

ARTICLE

How IP Rights Create Competition in E-commerce

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In the offline economy, IP was often seen as creating or protecting monopoly; in online commerce it frequently makes competition possible.

1. Patents and other IPRs in Traditional Commerce

Since the early nineteenth century United States courts have described intellectual property rights, particularly patents, as giving their owner a “monopoly.”¹ The Supreme Court identified the connection between patents and monopoly in 1829,² and later decisions made that connection more obvious and important.³ They continued to do so into the twentieth century, increasingly identifying the patent “monopoly” with the monopoly targeted by the antitrust laws.⁴

This concern that patents can facilitate monopoly led to rules limiting the scope of patents to contain their power. One was the restrictive doctrine of patent claiming, confining the inventor strictly to the thing that was actually invented. For example, in 1853 the Court rejected Samuel Morse’s famous claim #8 in his telegraph patent, which described a very simple electric product but asserted exclusive rights to every device that used “the motive power” of “galvanic current” to transmit

¹ *People v. Melvin* (N.Y. Ct. Corr. Of Errors), Yates Sel. Cases 112, 185 (1810) (speaking of the acquisition of a patent, which “would have given the defendants a monopoly....”).

² *Pennock v. Dialogue*, 2 Pet. 1, 6 (1829) (identifying patents as an exception to laws prohibiting monopolies).

³ E.g., *United States v. Am. Bell Tel. Co.*, 128 U.S. 315, 355 (1888) (“monopoly which these patents grant”); 19th century: *Singer Mfg. v. June Mfg.*, 163 U.S. 169, 184 (1895) (“monopoly flowing from the patent”).

⁴ *United States v. Univis Lens Co.*, 316 U.S. 241, 243 (1942) (identifying “patent monopoly” with unlawful resale price maintenance); *Carbice Corp. v. Am. Patents Dvlp. Corp.*, 283 U.S. 27, 31 (1931) (tying agreement unenforceable because it exceeds the “scope of the patent monopoly”); *Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488, 490 (1942) (using the term “patent monopoly” to describe the offense of patent “misuse,” here by tying).

messages.⁵ Another was the doctrine of novelty, which the Supreme Court’s 1850 *Hotchkiss* decision used to deny a patent to someone whose doorknob was identical in every way to existing doorknobs except for its use of a different but common material.⁶

One important patent-limiting rule was “exhaustion,” or the first sale doctrine, which also expressed the first national policy against “self-preferencing.” Patent exhaustion, which is not stated in the Patent Act but was created by the Supreme Court, held that once a firm sold a patented good it gave up all control of that good and could no longer use a patent license to enforce conditions applying after the sale. In one important 1850 decision, 40 years prior to the Sherman Act, the Court held that the manufacturer of a wood planing machine could not enforce a patent license restriction that required the machine’s user to purchase its disposable blades exclusively from the patentee.⁷ As the Court generalized the exhaustion rule in 1859: “When the patented machine rightfully passes to the hands of the purchaser ..., the machine is no longer within the limits of the monopoly.”⁸ Most recently, in 2007 the Supreme Court used patent exhaustion to deny the maker of a patented electronic printer the power to prevent third parties from restoring and refilling its spent toner cartridges.⁹ Exhaustion doctrine did not prohibit every act of self-preferencing, but only those that enlarged the “scope of the patent” by permitting the patentee to attach things to it that the patent did not include.

The Supreme Court briefly changed its mind in its *A.B. Dick* decision in 1912. It held that a large manufacturer of office machinery could use patent law to force users of an early patented copy machine to use its own paper, stencils, and ink.¹⁰ The decision provoked a quick reaction from Congress. In 1914 it passed the Clayton Act, whose §3 prohibited tying arrangements involving goods “whether patented or unpatented.” The Supreme Court then revived its exhaustion rule, citing the Clayton Act in its ruling that forbade Edison’s Motion Picture Patents Company from requiring that purchasers of the Edison projector use it exclusively with the company’s own films.¹¹

In 1947 the Supreme Court made the link between a patent and antitrust’s concern with monopoly explicit. In *International Salt* it held that a patent created a “limited monopoly” sufficient to establish the market power needed to condemn a

⁵ *O’Reilly v. Morse*, 56 U.S. 62, 129 (1853). See Herbert Hovenkamp, *The Emergence of Classical American Patent Law*, 56 *Ariz. L. Rev.* 263 (2016).

⁶ *Hotchkiss v. Greenwood*, 52 U.S. 248, 262 (1850).

⁷ *Wilson v. Simpson*, 50 U.S. 109 (1850).

⁸ *Chafee v. Boston Belting Co.*, 63 U.S. 217, 221 (1859).

⁹ *Impression Prods., Inc. v. Lexmark Intern., Inc.*, 581 U.S. 360 (2017).

¹⁰ *Henry v. A. B. Dick*, 224 U.S. 1 (1912).

¹¹ *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 500 (1917).

tying arrangement.¹² It did not seem to matter that the tied product was ordinary salt, a plentiful commodity incapable of being patented, and over which the defendant could not conceivably acquire a monopoly. The Supreme Court extended this market power presumption to copyrights in 1962,¹³ and some lower courts even applied it to trademarks.¹⁴ The Court restated the market power presumption for patents as late as 1984,¹⁵ but then overruled *International Salt* in 2006.¹⁶

Nonetheless, this history reflects a well-entrenched idea that patents and other IP rights confer a monopoly. Today, market power must be proven, but IP rights continue to play a significant role in determining the legality of some practices. For example, in its 2023 *John Deere* decision a court sustained the plaintiff's complaint that the defendant's refusal to license its copyrighted diagnostics software served to create an unlawful tie of its market-dominating tractors to aftermarket service.¹⁷

2. IP Rights in Digital Commerce

The function of IP rights on networked digital platforms is very different than in old economy markets, although the issue relates more to trademark or copyright. The literature on two-sided platforms has long been enamored of the idea that they are "winner take all" markets – effectively, natural monopolies.¹⁸ The argument is straightforward. Networks experience economies of scale in consumption: that is, the network becomes more valuable to each member as the number of other members increases. Further, "indirect" network effects on many platforms mean that a platform becomes more valuable to users on one side as the number of users on the other side increases. For example, potential riders on Uber experience greater value as the number of available drivers increases, and vice-versa. In such an environment any larger network has advantages over a small one and the final, or equilibrium, point may be a single firm occupying the entire market.

Yet today the digital economy contains thousands of two-sided platforms, and nearly all have competitors; that is, they do not appear to be winner-take-all in any important respect. The reason is product differentiation, which in digital commerce is protected principally by intellectual property laws. For example, the world

¹² *International Salt v. United States*, 332 U.S. 392, 395 (1947).

¹³ *United States v. Loew's, Inc.*, 371 U.S. 38 (1962).

¹⁴ *Siegel v. Chicken Delight, Inc.*, 448 F.2d 43 (9th Cir. 1971).

¹⁵ *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 16 (1984) ("if the government has granted the seller a patent or similar monopoly over a product, it is fair to presume [it] gives the seller market power.").

¹⁶ *Illinois Tool Works, Inc. v. Independent Ink, Inc.*, 547 U.S. 28 (2006).

¹⁷ *Deere & Co. Repair Serv. Antitrust Litig.*, 703 F. Supp. 3d 862 (N.D. Ill. 2023).

¹⁸ E.g. Richard B. McKenzie & Dwight R. Lee, *How Digital Economics Revises Antitrust Thinking*, 46 *Antitrust Bulletin* 253 (2001). A helpful analysis is Mark Rysman, *The Economics of Two-Sided Markets*, 23 *J. Econ. Persp.* 125 (2009).

contains roughly 1500 dating apps, and entry and exit is a revolving door.¹⁹ It also contains many thousands of periodicals, most of which have two-sided platform versions, and several digital social network sites. Arguing that two-sided platforms are winner-take-all must assume that these markets will eventually evolve into an equilibrium of one firm.

While even product differentiated networks become more valuable as they grow, that value often cannot be aggregated across two or more *different* networks, provided that they are sufficiently differentiated. For example, *TeenVogue* and *Field & Stream*, two magazines operating as digital two-sided platforms, have roughly the same circulation (1,215,000 & 1,260,000, respectively).²⁰ Each could presumably become more valuable to its own subscribers and particularly advertisers as circulation grows. However, they have very few of the *same* subscribers. These two periodicals are sufficiently differentiated that they are unlikely to blend into one, and network effects are unlikely to accumulate across the two of them. The same thing is true of social network sites, dating sites, and even internet merchandisers. Several of these experience multi-homing, or persons who join multiple sites, for example by reading multiple periodicals, but that merely indicates that they operate as complements.

In this setting, intellectual property rights operate as an important *anti*monopoly feature, preserving competition by protecting differentiation. Because digital content is so readily copied, laws protecting copyrights and trademarks serve to promote a variety of firms within a single competitive class. Lack of enforceable IP rights would lead to a loss of product differentiation.

A few markets have resisted significant product differentiation, at least until now. One explanation of Google’s dominant position in consumer search, with its 90+ percent market share, is that search has not been easy to differentiate. Duck-Duck-Go pioneered in the development of stealth, or anonymous, searching, but most others copied it.²¹ Whether this remains the case in the future is uncertain. At this writing Google Search’s large payments to implementers such as Apple for default search engine status have been found unlawful. The remedy awaits a decision in summer, 2025. One question that the liability decision did not answer is whether search is a winner-take-all market (absent Google’s payments), or whether search will accommodate a multi-firm equilibrium and sufficient conditions can be created to

¹⁹ See Finances Online, 141 Crucial Online Dating Statistics: 2024 Data Analysis & Market Share <https://perma.cc/MRG9-SJ7W>.

²⁰ Top 100 U.S. Magazines by Circulation, PSA Research Center <http://www1.psaresearch.com/images/TOPMAGAZINES.pdf> (last visited Sep 1, 2024).

²¹ See Gilad Edelman, DuckDuckGo’s Quest to Prove Online Privacy is Possible (Wired, June, 2021), <https://www.wired.com/story/duckduckgo-quest-prove-online-privacy-possible/>.

move the market in that direction. Adding to the uncertainty is the rapid incorporation of AI tools into search, which may enable more product differentiation to occur. If that were true a new search market might emerge that resembles the market for social networking sites, with different products for different user preferences.

The ability to differentiate one's product is thus an essential part of platform competition that requires legal protection. As a result, restraints that limit firms' ability to differentiate their products can be competitively harmful.²² For example, Amazon has imposed a restraint on ebook publishers that if that publisher and a competing ebook seller develop a business model for sales, Amazon will have a right to duplicate the model. As the European Commission concluded:

[This] Business Model Parity Clause prevented the emergence and/or development of alternative models with competitors, including: (i) print and e-book bundles; (ii) pay-as-you read and book club models (where readers do not necessarily have to acquire the ebook for an unlimited period of time, but are rather given a license to access only parts thereof); (iii) subscription models; and (iv) applications for smartphones giving access to ebooks versions of classics.²³

The Commission criticized a license agreement requiring a producer of highly illustrated ebooks to license that technology to Amazon and enable it to be compatible with Kindle readers.²⁴

Digital platforms are distinctive not because of property lines in land or brick and mortar, but rather because of their trademarks, copyrights, and sometimes patents. While patents or other IP rights are often seen as facilitating monopoly or exclusion in old commerce, one of their most important functions in digital markets is to enable competition by establishing boundary lines along with the legal tools to defend them.

These differences indicate that the principal focus of IP policy in digital markets is not with limiting IP scope in order to prevent overclaiming, as it was in traditional markets. On the contrary, the concern is with agreements or other practices that weaken these boundaries. The impact differs depending on the nature of the product.

²² Erik Hovenkamp, *Restraints on Platform Differentiation*, 25 Yale J.L.Tech. 271 (2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4164172

²³ European Commission Competition Directorate General, *Commission Decision relating to a proceeding under Article 102 of the Treaty on the Functioning of the European Union (TFEU) and Article 54 of the EEA Agreement*, at 23 (April 5, 2017). *Silverman v. Amazon.com, Inc.*, No. 1:21-cv-01256 (S.D.N.Y. filed Feb. 11, 2021) (the MFNs "give Amazon the right to copy any [new business model], which once again blocks the possibility of the [a]lternative [p]latforms differentiating themselves.").

²⁴ EU Commission directorate, *id.* at 27-28. Other cases are discussed in Erik Hovenkamp, *Restraints on Platform Differentiation*, *supra*.

For many periodicals, social networks, and dating sites, virtually the entire product is digital. This means that IP rights account completely for the “walls” between firms. By contrast, a firm such as Amazon consists of a digital two-sided platform plus millions of products, many of which are physical, or “tactile.” The extent to which these compete with the products of both offline and other online firms varies enormously depending on the product.²⁵ A market containing several internet firms with digital products could quickly collapse into one if IP rights did not protect the boundaries between them.

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²⁵ See Herbert Hovenkamp, Antitrust and eMarkets, Stan. L. & Pol’y Rev. (forthcoming, 2025), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4962651