962) (“[T]he incentive to invent is less under monopolistic than under competitive conditions . . .”).

²² What I am describing here as altruistic innovation ought not to be underestimated. Some of the research conducted at Bell Labs during its golden years might be considered altruistic, in the sense that it conveyed no clear competitive advantage to AT&T over its (non-existent) competi-

that external innovation can determine the rate of both external *and* internal innovation.

How is exclusion relevant to this story? Exclusion, if cheap enough, is actually an alternative to innovation, particularly for a monopolist. The cheaper exclusion is, the less reason a dominant firm has to invest in improving its products. There is a tradeoff, in other words, between investing in innovation and investing in exclusion.

If we accept, then, that innovation and exclusion are alternative responses to an external challenge, then making exclusion *expensive* is the same thing as promoting innovation. The simplest description of antitrust's innovation policy is this: it should use enforcement policy to raise the costs of exclusion, therefore promoting outside innovation and forcing the incumbent to respond in kind.²³

Raising the costs of exclusion is accomplished in two ways. First, more obviously, the federal agencies could bring Sherman Act, Section 1 or 2, or FTC Act, Section 5 actions that target exclusion directly. Alternatively, and importantly, however, are merger policies that prevent larger firms from acquiring highly innovative small firms in order to either capture or shut down their innovation efforts.²⁴

To simplify, I have been discussing the monopoly incumbent, but I think antitrust's innovation policy must also attend to the effects of oligopoly exclusion on innovation.²⁵ It will not do to ignore oligopoly, for an oligopoly may want to slow or block external innovation for the same reasons as a monopolist. The one difference is that an individual member of an excluding oligopoly may sometimes break with the others and gain competitive advantage by adopting innovations. However, for game-theoretic reasons it is easier to maintain an oligopoly-exclusion scheme than a price-elevation scheme, meaning that parallel exclusion warrants particular scrutiny for enforcers who consider innovation a paramount concern.

We can see that, in practice, oligopolies do sometimes act collectively to block innovation. Consider American steel pipe manufacturers, who have, since the 1970s, faced the prospect of market entry by a manufacturer of cheaper, higher quality, plastic pipes. There are multiple well-documented ef-

tors, yet at the same time ultimately proved of great importance. In the 21st century, large firms like Google and Microsoft also maintain research programs whose connection to a competitive advantage might be considered unclear.

²³ Cf. Susan A. Creighton, D. Bruce Hoffman, Thomas G. Krattenmaker & Ernest A. Nagata, *Cheap Exclusion*, 72 ANTITRUST L.J. 975 (2005).

²⁴ See, e.g., U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines § 6.4 (2010), available at <http://ftc.gov/os/2010/08/100819hmg.pdf>.

²⁵ Hemphill & Wu, *supra* note 15.

forts to slow or block the entry of plastic piping, including efforts to manipulate standard setting to block entry (as in *Allied Tube*²⁶), or by paying off distributors with an annual rebate if they stick with the oligopoly (as, roughly, in the 2012 FTC Pipes case).²⁷

It is true that the law surrounding such parallel exclusion is unclear and confusing, which may deter enforcement. Under current law this must mainly be the domain of Section 1 enforcement, based on the existence of an explicit or tacit horizontal or vertical agreement.²⁸ However, the fact that challenging parallel price elevation based on tacit agreements or interdependence is so controversial has had spillover effects for targeting parallel exclusion, even though there are important reasons to distinguish pricing and exclusion. In addition, the United States lacks a collective dominance rule like Europe's,²⁹ and most efforts to use Section 2 to create a rule against shared monopolies have been unsuccessful.

The fact that the law in this area happens to be confused should not be a deterrent to targeting the harm in parallel exclusion cases, especially given their potential effects on innovation. The Justice Department's litigation against Visa and Mastercard in the late 1990s provides a helpful guide. Facing market entry by American Express, Visa and Mastercard adopted, in parallel, rules that threatened its member banks with expulsion from their payment networks were they to sign with American Express. The Justice Department successfully challenged the jointly adopted exclusion scheme based on the vertical agreements in the exclusion agreement.³⁰ While not every anticompetitive parallel exclusion case will feature an explicit agreement, those that do should be seen as low-hanging fruit.

The bottom line is that an innovation-centered antitrust policy must make scrutiny of exclusion of innovators its primary concern and a focus of resources. In practice, this means pursuing challenging cases with few opportunities to rely on rules of per se illegality. However, the difficulty of the undertaking should not take away from its importance.

²⁶ *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492 (1988).

²⁷ The full complaint contained allegations against three pipes firms and included two allegations of illegal agreements. *Sigma Corp.*, FTC Docket No. C-4347 (2012), available at <http://www.ftc.gov/os/caselist/1010080/120104sigmacmpt.pdf>.

²⁸ *United States v. Visa U.S.A., Inc.*, 344 F.3d 229, 243 (2d Cir. 2003); *Allied Tube*, 486 U.S. 492.

²⁹ Case COMP/IV/32.448 & IV/32.450—Cewal, Cowac & Ukwal, Comm'n Decision, 1993 O.J. (L 34) 20 (Dec. 23, 1992); see also Case COMP/D/32.448 & 32/450—Compagnie Maritime Belge, Comm'n Decision, 2005 O.J. (L 171) 28 (Apr. 30, 2004), available at http://ec.europa.eu/competition/antitrust/cases/dec_docs/32450/32450_35_6.pdf.

³⁰ *Visa U.S.A., Inc.*, 344 F.3d at 243.

III. OVERSIGHT OF INNOVATION CATALYSTS: STANDARD SETTING, PLATFORMS, AND PATENTS

A competition law that is centered on promoting innovation would take very seriously its oversight of the main innovation catalysts in an economy. It would devote resources to making sure that these instrumentalities are not corrupted.

In a healthy, innovative economy, there are certain instrumentalities that act as catalysts for innovation. This is a topic of many popular and academic works on what makes Silicon Valley special or how to create “innovation clusters.”³¹ Of course, many of these instrumentalities lie beyond the jurisdiction of even the most widely construed antitrust law, as they include matters like good engineering programs, healthy venture capital firms, and a culture that accepts failure. But there are some instrumentalities that do lie within the domain of competition enforcement. Here I want to focus on three: Standard Setting, Platforms, and Patents.

Platforms and standard-setting processes are two conceptually very similar instrumentalities of innovation. (In some cases, in fact, there is no real difference between a platform and a standard.) These two catalysts have this in common: they reduce the costs of entry for new products or new firms, and therefore increase the rate at which product innovation can happen. Each lowers the price a firm incurs to introduce a new product and potentially reach an enormous number of customers. On the other hand, if abused, both instrumentalities can lose their catalytic ability, or even be used to exclude innovation.

Let’s start with platforms. Platforms are critical to innovation because, again, they vastly cheapen market entry for a large number of firms (the developers), creating ultra-low-cost market entry. The platform owner, in effect, tees up the market for everyone else, providing both the tools and distribution necessary to reach customers. For example, the Windows platform, which became dominant in the 1990s, made it far easier for a new firm (like Netscape) to reach millions of customers with a single product, without having to write its own operating system or its own tools. A developer who writes mobile apps today for smartphones can do so with just a few programmers. The developer may have to do some separate coding for Android, Apple, and Win-

³¹ *E.g.*, STEVEN JOHNSON, *WHERE GOOD IDEAS COME FROM: THE NATURAL HISTORY OF INNOVATION* (2010); *see also* INNOVATION CLUSTERS AND INTERREGIONAL COMPETITION (Johannes Bröcker, Dirk Dohse & Rüdiger Soltwedel eds., 2003); INNOVATION NETWORKS AND CLUSTERS: THE KNOWLEDGE BACKBONE (Blandine Laperche, Paul Sommers & Dimitri Uzundis eds., 2010); KNOWLEDGE EXTERNALITIES, INNOVATION CLUSTERS AND REGIONAL DEVELOPMENT (Jordi Suriñach, Rosina Moreno & Esther Vayá eds., 2007); Stefano Breschi & Franco Malerba, *The Geography of Innovation and Economic Clustering: Some Introductory Notes*, 10 *INDUS. & CORP. CHANGE* 817 (2001).

dows, but doesn't have to write his own operating system or manufacture a physical phone. The platform, we might say, allows radically non-integrated firms to succeed.

As such, platform-centered industries are profoundly different from the vertically integrated structures that dominated the 20th century. It is interesting to imagine what the platforms from the high-tech world would look like in more traditional industries. Imagine that General Motors was an "open car platform" that made available its car manufacturing facilities to any developer to build a car and try to sell it through General Motors' dealers. It sounds impractical, but if such a system worked it might actually foster innovation in the car industry.

Standards and platforms are different, and not always thought of together, but in fact the two concepts are closely related when it comes to innovation. (A platform usually relies on standards, and can sometimes be described as a privately implemented standard.) A successful industry standard, like a platform, also reduces the costs of entry. Consider the USB (universal serial bus), which is a successful standard for attaching peripherals to a computer. The existence of that standard makes it cheaper to develop peripherals like printers, thumb-drives, and so on. It is standards that make possible product ecosystems. The critical issue, again, is making possible low-cost market entry by non-integrated firms.

Given the importance of platforms and standard setting to innovation, an innovation-centered law would make a major goal the protection of the integrity of these instrumentalities. We can begin with standard setting, where competition law in general and the Federal Trade Commission in particular have a decent, if still relatively short, track record of trying to prevent abuse and corruption of standard-setting processes.³²

Summarizing a broad literature, there are several ways the process may be corrupted.³³ Those involved in standard setting can game the system by lying

³² See, e.g., *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492 (1988) (holding that efforts to influence private SSO are not immunized under *Noerr-Pennington* doctrine); *Rambus Inc. v. Infineon Techs. AG*, 318 F.3d 1081 (Fed. Cir. 2003) (finding no breach of duty to disclose pending patent applications); *Intel Corp.*, 128 F.T.C. 213 (1999) (entering consent order prohibiting Intel from withholding advanced technical information based upon intellectual property disputes); *Dell Computer Corp.*, 121 F.T.C. 616 (1996) (entering consent order prohibiting Dell from enforcing its patents rights after Dell promoted a proprietary standard without disclosure); *Union Oil Co. of Cal.*, FTC Docket No. 9305 (2004), available at <http://www.ftc.gov/os/adjpro/d9305/040706commissionopinion.pdf> (Union Oil promoted a proprietary standard, while stating to industry participants and government agencies that it was non-proprietary).

³³ See, e.g., Stacy Baird, *The Government at the Standards Bazaar*, 18 STAN. L. & POL'Y REV. 35 (2007); Herbert Hovenkamp, *Patent Deception in Standard Setting: The Case for Antitrust Policy* (U. Iowa Legal Studies Research Paper July 2010); Mark A. Lemley & Kimberly A. Moore, *Ending Abuse of Patent Continuations*, 84 B.U. L. REV. 63 (2004); Philip J. Weiser,

about or hiding patents related to a standard and then asserting them later (sometimes called “patent ambush”). Alternatively, parties to a standards process may promise to license a relevant patent in a standardized way, and later break their promise, or threaten to, thereby endangering everyone who relies on the standard.³⁴

The preeminent interest in protecting standard setting is not preventing harm to any individual firm, but rather combatting a *systemic* harm: the corruption of an instrumentality that is critical to innovation. Aside from the individual harm that may come from an instance of standard-setting abuse, the real blow would be the loss of trust in the standard-setting process as a whole, and, consequently, higher costs of entry across the board for innovators, at a collective social loss.

Oversight of platforms is conceptually similar, albeit far less developed. Consider the paradigmatic case of a platform owner that broadly represents to the world that it maintains an open and transparent innovation platform, based on open standards. Based on those representations, that owner attracts investment and in time manages to gain a monopoly position in the market in question. Having achieved this platform monopoly, the platform owner then begins to take measures to exclude competitors both to this platform monopoly, and to the most lucrative applications. Such measures might include granting its own applications access to secret APIs, making efforts to exclude applications that might themselves serve as platforms, selectively disabling certain functions on applications for its own competitive advantage, and other tactics.

Enforcing the law to protect innovation would take some of this conduct as a source of systemic harm, so long as its effects were harmful to competition. The “bait-and-switch” behavior of the platform owner may destroy any incentive, in the future, to invest in application development for new platforms. That is a problem less because of harm to any individual developer, and more of a systemic problem: the corruption of the entire system of platform-based innovation that has been so central to technological progress. It discourages innovation if being an application developer becomes a fool’s game, and everyone wants to be the platform.

If this sounds a bit like the *Microsoft* case, that’s right, but it is a more general phenomenon. That particular litigation can be seen as the foundation of contemporary platform oversight. That is particularly clear for the condem-

Making the World Safe for Standard-Setting, in 2 THE IMPACT OF GLOBALIZATION ON THE UNITED STATES 171, 171–202 (Beverly Crawford ed., 2008).

³⁴ This is what happened in *Negotiated Data Solutions LLC*, FTC Docket No. C-4234, 2008 WL 258308 (Jan. 22, 2008) (entering consent order binding patent holder to its predecessor-in-interest’s commitment to SSO).

nation of Microsoft's Java strategy, where the firm pretended to embrace Java as a platform, but in fact was attempting to lure developers to a version that was only compatible with Windows.³⁵ One way to understand *Microsoft* is as sending this message: once the entire industry has committed to a private platform, and invested heavily in that platform, and granted the owner a profitable monopoly, the platform owner earns (and should expect) oversight of its practices from that point onward. To be sure, the *Microsoft* litigation took the form of a monopoly maintenance case, premised on the fact that Netscape (and Java) was itself a platform, and a potential threat to Microsoft's Windows operating system. But the case should be taken more broadly to suggest that, in a purely innovation-centered antitrust law, the treatment of applications by platform owners would be the subject of continuing oversight.

I hasten to add, however, that manipulating standard setting and platforms is a problem even when it has nothing to do with the potential acquisition or maintenance of monopoly power, which is why Section 5 of the Federal Trade Commission Act³⁶ is important in this area. Nevertheless, competition law should not somehow declare closed platforms illegal, or make every successful platform a utility. There must be important allowances for both non-arbitrary exclusion and for platforms that are closed or semi-closed to begin with, and stay that way. The platform that declares itself closed from the outset does not gain the advantages of inviting development on an open platform. The problem is with platforms that gain dominance based on a practice of serving as the entire industry's basis for innovation and then later use that position to destroy any threats to their dominance.

This leads us finally to the patent system, a topic that is far too large to be considered in full here, and one that, as suggested earlier, has been the subject of deep and perhaps excessive scholarly inquiry, coupled with little actual reform. Suffice to say that antitrust enforcement that takes innovation as its paramount concern must engage very closely with the patent system, which is in this view a sister regime sharing the same goals, if it uses different methods.

Herbert Hovenkamp argues that "it is not the purpose of antitrust to fix defects in other regulatory regimes, particularly when those regimes are federal" and that, therefore, "For the most part, the patent system must confront these problems of over-protection and excessive abstraction for itself, and antitrust has relatively little place."³⁷ This view I cannot agree with fully. For while it is true that antitrust enforcers may not be able to do much about individual patents, they should have a major role in overseeing the effects of

³⁵ *United States v. Microsoft Corp.*, 253 F.3d 34, 74-78 (D.C. Cir. 2001).

³⁶ 15 U.S.C. § 45.

³⁷ Hovenkamp, *supra* note 3, at 750.

accumulated patents. The degree to which the Patent and Trademark Office and federal courts can prevent the anticompetitive use of accumulated patents is limited. The PTO's task is to make sure patents are granted only when deserved, and the federal courts can, on a case-by-case basis, decline to allow the enforcement of a patent. But neither institution is in a position to examine the strategic use of patent as an exclusionary tool. Neither can examine, for example, a campaign of patent accumulation and threatened enforcement that might be considered an "unfair method of competition" under Section 5 of the FTC Act, or a strategy designed to maintain a monopoly, raising Section 2 (or even Clayton Act, Section 7) concerns.³⁸

Antitrust enforcers whose primary concern was innovation would have no choice but to see constant oversight of the patent system as their job. This is necessarily difficult, because the patent system is designed to create market power as the reward for invention. The line between legitimate and illegitimate use of the patent power is indistinct. However, that doesn't mean it doesn't exist. For there are clearly instances when the power created by patent is used in strategic ways that no reasonable patent system could have intended, such as using huge collections of potentially invalid patents as a litigation threat. So, as a general rule, enforcers should be constantly examining the strategic use of the patent power for excluding competitors or maintaining or gaining monopoly in ways that exceed the rewards reasonably intended by the patent system itself.

IV. TIMING IS EVERYTHING

Those concerned with innovation policy tend to be obsessed with questions of timing. For any aspect of an innovation policy, whether in telecommunications, intellectual property, or elsewhere, the *when* of any decision can matter as much as the substance. However, in antitrust policy, timing decisions are often obscured. In innovation-centered antitrust enforcement, the timing of intervention would become a more crucial issue than it is today—a matter of prosecutorial discretion considered independent of illegality.

Section 2 of the Sherman Act might be thought to have a timing rule already, based on the statement in *United States v. Grinnell Corp.* that a violation of the law consists of "the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident."³⁹ The timing rule

³⁸ There are a limited number of recent challenges to strategic accumulation and threatened enforcement of patents to monopolize a market, beyond what is allowed by the patent itself. An older, successful example is *Kobe, Inc. v. Dempsey Pump Co.*, 198 F.2d 416, 423–27 (10th Cir. 1952).

³⁹ 384 U.S. 563, 570–71 (1966). Sometimes, courts and commentators emphasize "durability" of a monopoly as an important factor in determining whether a monopoly even exists. *See, e.g.*,

expressed here is that enforcement of the law should not be triggered by monopoly in and of itself, but by wrongful conduct.

This is a deceptively attractive formula for the enforcer, but it assumes knowledge of something that is, in fact, nearly impossible to know before serious investigation: first, whether the acquisition or maintenance of monopoly is actually the product of acumen or of exclusionary conduct, and second, whether any exclusionary conduct is in fact justified. It can be many years before that question is resolved one way or another, and even then at times the determination has amounted to something of a legal fiction, a contrivance for dealing with the actual concern, which is a monopoly that has simply lasted too long.⁴⁰ Show me a firm with dominant market share and I'll show you a potential Section 2 case, or at least a lengthy investigation. That is why the timing decision, which is really a matter of prosecutorial discretion, cannot be hidden behind the fig leaf of illegality.

For innovation policy, timing is always important, for the timing decision sets the size of the bounty promised the innovator. This is an analysis familiar from the intellectual property laws. How much should the law (credibly) promise to encourage investments in innovation? The basic answer is this: enough, but no more.⁴¹ The reward of monopoly is attractive only to the extent it encourages innovation. As Justice Sandra Day O'Connor put the orthodoxy, the IP system "reflects a balance between the need to encourage innovation and the avoidance of monopolies which stifle competition without any concomitant advance in the 'Progress of Science and useful Arts.'"⁴²

In antitrust, the timing of investigation and enforcement decisions, in effect, set the size of the bounty promised to the monopoly-seeking entrepreneur. As Justice Scalia wrote in *Trinko*, "The opportunity to charge monopoly

Reazin v. Blue Cross & Blue Shield of Kan. Inc., 899 F.2d 951, 967–68 (10th Cir. 1990); United States v. Syufy Enters., 903 F.2d 659, 666–70 (9th Cir. 1990) (emphasizing the importance of evaluating the ability of a defendant to "maintain" market share); Richter Concrete Corp. v. Hilltop Concrete Corp., 691 F.2d 818, 826 (6th Cir. 1982) (noting that a defendant's declining market share undermined any "inference of capacity to monopolize"); Advanced Health-Care Servs., Inc. v. Giles Mem'l Hosp., 846 F. Supp. 488, 494 (W.D. Va. 1994) ("If the defendants' market share is declining and/or other competitors' market shares are rising, then the defendants can hardly possess monopoly power."); 2B PHILLIP E. AREEDA ET AL., ANTITRUST LAW ¶ 501, at 111 (3d ed. 2007) (defining monopoly power to include this durability element).

⁴⁰ See, e.g., Oliver E. Williamson, *Dominant Firms and the Monopoly Problem: Market Failure Considerations*, 85 HARV. L. REV. 1512, 1513 (1972).

⁴¹ See Tim Wu, *Intellectual Property, Innovation, and Decentralized Decisions*, 92 VA. L. REV. 123 131–36 (2006) (discussing basic case and complications).

⁴² *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989); see also *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 229 (1964) ("Patents are not given as favors, as was the case of monopolies given by the Tudor monarchs, but are meant to encourage invention by rewarding the inventor with the right, limited to a term of years fixed by the patent, to exclude others from the use of his invention.") (citations omitted).

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.”⁴³ If that’s true, the question, then, is how long should a “short period” be? Five years? Ten years? The decision, by implication, plays a role in deciding how large a prize the successful innovator can expect.

Stated otherwise, the static costs of an exclusive grant, both in terms of higher prices and exclusionary effect, should be weighed against the increased incentives to innovate, and the balance found at that point. The same analysis should inform an innovation-centered antitrust law. No matter what its competitors may say, a firm about to achieve dominance, or newly arrived at dominance, should probably not be subject to immediate intervention, absent strong evidence that improper methods were used to get there.

Antitrust policy must, in other words, make a credible commitment to allowing the successful competitor to earn the prize. Right now, that hardly seems to be a problem, given the billions that founders of successful tech companies have earned. Nonetheless, antitrust law enforcement must remember that investment can depend on a creditable commitment to allow a successful firm to earn out its investments.⁴⁴

But tolerance of dominance for reward purposes must also reach its limit. Once a firm has earned back its investments, and in some cases earned hundreds of millions if not billions in monopoly rents—in other words, once its founders have struck it rich—it becomes ridiculous to argue that antitrust enforcement threatens any initial incentives to innovate (even if, in some mathematical sense, this is true). The Justice Department’s case against Microsoft in the 1990s may well have, in a mathematical sense, reduced the incentive to be Bill Gates, but not in the sense that it measurably deterred anyone from trying to be the next platform monopolist.

If all this sounds too untied to questions of illegality, what I am really recommending is a kind of ripeness policy, or a rule of thumb. The fact is that a newly dominant firm—again, assuming it gained its position legitimately, with acumen—is less likely to have developed the techniques, expertise, or the staffing for exclusion. Odds are, exclusion techniques will become attractive later in the firm’s life, in the sense that professional athletes tend to turn to performance-enhancing drugs when their God-given abilities begin to flag.

If we are speaking of a rule of thumb I’d suggest the following: The monopolist should be profitable before enforcement is countenanced. Waiting

⁴³ *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004).

⁴⁴ *Cf. Douglass C. North, Institutions and Credible Commitment*, 149 J. INSTITUTIONAL & THEORETICAL ECON. 1 (1993).

through a few years of dominance is likely a good idea. But ultimately, once the monopolist has earned back its investments, all talk of forbearance to preserve incentives to innovate must come to an end.

V. CONCLUSION

The main objection to competition law enforcement that takes innovation seriously is that it's a good idea in theory but too difficult in practice. Lawyers and judges like nothing better than a nice, clean price-fixing case. Enforcers dream of a case where no one has to argue or worry about procompetitive justifications or other complications. This can easily lead to "price fixation"—getting stuck on pricing cases because they are the easiest and politically safest cases to bring. The idea of promoting or protecting innovation sounds good, but challenging an old-school cartel that fixes high prices is easier.

Cases based on price effects have the advantage of clarity, clear villainy, and short-term effects. Price-related conduct is simply easier to describe, understand, and classify as harmful. In a price-fixing cartel, the bad guys can be clearly identified, and courts and lawyers can rely on the agreed view that high prices are bad for consumers, and the effects of a successful challenge to price-related conduct are felt in the short term. All these factors combine to make risk-averse attorneys and judges prefer the relative safety of price-related cases.

In contrast, the challenges of innovation-centered competition enforcement are many. The most serious challenge is that the merits of the conduct challenged in exclusionary cases can often be debated, making the venture inherently more daunting. Moreover, the effects of a successful challenge are felt over the long term and are hard, if not impossible, to measure. There is no denying that protecting innovation is a murkier and vaguer goal. But it also happens to be much more important. It is the job of the enforcement agencies and their economists to exercise judgment—to make the effort to sort the wheat from the chaff, and not just retreat out of fear of making mistakes.