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A "Primarily Property" Presumption Is – Still – *Really* Needed for the IP/Antitrust Interface[*]

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"… the presumption of market power is gone, and today patents are regarded in most cases as no more indicative of monopoly power than are land titles or other tangible property interests." (Hovenkamp, 2015, p. 471)

"A U.S. patent provides a lawful monopoly over the manufacture, use, and sale of an invention …" WesternGeco LLC v. ION Geophysical Corp., 585 U.S. __ (2018); dissenting opinion by Justice Gorsuch.

"A licensing agreement that provides for the payment of royalties after a patent's term expires does not enlarge the patentee's monopoly or extend the term of the patent." Kimble v. Marvel Entertainment, LLC, 576 U.S. __ (2015); majority opinion by Justice Kagan.

Abstract

Antitrust discussions in the U.S. have a long tradition of describing intellectual property (IP) – primarily patents and copyrights – in unqualified terms of "monopoly". Although there have been substantial efforts over the past two decades to pull back from this automatic association, the presumption of unqualified monopoly continues to appear in important legal decisions, as well as in legal and social sciences discussions, that involve IP.

There is another place where the discussions might start: with a presumption that any IP is "primarily property" – albeit with some important distinctions that separate IP from "garden variety" tangible property and that raise the possibility of market power in some instances.

This paper explores the important similarities – and differences – between "garden variety" property, such as real estate, and IP; it concludes that the similarities are substantial, so that the presumption that IP is "primarily property" is a reasonable alternative starting point for antitrust/IP discussions. It then discusses some beneficial differences that this alternative starting point could have made and/or could still make.

Key words: Antitrust; intellectual property; monopoly; market power; patent; copyright; trademark

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I. Introduction.

Antitrust discussions in the U.S. have a long tradition of describing intellectual property (IP) – especially patents and copyrights, but sometimes even trademarks – in unqualified terms of "monopoly". Since antitrust policy is supposed to encourage competition and discourage monopoly, this tradition has meant that there was a hostile climate that automatically surrounded any antitrust discussion that involved IP.

Modern antitrust discussions – for at least the past four decades – have struggled to move away from this presumptive hostility. Over two decades ago the U.S. Department of Justice (DOJ) and the Federal Trade Commission (FTC) abandoned this presumption for enforcement purposes; over a decade ago the U.S. Supreme Court followed suit. But, alas, the presumption of unqualified monopoly still appears in important legal decisions, as well as legal and social sciences discussions, that involve IP.[1]

There is another place where the discussions might start: with a presumption that any IP is "primarily property" – albeit with some important distinctions that separate IP from "garden variety" tangible property (such as land and structures, vehicles, personal possessions, etc.). The discussion could then acknowledge that in *some instances* IP does involve market power and thus warrants antitrust considerations.

Why does this matter? The monopoly presumption has clearly influenced past policy – both by antitrust enforcers and by the courts – in unfortunate directions. And it continues to get in the way of clear thinking about IP and its role in a modern economy and the relationship between antitrust and IP in such economies.

[1] And the automatic and unqualified associations between IP and monopoly appear in general IP legal texts. See, for example, Hunter (2012, p. 1); Merges et al. (2012, p. 431); Chisum et al. (2015, p. 7); Menell et al. (2018, p. 493); and Bouchoux (2018, p. 4).

This paper will expand on these themes: In Section II we provide a brief overview of the standard argument for doing something special – for establishing a property right – in a newly created idea and thus for the concept of I*P*. Section III addresses the "monopoly" presumption that has traditionally accompanied IP discussions, especially when antitrust issues are also involved. Section IV explores the important similarities – and differences – between "garden variety" property, such as real estate, and IP; it concludes that the similarities are indeed substantial, so that the perspective that IP is "primarily property" is a reasonable starting point for antitrust/IP discussions – instead of starting with the traditional monopoly presumption. Section V then addresses some beneficial differences that this alternative starting point could have made and/or could still make. Section VI concludes.

II. The nature of intellectual property.

Information – once it is in existence – is a classic "public good": It is non-rival and non-exclusive: Additional parties can acquire and utilize the information without diminishing the original owner's understanding of the information; and, often, it is difficult or impossible to prevent those parties from acquiring the information; equivalently, the costs of duplication – copying – are often close (or even equal) to zero.

Under these circumstances, we would expect competitive markets to drive the price of transactions that involve this information to something close to those near-zero duplication costs. And, once this information has come into existence, this competitive price is (approximately) the socially optimal price.

The problem, of course, lies in the creation of this information:[2] If the initial creation of the information requires the expenditure of resources by the creator, then the near-zero duplication costs and the associated near-zero competitive price will make it difficult for the creator to recoup his/her initial investment. In turn, these difficulties will discourage that initial investment and thus discourage the creation of the information in the first place.[3]

The "solution" to this problem in modern societies has been to establish a limited-term property right (for the creator) in the newly created information, which provides the owner with the ability to exclude others from using the information – in essence, to limit (or prevent) copying for a specified period of time, after which the information enters the public domain and is freely available for all to copy. This is the essence of the patent and copyright systems of the U.S. and other modern societies.[4] Indeed, the Framers of the U.S. Constitution considered such property rights to be sufficiently important that they included a clause in the Constitution that specifically authorized the Congress to draft legislation that would establish property rights for inventors and authors.

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[2] Boldrin and Levine (2008; 2013) argue that in actuality this is not a problem.

[3] It is important immediately to emphasize that "discourage" should not be equated with "zero" creation. It is clear that information was created prior to the development of IP protections, and that there are artists who will create and inventors who will tinker even in the absence of any reward. Further, for inventions, the possibility of not revealing the information ("trade secrets") or of having an invention that is difficult to copy may also encourage invention. Moser (2005, 2012) provides an interesting historical contrast (circa 1851) of differences in the ease of copying across different technology categories. She demonstrates that inventors sought patent protection (which was costly and available only in some countries) more frequently for mechanical inventions, where "reverse engineering" – and thus copying – was relatively easy; and that inventors relied on "trade secrets", which involved less cost and could be employed universally, more frequently for dyes and other chemical products, since analytical chemistry was still at a relatively primitive stage in the mid 19th century and thus copying was more difficult.

[4] This essay will be primarily about patents and copyright. However, it should be immediately noted that trademark involves a somewhat similar property right – but with an unlimited life (so long as the trademark is used and renewal fees are paid). The importance of a trademark is less for the new information that is embodied in the trademark itself and more for the provision of a distinctive means for buyers of a firm's products/services to be able to identify that firm (and its products/services) and thus encourage the firm to provide worthwhile products/services to those buyers (and not to have to worry about the free-riding and possible value deterioration from counterfeiters).

Notice that this institution of a limited-term property right addresses the two important features of information creation and dissemination that were described above: The property right itself – the ability to exclude – recognizes the need to prevent (or limit) copying and thereby provide the incentive for the initial investment in the information creation.[5] But the limited term of the property right recognizes that – once created – the information is a public good.[6] The length of that limited term should – in principle – reflect the socially optimal point in that tradeoff: between the need to provide a period of exclusion, so as to encourage the investment that is needed to create additional new information (at both the extensive and intensive margins), but also the goal of making that newly created information freely available sooner rather than later.[7]

III. Enter "Monopoly".

This section briefly reviews the origins of the connection between IP and "monopoly" and its persistence to the present day.

A. The intertwining of IP and "monopoly".

[5] Also, the IP framework makes it easier for transactions in IP – say, buying/selling or licensing – to occur. Without IP, it would be more difficult for the creator to transact with another party: Prior to the transaction, the buyer would legitimately ask, "So what am I buying?" And the seller would reply, "Oh, I can't tell you that. If I do, then you won't need to pay me for it." Of course, there could be individual pre-negotiation contracts – non-disclosure agreements – that could be related to the revelation of the information in the negotiation. But the IP framework clearly regularizes and reduces the transactions costs of such arrangements.

[6] Also, the required disclosure of the essential features of a patent at the time of the patent issuance – or at a lag after the initial patent filing – provides both a description of the "boundaries" of the property and also an important information disclosure that may encourage other inventors to pursue somewhat similar but not identical ideas.

[7] The modeling of this tradeoff is, in principle, reasonably straightforward. See, for example, Nordhaus (1959, ch. 5) and Scherer (1984, ch. 7). The recognition of this tradeoff immediately raises the question of whether there should be different lengths of the property right for different types of IP, which would depend on the size and difficulty of the initial investment and the social value from the unhindered access to the resulting creation.

The discussion in Section II simply involved the concept of "property" and thus the right to exclude (and thereby prevent or restrict copying).[8] There was no mention of "monopoly" or "market power" – *nor did there need to be*. The issue was simply how the initial costs of creation of new information could be recovered when the costs of copying/duplicating are at or near zero.

So, why has the concept of monopoly become so intertwined with IP?

Historical origins often matter – and in this case matter a lot. The first British law[9] that created patents in 1624 had the title "The Statute of Monopolies"! Although the first British copyright law in 1720 – The Statute of Anne – was far more neutral in this descriptive dimension, it nevertheless became associated with the idea of monopoly. This was surely encouraged by the latter Statute's designation of 14 years as the term of a copyright – which was identical to the term of a patent that had been established by the Statute of Monopolies a century earlier. In addition, the fact that both statutes provided the owner with the right of exclusion probably encouraged the idea that these were monopolies.

These ideas carried over to the development of U.S. patent and copyright laws. Heeding the Constitution's encouragement, the Congress passed the Patent Act of 1790 and the Copyright Act of 1790. In both instances the term of the property right was 14 years. The British notion of "monopoly" that was attached to these instruments carried over as well.[10]

When the Sherman Act was enacted in 1890, its Section 2 made it unlawful for any person to "monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce…" Thus, there appeared

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[8] In any legal discussion of "property", the right to exclude – as well as the right to "alienate" (i.e., to transfer/sell) – usually figures prominently. See, for example, Klick and Parchomovsky (2017).
[9] It appears that Venice in 1474 enacted the first patent law.
[10] See, for example, Walterscheid (1994, 1998).

immediately to be a conflict between the apparent monopoly essence of the IP laws and the monopolizing prohibition of Section 2. And, again, the ideas that IP involved rights of exclusion and that monopolies generally try to exclude competitors probably enhanced this automatic conflation of monopoly and IP.

This sense of inherent conflict has never gone away. There have clearly been cycles of waxing and waning of the hostility toward IP by antitrust enforcers and by the courts' legal interpretations in antitrust cases in the many decades since 1890.[11] The high point of hostility was probably in the early 1970s, when "the nine no-nos of IP" were doctrine at the Antitrust Division of the U.S. Department of Justice (DOJ).[12] This was reinforced by decades of U.S. Supreme Court decisions – prior to and well after the 1970s – that regularly identified both patents and copyrights with monopoly: automatically and without qualification.[13] The fears that

[11] Discussions of this waxing and waning can be found in, e.g., Hovenkamp (2009, 2015, forthcoming); and Hovenkamp et al. (2017).

[12] See Wilson (1970). Discussions of these "no-nos" can be found in, for example, Gilbert and Shapiro (1997) and Coston (2013).

[13] These include (after 1890): Hobbie v. Jennison, 149 U.S. 355 (1893); Consolidated Electric Light Co. v. McKeesport Light Co., 159 U.S. 465 (1895); Singer Mfg. Co. v. June Mfg. Co., 163 U.S. 169 (1896) E. Bemont & Sons v. National Harrow Co., 186 U.S. 70 (1902); Continental Paper Bag Co. v. Eastern Paper Bag Co., 210 U.S. 405 (1908); Kalem Co. v. Harper Brothers, 222 U.S. 55 (1911); Henry v. A. B. Dick Co., 224 U.S. 1 (1912); Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502 (1917); Boston Store of Chicago v. American Graphophone Co., 246 U.S. 8 (1918); Carbice Corp. v. Patents Development Corp., 283 U.S. 27 (1931); Fox Film Corp. v. Doyal, 286 U.S. 123 (1932); Leitch Mfg. Co v. Barber Co., 302 U.S. 458 (1938); Ethyl Gasoline Corp. v. U.S., 309 U.S. 436 (1940); Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488 (1942); U.S. v. Univis Lens Co., 316 U.S. 241 (1942); U.S. v. Masonite Corp., 316 U.S. 265 (1942); Mercoid Corp. v. Mid-Continent Investment Co., 320 U.S. 661 (1944); Precision Instrument Manufacturing Co. v. Automotive Co., 324 U.S. 806 (1945); International Salt Co. v. U.S., 332 U.S. 392 (1947); U.S. v. Line Material Co., 333 U.S. 287 (1948); Great Atlantic. & Pacific Tea Co. v. Supermarket Equipment Corp., 340 U.S. 147 (1950); U.S. v. Loews, Inc., 371 U.S. 38 (1962); U.S. v. Singer Manufacturing Co., 374 U.S. 174 (1963); Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225 (1964); Brulotte v. Thys Co., 379 U.S. 29 (1964); Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp., 382 U. S. 172 (1965); Graham v. John Deere Co., 383 U.S. 1 (1966); Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100 (1969); Blonder Tongue v. University of Illinois Foundation, 402 U.S. 313 (1971); Lee v. Runge, 404 U.S. 887 (1971); Gottschalk v. Benson, 409 U.S. 63 (1972); Twentieth Century Music Corp. v. Aiken, 422 U.S. 151 (1975); Aronson v. Quick Point Pencil Co., 440 U.S. 257 (1979); Sony Corp. v. Universal City Studios, 464 U.S. 417 (1984); Harper & Row v. Nation Enterprises, 471 U.S. 539 (1985); Bonito Boats v. Thunder Craft Boats, 489 U.S. 141 (1989); Stewart v. Abend, 495 U.S. 207 (1990); Pfaff v. Wells Electronics, Inc., 525 U.S/. 55 (1998); Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722 (2002); and Eldred v. Ashcroft, 537 U.S. 186 (2003). See also the Supreme Court's association of patents and monopoly in a tying case that didn't involve a patent: Jefferson Parish Hosp. Dist. v. Hyde, 466 U.S. 2 (1984).

underlay the "nine no-nos" were that the patent monopoly would be enhanced and expanded to adjoining markets through the nine identified business practices.

We are currently in a considerably more enlightened era – as evidenced by the DOJ's and FTC's "Antitrust Guidelines for the Licensing of Intellectual Property" (1995; 2017) and the two Agencies' report on "Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition" (2007). The Guidelines and the Report emphasize that there is no automatic presumption of market power with respect to IP and that antitrust analysis ought generally to treat IP as it treats other forms of property. Eleven years after the 1995 Guidelines' (p. 2) declaration that "the Agencies do not presume that intellectual property creates market power in the antitrust context", the U.S. Supreme Court in 2006 followed with a similar statement: "Congress, the antitrust enforcement agencies, and most economists have all reached the conclusion that a patent does not necessarily confer market power upon the patentee. Today, we reach the same conclusion …"[14]

And yet the courts – including the Supreme Court! – and legal and social sciences scholars continue to refer – almost as an instinctive reflex and without qualification[15] – to IP as embodying monopoly and market power. Consider the following recent examples (in all instances, emphasis has been added to highlight the mention of *monopoly* or its equivalent):

<u>1. Supreme Court opinions</u>.

"A U.S. patent provides a lawful **monopoly** over the manufacture, use, and sale of an invention …" <u>WesternGeco LLC v. ION Geophysical Corp.</u>, 585 U.S. __ (2018); dissenting opinion by Justice Gorsuch.

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[14] See <u>Illinois Tool Works Inc. v. Independent Ink, Inc.</u>, 547 U.S. 28 (2006).

[15] It might be objected that the use of the word "temporary" in some of the examples that follow constitutes an important qualifier to the characterization of IP as monopoly. However, this usage reflects only the limited-term nature of the phenomenon; the "M" word and the consequent implication that the product will be priced at above-competitive levels during that term remain.

“Once sold, the Return Program cartridges passed outside of the patent **monopoly** … But a license is not about passing title to a product, it is about changing the contours of the patentee’s **monopoly** … it [patent exhaustion] remains an unwritten limit on the scope of the patentee’s **monopoly**.” Impression Products, Inc. v. Lexmark International, Inc., 581 U.S. __ (2017); majority opinion by Chief Justice Roberts.

“Those costs include the higher prices that can accompany the grant of a copyright **monopoly.**” Star Athletica, L.L.C. v. Varsity Brands, Inc., 580 U.S. __ (2017); dissenting opinion by Justice Breyer.

“A licensing agreement that provides for the payment of royalties after a patent’s term expires does not enlarge the patentee’s **monopoly** or extend the term of the patent.” Kimble v. Marvel Entertainment, LLC, 576 U.S. __ (2015); majority opinion by Justice Kagan.

“The scope of a patent holder’s **monopoly** right is defined by …” Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc., 574 U.S. __ (2015); dissenting opinion by Justice Thomas.

“The latter [patents] pose no comparable risk of pre-emption, and therefore remain eligible for the **monopoly** granted under our patent laws.” Alice Corp. v. CLS Bank International, 573 U.S. 208 (2014).

“… Congress has enacted patent laws rewarding inventors with a limited **monopoly**.” Nautilus, Inc. v. Biosig Instruments, Inc., 572 U.S. __ (2014).

“… if simple copying were a protected use … The undiluted patent **monopoly** … would extend not for 20 years (as the Patent Act promises), but for only one transaction.” Bowman v. Monsanto Co., 569 U.S. 278 (2013).

“… patent and antitrust policies are both relevant in determining the ‘scope of the patent **monopoly**’ – and consequently antitrust law immunity – that is conferred by a patent.” FTC v. Actavis, Inc., 570 U.S. 136 (2013); majority opinion by Justice Breyer.

“If its [the patent holder’s] actions go beyond the **monopoly** powers conferred by the patent … But again, that’s the whole point of a patent: to confer a limited **monopoly …** But a patent holder acting within the scope of its patent … is simply exercising the **monopoly** rights granted to it by the Government … the point of the patent, which is to confer a lawful **monopoly** on its holder.” FTC v. Actavis, Inc., 570 U.S. 136 (2013); dissenting opinion by Chief Justice Roberts.

“That philosophy understands copyright’s grants of limited **monopoly** privileges to authors as … But ordinarily a copyright—since it is a **monopoly** on copying—restricts dissemination …” Golan v. Holder, 565 U.S. 302 (2012); dissenting opinion by Justice Breyer.

“On one side of the balance is whether a patent **monopoly** is necessary to …” Bilski v. Kappos, 561 U.S. 593 (2010); concurring opinion by Justice Stevens.

"Intel's authorized sale to Quanta thus took its products outside the scope of the patent **monopoly** …" Quanta Computer, Inc. v. LG Electronics, Inc., 553 U.S. 617 (2008).

2. Lower court opinions.

"… the Constitution authorizes Congress to grant authors **monopoly** privileges on the commercial exploitation of their output …" Williams v. Gaye, 885 F.3d 1150 (2018); dissenting opinion by Judge Nguyen.

"Thus, many brilliant and unconventional ideas must be beyond patenting simply because they are "only" ideas, which cannot be **monopolized**." Aatrix Software v. Green Shades Software, 890 F.3d 1354 (2018); concurring opinion by Judge Lourie.

"Overall, the Court finds that the Refinery has failed to come forward with any evidence that EIG misused its copyrights by attempting to extend its copyright **monopoly** to …" Energy Intelligence Group, Inc. v. CHS McPherson Refinery, Inc., 300 F.Supp. 3d 1356 (2018).

"The exhaustion doctrine is simply a limit on the scope of the patent **monopoly**, that is, a limit on the exclusive rights of the patentee." Lexmark International, Inc. v. Impression Products, Inc., 816 F.3d 721 (2016); dissenting opinion by Judge Dyk.

"… Section 7.03(c) operates to discourage licensees from doing anything that threatens the patentholder's **monopoly**." Canon Inc. v. Tesseron Ltd., 115 F. Supp. 3d 391 (2015).

"…Omega misused its copyright of the Omega Globe to expand its limited **monopoly** impermissibly." Omega S.A. v. Costco Wholesale Corp., 776 F.3d 692 (2015); majority opinion by Judge Nelson.

"Inherent in granting a copyright owner the exclusive right to reproduce his works is the risk that he will abuse the limited **monopoly** his copyright provides … Omega attempted to use the copyrighted Globe Design … to control an area outside its limited **monopoly** on the design." Omega S.A. v. Costco Wholesale Corp., 776 F.3d 692 (2015); concurring opinion by Judge Wardlaw.

"…the historic belief that, at some point, a Government-created **monopoly** on intellectual property should yield to an expanded public use." Flo & Eddie, Inc. v. Sirius XM Radio, Inc., 62 F. Supp. 3d 325 (2014).

"… courts have long held that copyright holders may also use their limited **monopoly** to …" Apple Inc. v. Psystar Corp., 658 F.3d 1150 (2011).

3. Legal and social sciences analyses.

"At first blush, the conflict between IP and antitrust is obvious. IP is a temporary **monopoly** intended to suppress rivalry." (Hemphill, 2018, ch. 31)

"All intellectual property rights grant right holders exclusive use of their goods to protect producers' incentives. On the other hand, these exclusive rights decrease the social surplus because of a **monopoly** situation." (Arai, 2018, p. 2)

"… individually owned patents create a temporary **monopoly** for the owner …" (Delerue, 2018, p. 13)

"Consider a product that has been patented. The patent allows the patentee to exclude competition. Since competition is excluded by the patent, the patentee can **raise the price above the competitive level**." (Hylton, 2017, p. 83)

"Protecting **monopoly** that results from the production of information that qualifies for IP protection enhances social welfare by encouraging the allocation of resources to invention." (Blair and Wang, 2017, p. 204)

"… the inventive and venturesome citizen creates an encompassing interest – as a **monopoly** right to tax – in return for enforcing the economic property rights in the idea …" Davidson and Potts (2017, p. 74)

"In this study, we define IP as it refers to creations of the intellect for which a **monopoly** is assigned to designated owners by law." (Jarrett, 2017, p. 1)

"Patents grant their holding actor **monopoly** rights over the patented innovation …" (Raiser et al., 2017, p.3)

"This paper's main assertion is that the extent of exclusivity that patent **monopoly** currently bestows …" Ragavan (2016, p. 52)

"This time-limited **monopoly** has been adopted in the copyright laws of virtually every country in the world." Herlihy and Zhang (2016, p. 391)

"Provisions in the Intellectual Property (IP) Chapter of TPP [Trans-Pacific Partnership] lengthen, broaden, and strengthen patent-related **monopolies** …" (Baker, 2016, p.1)

"Firms possessing intellectual property rights (IPRs) can use them to extract **monopoly** rents from other firms and consumers …" Schwartz (2016, p. 228)

"…strong IPR regimes can effectively grant firms a temporary **monopoly** …" (Balsmeier and Delanote, 2015, p. 1071)

"The protection of IPRs creates incentives to innovate by granting **monopoly** rights to inventors through a patent." (Naghavi and Strozzi, 2015, p. 150)

"Given their **monopoly** status afforded by intellectual property rights, seed companies …" (Barrows et al., 2014, p. 109)

"Patent law is based on the idea that a temporary **monopoly** is a necessary reward for innovative effort… (Nicholas, 2014, p. 405)

B. Is the traditional "monopoly" characterization warranted?

Perhaps – despite the changed positions of the enforcement Agencies and the Supreme Court – the "monopoly" descriptor might nevertheless be appropriate? After all, patents and copyrights do provide for exclusion – and monopolies usually try to exclude competitors.

However, consider the following numbers:

1. For patents:

- In FY2018 the U.S. Patent and Trademark Office (USPTO) issued 338,072 patents of all kinds, which included 306,909 "utility" patents (which are the standard 20-year life patents that are associated with invention and innovation).[16] It is inconceivable that over 300,000 "monopolies" were created in a single 12-month period. Even if one acknowledges that "only" 161,970 of the total were issued to U.S. residents, it seems unlikely that anyone would believe that these many monopolies were created in the U.S. economy during FY2018.

[16] These data are drawn from USPTO (2018, p. 181). The other categories of patents are "design" and "plant patents, and a few hundred "reissued" patents are also included in the total. Also, a special legal regime – which is authorized by the Hatch-Waxman Act of 1984 – applies to pharmaceutical patents (even though they are included in the category of utility patents).

- Since 1790, over 10,000,000 patents have been issued by the USPTO and its predecessors.[17] Again, it is inconceivable that this many monopolies could have come into existence.

- The maintenance of the patent property right requires the owners to pay a renewal fee at 3.5 years, 7.5 years, and 11.5 years after issuance; otherwise, the patent lapses, and the idea enters the public domain and can be used by anyone. The fees are comparatively modest.[18] Nevertheless, at the first renewal stage, one-seventh of the original patent recipients decline to renew; at the second stage, one-third of the original patent recipients decline to renew; and at the third stage, generally over half (e.g., 56.1% of those who received patents in 2006) decline to renew.[19] Further, it appears that over 90% of patents are never put to use.[20]

These non-renewal and non-use rates are not consistent with the idea that all – or even most – patents are inherently monopolies.

2. For copyrights:

- In FY2017 the U.S. Copyright Office (USCO) registered 452,122 new copyrights; since 1790 over 35,750,000 copyrights have been registered.[21] Again, these numbers are wholly inconsistent with the notion that all copyrights are inherently monopolies.

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[17] As of mid-February 2019, the cumulative number of patents that had been issued since 1790 exceeded 10,206,000.

[18] For entities that are not considered "small" (e.g., businesses with 500 or fewer employees, or non-profit institutions) or "micro" (e.g., individuals), the fees are $1,600, $3,600, and $7,400 at the three renewal dates, respectively. Small entities receive a 50% discount on these fees; micro entities receive a 75% discount.

[19] These data are taken from USPTO (2018, p. 36). For a recent analysis of patent renewal data and a review of earlier studies, see Kim (2015).

[20] Lemley (2001) estimates that 95% of patents are neither licensed nor litigated. There may also be a few percent that are simply used by the owner only; so 90% seems to be a safe lower bound. See also Scherer (2001). And for the 5-10% of patents that are in use, many are unlikely to rise to the level of "monopoly".

[21] These data are drawn from USCO (2017, p. 17).

IV. Starting instead with "primarily property".

Suppose instead of "monopoly" as the going-in presumption for IP, we simply stay with the concept of "property". Pieces of tangible property – e.g., land, structures, vehicles, personal possessions, etc. – generally have the same characteristics as are associated with IP: the ability to exclude others; the ability to buy, sell, rent/lease, license, etc. And at least part of the reason why developed economies have attached these attributes to tangible property more generally is to encourage individuals, households, and enterprises to invest in and thereby create, maintain, and improve such property (as well as providing personal security and assurance).[22]

In order to fix ideas and draw useful comparisons, let's consider a specific (and familiar) form of property: "real estate".[23] This example has a fortuitous linguistic feature: The documents in the U.S. that conveyed ownership titles to plots of land from the government to private owners in the 18th and 19th centuries were described as "letters patent".

A. The similarities between real estate and IP.

We begin with a listing of the similarities between real estate and IP:[24]

- Both types of property – in principle – can be described in terms of boundaries. For patents, the "boundaries" are described in the patent application; for real estate, the boundaries are described in local municipal property deeds offices.[25]

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[22] Economics-oriented discussions of a "theory" of property can be found in, for example: Alchian (1965); Alchian and Demsetz (1973); Demsetz (1967); Furubotn and Pejovich (1972; 1974); Umbeck (1981); Barzel (1997); and Cole and Grossman (2002).

[23] Comparisons of IP with real estate or other real property are present in a number of other analyses of IP. However, the emphasis in those essays is often on the differences (see, for example, Lemley and Shapiro, 2005; Anderson and Kovacic, 2017); by contrast, the emphasis here will be more on the similarities. For somewhat similar essays in the same direction, see Bessen and Meurer (2008) and Hovenkamp (2009, 2011, 2015. forthcoming).

[24] It is important to note that the Patent Act states that "patents shall have the attributes of personal property", including "the right to exclude others from making, using, offering for sale, or selling the invention".

[25] The property deeds office usually lists the owner as well. The PTO lists the inventor of a patent and any initial assignment of ownership; but (to this author's knowledge) there is no further effort to keep track of any subsequent

- Both generally embody rights of exclusion, the violation of which can be considered to be a form of "trespass". The exclusionary rights can be enforced in the courts.

- Both can generally be bought, sold, rented/leased, licensed, etc.

- The owners of both kinds of property can choose to not use the property – to allow it to remain idle or fallow.

- Each piece of property within both categories can be considered to be unique. For real estate, each piece of property has a unique location. For adjacent pieces of property (or horizontally or vertically adjacent units in a multi-unit building), even if the pieces are otherwise identical, their unique locations make them unique – at least for some potential purchasers/owners. And this uniqueness takes them technically out of the "commodity" category (although the degree of substitutability between some adjacent pieces of property may be quite high).[26] As for IP, the approval/registration processes by the USPTO or the USCO are supposed to ensure that each piece of property is unique.

- The combination of "adjacent" pieces of property – so as to create something that has greater value than the simple sum of the stand-alone values of the separate pieces of property – may be worthwhile. For real estate, this could be the melding of physically adjacent pieces of property so as to create a larger-scale project: e.g., a shopping center; an apartment complex; an

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ownership of patents. For copyright, there is no effort to maintain any ownership registry. Lenard and White (2016) have proposed such an ownership registry for music copyrights, as one important building block toward making markets in music more competitive and less regulated. For print works that are under copyright, the problem of "orphan" works – those that are still under copyright but for which the authors cannot be located – poses a problem for those markets as well.

[26] And once they are out of the category of commodity, they are out of the realm of the analytical apparatus of "perfect competition", and instead the analytical apparatus of "monopolistic competition" (e.g., Chamberlin, 1933) becomes relevant. In that framework, we expect to see prices that are in excess of marginal costs, so that the Lerner Index (Lerner 1934) is not an especially interesting piece of information – at least as an indicator of significant market power. Of course, for pieces of property that have a high degree of substitutability (and thus very flat individual demand curves) the analytical apparatus of "perfect competition" may provide a good first-approximation.

office park; an amusement park; etc. For patents, this could be the combining of complementary technological processes or products (which would include a later invention that builds on an earlier invention).[27] For copyrights, this could be a "building-on" creative effort, so as to transform an existing work into a new form: e.g., transform a book into a movie or a stage play.

- The efforts to combine such complementary pieces of both kinds of property can lead to problems of bargaining among the parties, hold-outs, etc.[28] Sometimes the bargaining difficulties become too great, and worthwhile projects are forgone.

- To address the potential bargaining problems among complementary pieces of both kinds of property, special institutions – e.g., patent pools or cross-licensing arrangements; partnerships or joint ventures (or even eminent domain) – are mechanisms for easing the assembly of these pieces of property.

- Sometimes for such complementary arrangements there can be after-the-fact (ex post) "hold-up" problems. For patents, this arises in the context of "standard essential patents" (SEPs) in patent pools; for real estate, if there is a partnership or joint venture among the owners of property, there might be hold-up efforts.

- Some pieces of property within the two categories have high values; other pieces have zero or near-zero value.

- Neither type of property can be freely created from what is considered to be the public domain. For real estate, this means that someone cannot simply stake a personal ownership claim to a piece of public park land or of other public land. For IP, this means that someone can't get a patent or copyright on something that is already "public knowledge" and thus in the

[27] For reviews and arguments that building-on problems are significant, see, e.g., Gallini (2002; 2017).
[28] Shapiro (2001) describes this for IP as the problem of "patent thickets". The problems of combining complementary patents can also lead to "royalty stacking", which is basically the Cournot (1838) combining-complementary-goods problem.

public domain; specifically for patents, this means that the invention must be new and non-obvious; for copyright, there must be some creativity.

B. The significant differences between real estate and IP.

Now let's consider some significant differences:

- Patents and copyrights have limited terms; real estate is usually owned in perpetuity.

- Patents and copyrights involve the creation of new information: a public good; real estate generally does not have such pervasive externalities.[29]

- Patents and trademarks must be renewed – with the concomitant payment of renewal fees – in order to remain as the property of the owner.[30] Real estate ownership rights do not need to be renewed. However, real estate is often subject to annual taxes by local governments – the non-payment of which can lead to forfeiture and thus the loss of ownership.

- The boundaries of IP – especially for some kinds of patents[31] – appear to be less well specified than is true for real estate;[32] however, even for real estate, there may sometimes be ambiguities as to physical measurements, or as to the specification of "boundaries" in other dimensions: e.g., the problem of the neighbor's overhanging tree; or the neighbor's loud backyard parties; or the height of the vertical "air rights" of a property.

[29] However, there can be some externalities that are associated with real estate: e.g., "neighborhood effects", which can be either positive (I plant flowers in my front yard for my own benefit, but my neighbors also benefit) or negative (I choose to let my front yard deteriorate and become overgrown, and my neighbors are adversely affected). Neighborhood (homeowners) associations and/or coop/condo associations and boards often arise so as to address such externalities.

[30] Between 1909 and 1978, the initial term of a copyright was 28 years, but it could be renewed once for an additional 28 years; between 1790 and 1909, the initial term was 14 years, with one renewal for an additional 14 years.

[31] See, for example, Allison and Lemley (2002) and Allison et al. (2015).

[32] But see Mossoff (2013) for an argument that comparisons with respect to "trespass" have little empirical basis.

- In addition to uncertainties about the boundaries, the validity of the patent itself may well be subject to more uncertainty than the validity of the title to a piece of real estate; and it is usually possible to buy title insurance to protect against the latter risk.[33]

- The greater vagueness of boundaries and even of validity for a patent create greater problems of potential trespass from the perspective of a possible trespasser than is true for real estate.

- The inherent public-good nature of the information that is embodied in a patent creates greater problems of trespass from the perspective of the owner than is true for real estate. Most landlords are readily aware of instances of trespass on their property; it may be harder for the owners of patents to discover when someone is using the information that is embodied in their patents.

- Real estate is rarely analyzed in the context of monopoly. The high prices that attach to some specific pieces of real estate are commonly attributed to location[34] and (where applicable) to the scarcity consequences of land-use zoning; few (if any) real estate analysts attribute the difference between Manhattan land prices and Montana land prices to the market power of Manhattan real estate owners.[35] By contrast, as was discussed above, all-too-often IP continues to be addressed in this context.

C. A summing up.

[33] See the discussion of this uncertainty in Lemley and Shapiro (2005).

[34] The Alonso-Mills-Muth models) of a mono-centric city provide a strong basis for expecting that competitive markets for land will lead to a higher price (per unit of area) in the center of a city than in the suburbs; see Alonso (1964); Mills (1967); Muth (1969).

[35] Recall that market power – whether exercised individually or collectively – involves the restriction of output below competitive levels so as to maintain prices (and profits) that are above competitive levels. Rarely (if ever) is such a claim made about urban real estate owners.

It is clear that there are substantial similarities between IP and physical property – as exemplified by real estate. But there are differences as well.

Since this essay is about IP and antitrust, it is worth returning to the issue of market power: As was argued above, it simply cannot be true that all – or even most – IP is automatically a monopoly. However, market power clearly does attach to some pieces of IP. "Blockbuster" drugs that have wide applicability and that have no close substitutes are surely in this category; and there are certainly other inventions that similarly stand "head and shoulders" above their closest rivals and that thus would qualify as true "monopolies".[36] But the annual numbers surely constitute only (at most) a small percentage of those 300,000+ patents each year.[37] And this must be even more true for copyrights.

On the other side, there may be the occasional instance of a piece of real estate that has true market power: e.g., the plot of land below which lies the only aquifer within (say) a 50-mile radius; or the exceptionally tall building that hosts a roof-top terrace that provides unique scenic views. But such instances – though not wholly absent – are likely far fewer than the instances of market power that attach to IP, especially patents.

Consequently, there is more justification for assuming that antitrust problems are likely to arise in IP – especially patents – than in real estate.[38] But the general continued automatic (and

[36] However, as White (2008) argues, there is generally no good paradigm for delineating market boundaries when monopolization antitrust cases are litigated; and thus there is no good means for deciding as a general matter whether an innovation should be considered to be a true monopoly or whether it should be considered to be just one among a group of imperfect competitors in a monopolistic competition analytic framework.

[37] Scherer (2005) has suggested that if a dispute that involves IP ends up in a federal court, this likely means that the IP involves market power. This characterization is too broad. Some pieces of IP – like some pieces of real estate – can be quite valuable; and thus lawsuits that represent heightened disputes with regard to that IP may well be worthwhile. But, for both categories of property, high value should not be conflated with market power and thus neither should any lawsuits that involve either kind of property.

[38] It is important to remember that the Sherman Act prohibits "monopolization" – not monopolies. Thus lawful monopolies – such as the occasional patent that possesses true market power – is not an antitrust problem; instead, modern antitrust focuses its attention on firms' efforts to expand that market power through anticompetitive means.

without qualifiers) association of all IP with monopoly is not warranted. In this regard, the current DOJ-FTC Guidelines have a sensible approach: a) Treat IP without a presumption that it automatically possesses market power; but b) pay more attention to the potential for market power when looking at IP.

The substantial similarities between IP and other forms of property suggest that a presumptive characterization of IP as "primarily property", which sometimes embodies market power – rather than a presumptive, unqualified characterization of IP as "monopoly" – could be a reasonable alternative starting point. The beneficial differences that would accompany this revised presumption will be addressed in the next section.

V. What difference would it make?

This section will suggest some areas where a "primarily property" presumption – rather than a "monopoly" presumption – would be worthwhile. As before, we will use "real estate" as a useful metaphor.

A. Patent assertion entities (PAEs).

Patent assertion entities (PAEs) are businesses that acquire patents from inventors but do not practice (use) the patents.[39] Instead, the PAE demands royalties from parties that it claims is using (and thus infringing) the patent and threatens suit – and often a possible injunction against continued use of the patent – in the event of non-payment. "Patent trolls" is the pejorative phrase that is often used to describe PAEs. The fact that a PAE neither created the idea that is embodied

[39] See Brown (2014) and the articles in volume 79(2) of the Antitrust Law Journal more generally for a possible connection between PAEs and antitrust.

in the patent nor practices the patent itself are considered to be negative attributes by those who are critical of PAEs' activities.

Here the real estate analogy is especially useful: A landlord who owns a commercial or industrial or residential building but who was not the architect (and thus didn't design or create the idea of the building) and who didn't construct the building and who doesn't directly occupy or use it – but instead rents the building to tenants – is not considered to be a "troll". Instead this would be described as a normal example of "vertical" separation and specialization: The architect, the construction company, the owner, and the tenant are each specializing on doing what they do best. And, of course, the boundaries that demarcate the landlord's property are usually sufficiently clear that few (if any) landlords demand rental payments from passersby or from occupants of nearby buildings.

The analogy provides a focus on the source of any problems that may arise in connection with PAEs: that the boundaries around some patents may be too vague,[40] and/or that it is too easy to initiate lawsuits that have a nuisance/harassment element.[41] If there are problems that are connected to PAEs, it is these patent-boundary and ease-of-lawsuit issues that should be addressed[42] – and not any concerns that PAEs are neither inventors nor users.[43]

B. Reverse payments.

Suppose that Company A owns a plot of land below which lies the only aquifer for a 50-mile radius. Company A sells its water at prices that are appreciably above its marginal costs of

[40] Or perhaps the patent was improperly granted in the first place – e.g., there wasn't sufficient novelty in the invention – so that there is nothing to infringe.
[41] This is, in essence, a negative externality problem.
[42] These are the same conclusions that Wright and Ginsburg (2014) reach.
[43] And, as has been pointed out by PAE defenders, to the extent that there are true problems of illegal copying of patented ideas, PAEs may be efficient specialists in enforcing the property rights that are embodied in patents.

pumping and distribution, inclusive of a reasonable return on its investment in drilling for the water (and in the drilling of the "false-start" dry holes) and including any premium for risk. Company A has the capability to pump and sell a larger volume of water; but the larger volume of water could be sold only at a lower price.

Company B believes that A's property claim extends only to the land surface and does not extend to the below-surface aquifer, and B begins drilling into the aquifer from an adjacent plot of land that B owns. (B happens to own the only other plot of land in the area from which the drilling could occur.) B intends to try to sell the water to many of the same customers who currently buy from A.

A discovers B's drilling efforts and sues B, claiming that B's drilling involves trespass on A's aquifer property; B counter-claims that A's suit is baseless, since A's real estate property right doesn't extend below the land surface. After a few months of legal sparring, A and B reach a settlement: B agrees that it will delay drilling for five years – after which A will not object to B's drilling; in return, A agrees to pay a sum of money that substantially exceeds B's legal costs.

Anyone who is familiar with the FTC's efforts to address "pay-for-delay" settlements in pharmaceuticals – where a generic manufacturer's challenge to the validity of a pharmaceutical patent is settled with a large payment from the patent holder to the generic manufacturer – will recognize that this hypothetical covers the basic set-up and characteristics of such settlements.[44] After well over a decade of challenging such settlements, the FTC finally achieved a Supreme Court decision in 2013 that states that the legality of such settlements can be challenged under a "rule of reason" antitrust standard.[45] But discussions of the appropriate legal stance toward such

[44] The only major difference is that the pharmaceutical patents have limited lives, whereas the real estate has an unlimited life.
[45] See FTC v. Actavis, Inc., 570 U.S. __ (2013). For a discussion of the economics of this case, see, for example, Farrell and Chicu (2019).

settlements have been muddled by discursions into the intricacies of the “scope of the patent”, whether an antitrust decision would have to determine the validity of the challenged patent, and the institutional details of the Hatch-Waxman Act.

By contrast, the real estate analogy makes the issue far clearer: If A’s real estate claim covers the aquifer, then A is allowed to exclude B; and A’s legitimate monopoly persists. If instead A’s claim is invalid, B is allowed to enter; and a more competitive environment will prevail – and A’s profits are likely to be significantly diminished as compared with the continued exclusion of B. That A is willing to make a substantial payment to B – in return for delaying B’s entry and the concomitant more-competitive environment – certainly raises suspicions that A has significant doubts about the validity of its property claim and that the “pay-for-delay” settlement may well represent a simple “classic” effort by a monopolist to pay off a potential entrant to stay out of the market.[46]

Perhaps an earlier use of the real estate analogy would have led to clearer legal thinking and an earlier arrival of the Supreme Court’s eventual – sensible – resolution of the issue.

C. Tying, patents, and market power.

Until the late 1970s, antitrust law had a deep suspicion with regard to tying.[47] In 1958 the Supreme Court declared tying to be a “per se” offense;[48] earlier (in 1949) the Court had declared that “Tying agreements serve hardly any purpose beyond the suppression of

[46] That the monopolist should be willing to pay a sum – up to the difference between its current monopoly profits and (roughly) half of the prospective duopoly profits) – is an important insight that extends at least back to Gilbert and Newbery (1982).
[47] And – unsurprisingly – tying was the first of the “nine no-nos” of 1970.
[48] See Northern Pacific R. Co. v. U.S., 356 U.S. 1 (1958).

competition."[49] Beginning in 1977[50] and again in 1984[51] the Court somewhat weakened its "per se" prohibition on tying; it declared that a showing of market power was needed before tying could be found to be illegal. And in Independent Ink, in addition to undoing the automatic link of patents with monopoly, the Court also expressed a more benign view toward tying generally: "Many tying arrangements, even those involving patents and requirements ties, are fully consistent with a free, competitive market."[52] But as of 2019, the Court has not (yet?) formally moved back from its per se violation position.

Although not all tying cases have involved patented products, a substantial number of these cases have involved patents. It seems likely that the Court's view that patents were inherently monopolies and (often) that tying was being used to leverage that monopoly power into the tied-product market influenced its early suspicions of tying. If a patent-as-real-estate alternative perspective had been available, perhaps the Court would have reached a more benign view of tying earlier.

D. Trespass.

If someone trespasses on a piece of real estate, the owner – after a polite request for the trespasser to vacate the premises – would likely call the police. If the trespass was a persistent phenomenon, the owner would likely seek a court injunction. Whether the owner was or wasn't the party that designed or constructed the building or whether the owner was or wasn't an occupant of the building or whether the owner was already receiving rent proceeds from tenants

[49] See Standard Oil Co. v. U.S., 337 U.S. 293, 305-306 (1949).
[50] See U.S. Steel Corp. v. Fortner Enterprises, Inc., 429 U.S. 610 (1977).
[51] See Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2 (1984).
[52] Illinois Tool Works Inc. v. Independent Ink, Inc., 547 U.S. 28 (2006).

(or whether there was or wasn't vacant space in the building, etc.) would normally not matter with respect to the owner's ability to obtain an injunction.

Until 2006, injunctions for patent infringement – the equivalent of trespass – were the traditional practice. However, in that year the Supreme Court declared that injunctions need not be the norm and that broader principles of equity could apply, so as to allow instead a payment of monetary damages – in lieu of the injunction.[53] The Court's opinions in this case (there was a majority opinion and two concurring opinions) included considerations of whether a PAE was the party that was bringing the suit, as well as whether the patent owner was licensing other parties and the extent of the vagueness and validity of the patent.

The real estate analogy would clarify that the PAE presence should be irrelevant, as should be whether the patent owner was licensing other parties. However, the possible vagueness of the boundaries – and thus the possibility that the infringer could have reasonably concluded ex ante that it wasn't infringing – would argue against an injunction (and in favor of monetary damages) if substantial resource investments (which would have appeared to be reasonable ex ante in the absence of infringement) would thereby be potentially destroyed.

E. Vertical restraints that a patent owner imposes on a patent licensee.

Many of the "nine no-nos" of 1970 involved vertical restraints that a patent owner might impose on its licensees

It is clear that an owner of a piece of real estate – e.g., a commercial building, or a shopping center, or a single- or multi-family residence – has a legitimate interest in how a tenant uses the property, whether the tenant sublets and to whom, etc. The tenant's behavior may affect

[53] See eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006). Allowing monetary damages in place of an injunction makes the trespass issue more like a contract dispute.

the owner directly; or the tenant's behavior may affect other tenants and thereby affect the owner. Vertical restraints by the owner on the tenant are thus a legitimate way for the landlord to exercise the owner's property rights. Similarly, a patent owner may well have a legitimate interest in how its patent is used by its licensees, etc.

As another useful real estate analogy: Suppose that the property owner of the land over the aquifer has clear ownership rights to the aquifer; but the property owner is skilled only at geological surveys (which is how it discovered the aquifer). The property owner may well want the services of a drilling company, a pipe laying company, a pipeline operating company, a water marketing company, etc., in order to extract the water from the aquifer and profitably distribute and sell the water to customer-users in its catchment area. The property owner ought to have the legal ability to: keep the title to the water and employ those specialty companies as contractors; or enter joint ventures with one or more of them; or sell the water to one or more of the companies in the vertical chain but impose pricing or other restraints on its "downstream" partners.

Antitrust policy – as expressed by the enforcement Agencies and by the courts – has become considerably more tolerant of vertical restraints over the past four decades.[54] But it seems that suspicions with regard to these restraints lingered longer when they were used by patent owners. Perhaps the availability of these real estate analogies could have hastened the transition in the world of IP.

F. A summing up.

[54] See, for example, White (1989; 2010) and the seven editions of Kwoka & White, The Antitrust Revolution, for discussions of how and why this transition occurred and the roles that economics and economists played in it.

This section has provided five significant recent and/or ongoing instances in which a "primarily property" presumption for IP would have hastened better policy and/or could still do so. There may well be other such instances. In any event, these examples show the value of a "primarily property" approach, as compared to the traditional "unqualified monopoly" approach.

VI. Conclusion.

Words matter: Words shape (as well as reflect) thoughts; thoughts – including the follow-on mental and formal models – shape actions.

It can't be a healthy influence on antitrust policy in 2019 – more than a decade (!) after the U.S. Supreme Court in Independent Ink declared that there should be no presumption that IP conveys market power – for the Supreme Court itself, as well as for lower courts and legal and social sciences scholars, to continue reflexively and without qualification to conjoin IP and monopoly.

A more nuanced view – a "primarily property" view – of IP is long overdue as the reflexive default presumption for these antitrust discussions and decisions. The time to start is now.

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