

# INTELLECTUAL PROPERTY, ANTITRUST, AND THE PRESUMPTION OF MARKET POWER: MAKING SENSE OF ALLEGED NONSENSE

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## Abstract:

The concepts of 'monopoly power' or 'market power' are often used in explaining the economic rationale for intellectual property (IP) rights. However, there is wide consensus among antitrust scholars and antitrust agencies that no such presumption should exist. The explanations to the undesirability of such a presumption of market power are varied. Some explanations are semantic, e.g., that IP rights do not confer market power 'in the antitrust sense', or that the use of the term 'monopoly' in the IP literature is different than its use in antitrust; other explanations focus on empirical observations that most IP rights do not have any commercial value, and therefore a fortiori lack any market power, while other explanations pertain to the undesirability of a presumption of market power as a matter of legal policy, and especially to the concern that a presumption of market power will lead to oversized antitrust law when applied to the exercise of IP rights.

The purpose of this paper is to clarify the relationship between IP rights and market power and their implication for antitrust and IP policy. I argue that the concept of 'market power' as used in economics and in the IP literature is the same concept as used in antitrust, and further that it could be expected that the sample of IP rights that tend to be involved in litigation would include those that do confer substantial market power upon their owners. Yet this should not necessarily lead to oversized antitrust law, since antitrust inquiry is (or at least should be) only interested in the extent to which a challenged practice increases or maintains market power. Therefore for most antitrust inquiries an IP holder's existing market power is irrelevant. A separate question is whether a presumption of market power should exist or not, yet an answer to this question depends on the specific conduct that is under review and the underlying substantive and procedural rules governing such inquiry; the merit of a presumption, therefore, is context specific. Accordingly I show when and where a presumption of market power may or may not make sense.

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**I. INTRODUCTION**

Do intellectual property (IP) rights confer market power? Do IP rights create ‘monopolies’ or are they mere property rights like any other form of property? Should court presume that IP rights confer market power on their owners? Ten years ago, in their Antitrust Guidelines for the Licensing of Intellectual Property (AGLIP), the US antitrust agencies proclaimed that they would not *presume* that IP rights confer market power and that such rights are essentially comparable to any other form of property.<sup>1</sup> This view, currently shared by many commentators as well as some courts is in contrast, or perhaps a response, to earlier courts’ decisions that presumed that they do. Some subsequent decisions by lower courts have abandoned the presumption, but the

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<sup>1</sup> U.S. Department of Justice and Federal Trade Commission, Antitrust Guidelines for the Licensing of Intellectual Property §2.0 (1995), *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,132, *available at* <http://www.usdoj.gov/atr/public/guidelines/ipguide.htm>.

Supreme Court has declined to do that so far.<sup>2</sup> In a recent decision, the U.S. Court of Appeals for the Federal Circuit has unequivocally revived the presumption, emphasizing that since “the Supreme Court has held that there is a presumption of market power in patent tying cases, [the court is] obliged to follow the Supreme Court’s direction in this respect”,<sup>3</sup> and that if “time may have come to abandon the doctrine, ... it is up to the Congress or the Supreme Court to make this judgment”,<sup>4</sup> thus dismissing as irrelevant all judicial and academic authorities holding that the presumption is no longer good law.<sup>5</sup>

What contributes to the confusion is that regardless of whether IP rights are officially presumed to confer market power, to create monopolies, or not, the terms ‘monopoly’, ‘statutory monopoly’, ‘limited monopoly’ or ‘temporary monopolies’ are frequently used in relation to IP rights,<sup>6</sup> and this terminology reflects the fundamental economic understanding of IP rights. Almost every economic analysis of IP rights, especially the analysis of patents and copyrights,<sup>7</sup> views IP rights as legal instruments that create monopolies; that the purpose of IP rights is to confer upon their owner market power in order to solve a market failure; to allow inventors and creators to set the price of their inventions and works above marginal cost so that they will be able to recoup their initial investment.

The standard economic theory of IP begins with the notion that the investment required for the creation of intellectual goods is often high relative to a very low marginal cost of using or making additional copies of them. Therefore if use or copying were free to all, price would fall to marginal cost. But since marginal cost is lower than the average cost the original creator would not be able to recover her initial investment, and would therefore refrain from making the investment in the first place.<sup>8</sup> By giving creators a right to exclude others from their work, creators can create artificial scarcity of

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<sup>2</sup> In 1985, following a decision of the Ninth Circuit Court of Appeal in which the presumption of market power was applied, *see* *Digidyne Corp. v. Data General Corp.*, 734 F.2d 1336 (9<sup>th</sup> Cir. 1984), the Supreme Court denied a petition for a writ of certiorari despite a dissenting opinion of Justices White and Blackmun who urged their colleagues to determine “what effect should be given to the existence of a copyright or other legal monopoly in determining market power.”, *see* *Data General Corp. v. Digidyne Corp.*, 473 U.S. 908, 909 (1985).

<sup>3</sup> *Independent Ink, Inc. v. Illinois Tool Works, Inc.*, 396 F.3d 1342, 1351 (Fed. Cir. 2005).

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> *See e.g.*, *Eldred v. Ashcroft*, 537 U.S. 186, 219 (2003) (referring to copyrights as “limited monopolies” and generally throughout the text to patents and copyrights as “monopolies”); *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 533 U.S. 722, 730 (2002) (referring to a patent as “temporary monopoly”), *Fogerty v. Fantasy, Inc.*, 510 U.S. 517, 526 (1994) (referring to copyrights as “monopoly privileges” and “statutory monopoly” *citing* *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975)).

<sup>7</sup> Although parts of the analysis in this paper might be applicable not only to patents and copyrights but to other legal instruments that fall under the broad rubric of “intellectual property”, the focus of this paper is patents and copyrights and the use of the term “intellectual property” in this paper is, unless otherwise indicated, is restricted to these two types of intellectual property.

<sup>8</sup> *See e.g.*, William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 326 (1989).

their intellectual goods, their price will increase and investment be recouped.<sup>9</sup> This is the *incentive* prong of the theory of IP rights. The second prong of the theory is the acknowledgement that with IP rights comes social cost. Once intellectual goods have been created, the right to exclude limits access for users who are willing to pay to a price above marginal cost of copying or using that intellectual good but below the profit maximizing price set by the holder, and excluding them from the good creates a deadweight loss. In addition, since innovation is often cumulative, that is, the creation of new intellectual goods often relies on previous intellectual goods as inputs, increased IP protection may inhibit innovation by limiting access to such inputs.<sup>10</sup> IP rights therefore generate a trade-off between incentive and access, and IP laws (and sometimes with the assistance of antitrust laws), by limiting the length and scope of IP rights and by crafting exemptions to the IP holder's exclusive rights, calibrate this trade-off with the aim of finding the proper incentives for sustained innovation and to minimize the social cost that the system imposes. This is, by and large, the basic economic theory of IP laws, as well as their basic legal justification, and although this trade-off between incentive and access does not exhaust the entire economic and non-economic questions concerning IP<sup>11</sup> this story, seldom disputed, serves as the starting point for any further discussion on IP law.

From this perspective, a non-nuanced answer to the question "do IP laws confer market power or create monopolies" seems quite straightforward. "Sure", says the IP lawyer, "the grant of IP rights creates legal monopolies." "Of course" says the economist, "that's what they're all about." But once the economist is pressed to give a more nuanced answer or the question is presented to an able (and disinterested) antitrust lawyer the asker is likely to get a more nuanced, but rather obscure answer: "Yes, but not in an antitrust sense", followed by an attempt to distinguish between the terms 'monopoly', 'market power', 'substantial market power', and 'price above marginal cost'.

The enactment and expansion of antitrust law in the 20<sup>th</sup> century necessarily complicated the question because, as Louis Kaplow noted: "A practice is typically deemed to violate the antitrust law because it is anticompetitive. But the very purpose of the patent grant is to reward the patentee by limiting competition, in full recognition that monopolistic evils are the price society will pay."<sup>12</sup> As a result of the introduction of antitrust, the checks on the powers conferred by the grant of IP rights were no longer the exclusive province of IP law. The notion that IP rights were monopolies needed refinement otherwise conflicts could be inevitable. The refinement was required in order to deal with two potential problems. One is potential overreach of antitrust law.

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<sup>9</sup> WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW, 8 n27 (2003), *citing* Arnold Plant, *The Economic Theory Concerning Patents for Innovations*, in ARNOLD PLANT, SELECTED ECONOMIC ESSAYS AND ADDRESSES 36 (1974 [1934]).

<sup>10</sup> Nancy T. Gallini, *The Economics of Patents: Lessons from Recent U.S. Patent Reform*, 16 J. ECON. PERSP. 131, 136 (2002).

<sup>11</sup> LANDES & POSNER, *supra* note 9, at 11.

<sup>12</sup> Louis Kaplow, *The Patent-Antitrust Intersection - A Reappraisal*, 97 HARV. L. REV. 1815, 1817 (1984).

An assumption that all IP rights are monopolies could potentially expose every IP owner to liability under the antitrust laws, not because having market power is unlawful—it is not—but because having market power is a prerequisite to many antitrust offences. This could increase the amount of antitrust litigation in which IP owners will be involved, thus causing an increased administrative burden on IP owners and on the judicial system, and possibly undermining the rationale for granting IP protection in the first place. A possible solution to this problem would be to read IP laws as an exemption to antitrust laws that makes their holders immune from antitrust liability. But this could create another danger: overreach of IP laws since such immunity could unduly aggravate the social cost of IP protection. The history of the intersection between IP laws and antitrust laws could therefore be read as an attempt to calibrate and recalibrate the tradeoff between the need to provide incentives for innovation and the interest in allowing access to the fruit of such innovations, and find a golden path between the conflicting aims of both laws.

The purpose of this paper is to clarify the relationship between IP rights and market power in a way that contributes to antitrust analysis of IP related conduct. I will argue that IP rights often confer upon their owners the ability to set the prices of their intellectual goods at a *substantial* deviation from marginal cost. In this sense, which is ‘the antitrust sense’ IP rights often confer market power on their owners. Although my approach towards this point is different from the approach articulated in the AGLIP and by their intellectual allies, I share their view that IP law and antitrust are not generally at odds. But unlike the AGLIP, I argue that the reason that IP law and antitrust are not in constant and inherent conflict is not because owners of IP rights do not have market power in the antitrust sense but despite the fact that often they do. The reason for the absence of such inherent conflict is that a seller’s existing market power is (or at least should be) irrelevant to many antitrust inquiries, because the focal point of antitrust is the effect of a *change* in market power that may result from a specific practice or conduct on welfare, not the existence of market power *per se*. Therefore, only if and when a specific practice or conduct increases maintains the involved parties’ market power the extent of the parties’ initial market power conferred by the IP grant (or otherwise) may be relevant for antitrust. Therefore, an antitrust defendant’s existing power may be relevant only if his challenged conduct was found to have an anticompetitive effect.

I do not purport to suggest that my approach solves all the potential tensions between IP and antitrust; many questions clearly remain unresolved. Nor do I argue that the AGLIP framework is not useful. For the majority of cases it is. Yet I think that at the margin my approach, which acknowledges that market power is likely to exist in many disputes that involve IP, is a better starting point to tackle the unresolved issues that lie at the interface of IP and antitrust than the AGLIP approach which denies such linkage and suggests that in the rare cases when market power exists antitrust knows how to handle it.

The paper will proceed as follows: I will begin with a short survey of the development of the legal approach towards the issue of IP, market power and antitrust

from the early days of antitrust towards the contemporary view that IP rights do not confer market power in an antitrust sense. I will then argue that the contemporary view - the 'anti-presumption' of market power - is misguided, and show why the price of many intellectual goods can be expected to deviate substantially from marginal cost. Next I will argue that much of the confusion is a result of a failure to ask the right questions; the confusion stems from attempts to analyze questions of IP, market power and antitrust in isolation from the specific actual antitrust questions that are examined. I will show that by striving to define the right question we can distinguish between situations in which the market power conferred by IP rights is relevant and those in which it is not. Next, after a short detour explaining what legal presumptions are and what they are used for, I will demonstrate the merits and demerits of having a rebuttable presumption of market power in three types of cases: conflicts involving attempts by IP owners to change the scope of their original entitlement and the related doctrine of IP misuse, tying cases, and cases involving attempts to enforce invalid IP rights. Before concluding, I will explain why my proposed analytical framework should not lead to oversized antitrust scrutiny of IP related conduct.

## II. A CONCISE HISTORY OF THE PRESUMPTION OF MARKET POWER IN THE ANTITRUST-IP CONTEXT

### A. *The Early Years*

Willard Tom and Joshua Newberg have identified three periods in the US jurisprudence of the intersection between antitrust and intellectual property laws.<sup>13</sup> During the first and second periods, which began at the end of the 19th century and lasted until the late 1970s, courts perceived the existence of an inherent conflict between patent laws (and later other IP) and antitrust laws. In both periods courts viewed patent and copyright laws as laws granting monopolies, although differed substantially in their views on what the proper scope of these monopolies was. While the tendency of courts in the first period was to define the scope of patents generously, in a way that covered any anti-competitive result that the patent holder could achieve by using her patent right, the second period emphasized patent rights as exceptions to the general rules governing the free market economy, exceptions that must be narrowly construed. The first period essentially treated any patent-related practice as *per se* legal, regardless of any subsequent anti-competitive effect; the second period shared the same perception of *per se* legality – but only as long as the practice fell within the scope, defined by the court, of the IP right. *Per se* illegality was then attributed to any practice beyond that scope regardless of any pro-competitive effect that might have resulted thereof.

Despite the different rules and different results, in both eras courts presumed that IP rights conferred market power upon their owners. The difference was in the normative consequences that resulted from that presumption. In the first period the

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<sup>13</sup> Willard K. Tom & Joshua A. Newberg, *Antitrust and Intellectual Property: From Separate Spheres to Unified Field*, 66 ANTITRUST L. J. 167 (1997) the following description follows theirs.

exercise of this market power was deemed to be legal *per se*, while in the second period courts were willing to impose antitrust liability on IP owners by presuming that IP rights conferred upon their owners enough market power to trigger antitrust liability. For example, in 1902, in *E. Bement & Sons v. National Harrow Co.*,<sup>14</sup> a leading case of the first era, the US Supreme Court upheld a price-fixing cartel formed by competing patent holders, noting that:

“[t]he general rule is absolute freedom in the use or sale of rights under the patent laws of the United States. The very object of these laws is monopoly, and the rule is, with few exceptions, that any conditions which are not in their very nature illegal with regard to this kind of property, imposed by the patentee and agreed to by the licensee for the right to manufacture or use or sell the article, will be upheld by the courts. The fact that the conditions in the contracts keep up the monopoly or fix prices does not render them illegal.”<sup>15</sup>

While sixty years later, in *United States v. Loew's, Inc.*<sup>16</sup> the Court ruled, in the context of a claim about illegal tying that:

“[t]he requisite economic power [necessary for a finding of an antitrust violation] is presumed when the tying product is patented or copyrighted.”<sup>17</sup>

Furthermore, the Court in *Loew's* added that the mere presence of competing substitutes for the tying copyrighted product was insufficient to destroy its economic distinctiveness for purposes of determination of violations of the antitrust law.<sup>18</sup>

### ***B. The Nine No-No's***

The culmination of the approach of the second era is what came to be known as the “Nine No-No's”.<sup>19</sup> These were a series of intellectual property licensing practices that the US Antitrust Division of the Department of Justice considered *per se* unlawful and likely to attract its scrutiny.<sup>20</sup> By creating a list of generally suspect practices, the

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<sup>14</sup> 186 U.S. 70 (1902).

<sup>15</sup> *Id.* at 91.

<sup>16</sup> 371 U.S. 38 (1962).

<sup>17</sup> *Id.* at 45.

<sup>18</sup> *Id.* at 49.

<sup>19</sup> The Nine No-No's have never been articulated in a written document or guidelines and were announced in a series of public speeches by senior officials of the Department of Justice, Antitrust Division. They became known as the Nine No-No's after a speech by Deputy Assistant Attorney General Bruce Wilson, *see* Bruce B. Wilson, Deputy Assistant Attorney Gen., Remarks before the Fourth New England Antitrust Conference, Patent and Know-How License Agreements: Field of Use, Territorial, Price and Quantity Restrictions (Nov. 6, 1970) *cited in* Tom & Newberg *supra* note 13, at 179, *see also* Richard Gilbert & Carl Shapiro, *Antitrust issues in the licensing of intellectual property: The nine no-no's meet the nineties*, 1997 BROOKINGS PAPERS ECON. ACTIVITY 283 (1997).

<sup>20</sup> *See* Bruce B. Wilson, Deputy Assistant Attorney Gen., Patent Licensing - *Per Se* Violations, Remarks before the Annual Joint Meeting of the Michigan State Bar Antitrust Law Section and the Patent Trademark and Copyright Law Section in Detroit (Sept. 21, 1972), *reprinted in* [Current Comment Transfer Binder 1969-1983] 5 Trade Reg. Rep. (CCH) P 50,146 (1972) (reiterating that the Nine No-No's were viewed as illegal *per se* while rule of reason was applied to *other* patent licensing matters); *but see*, Tom & Newberg, *id.* (noting that there is some dispute as to whether every No-No was understood by the Division as illegal *per se*).

Nine No-No's reflected two perceptions of that era: one was the notion that IP rights conferred market power upon their owners, and the second was that many restrictions imposed by IP owners on their licensees were likely to be anti-competitive.<sup>21</sup>

Towards the end of the 1970s the Antitrust Division began to change its approach.<sup>22</sup> The growing influence of the Chicago School on economics and antitrust analysis, which considered maximizing net efficiency gain as the primary concern of antitrust policy, thereby recognizing that many restrictions on competition, especially vertical, could indeed be efficient and welfare increasing, has had its impact on the Division's approach to restrictions in the context of IP as well.<sup>23</sup> In 1981, the Division proclaimed the burial of the Nine No-No's. In a public speech before the American Bar Association Antitrust Section, Deputy Assistant Attorney General Abbott B. Lipsky, Jr. announced that "the nine no-no's, as statements of rational economic policy, contain more error than accuracy."<sup>24</sup> In his speech, Lipsky noted that his analysis of IP-related conduct non-coincidentally bore strong thematic resemblance to Division's change of the approach towards vertical restraints in other, non-IP, contexts.<sup>25</sup>

### ***C. The Modern Approach: From Presumption to Anti-Presumption***

This new approach reflected a shift in the understanding of the relationship between antitrust and IP laws. Antitrust and IP laws were no longer viewed as conflicting statutory schemes but rather as complementary policies within a harmonized legal system. Both policies were deemed to share the same economic goal: "to maximize wealth by producing what consumers want at the lowest cost",<sup>26</sup> "both are aimed at encouraging innovation, industry and competition."<sup>27</sup> The AGLIP, issued in 1995 by the Antitrust Division and the Federal Trade Commission (FTC), were the highlight of this new approach. Under this modern approach intellectual property is essentially comparable to any other form of property;<sup>28</sup> in contrast to earlier courts'

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<sup>21</sup> The Nine No-No's included: tying unpatented materials to the patent; mandatory grantbacks to the licensor of patents issued to the licensee; restriction on resale of the patented product; restrictions on the licensee's freedom to deal with others; agreement by the licensor not to license others; mandatory package licensing; royalties unrelated to the sales of the patented item; restrictions on sales of unpatented products made by a patented process; and resale price maintenance, *see* Wilson, *supra* note 20; Tom & Newberg, *id.* at 179-181; Gilbert & Shapiro, *id.* at 285.

<sup>22</sup> *See e.g.*, Ky P. Ewing, Jr., Deputy Assistant Attorney Gen., Patent-Antitrust – Antitrust Division Enforcement, Remarks before the San Francisco Patent Association, Pebble Beach, Cal. (May 5, 1979), *reprinted in* [Current Comment Transfer Binder 1969-1983] 5 Trade Reg. Rep. (CCH) P 50,398, at 55,887 (1979) (denouncing the impression that the Division's view of the Nine No-No's was as restrictions illegal *per se*).

<sup>23</sup> For a concise exposition of the Chicago School approach to antitrust *see* HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE, 2nd ed. §2.2b (1999).

<sup>24</sup> Abott B. Lipsky, Jr., Deputy Assistant Attorney Gen., Patent Licensing - Antitrust Division Reappraisal, Remarks before the American Bar Association Antitrust Section, Washington D.C. (Nov. 5, 1981) *reprinted in* [Current Comment Transfer Binder 1969-1983] 5 Trade Reg. Rep. (CCH) P 50,434 (1981)

<sup>25</sup> *Id.* at 55,986.

<sup>26</sup> WARD S. BOWMAN, JR., PATENT & ANTITRUST LAW: A LEGAL & ECONOMIC APPRAISAL 1 (1973).

<sup>27</sup> Atari Games Corp. v. Nintendo of America, Inc., 897 F.2d 1572, 1576 (Fed. Cir. 1990).

<sup>28</sup> AGLIP, § 2.0.

decisions no presumption of market power is inherent in the mere possession of IP;<sup>29</sup> and licensing of IP allows firms to combine complementary factors of production and is generally considered pro-competitive.<sup>30</sup> Similar guidelines were issued in 2000 by the Canadian Competition Bureau<sup>31</sup> and reflect the same perspective. According to the Canadian guidelines, “IP laws and competition laws are two complementary instruments of government policy that promote an efficient economy.”<sup>32</sup>

As Tom & Newberg explain, this new approach effectively repudiates the former.<sup>33</sup> Since IP is comparable to any other form of property there is no “invisible, magic line surrounding the intellectual property kingdom, the crossing of which automatically leads to antitrust penalties”.<sup>34</sup> A finding of antitrust violation therefore depends on the existence of anticompetitive effect, the determination of which usually requires an analysis of the specific market conditions and a finding of market power. Furthermore, if an IP right is not presumed to confer market power a full inquiry into the market and the availability of substitutes is required.<sup>35</sup> The obvious (as well as stated) result of that approach is that many practices, especially licensing restrictions, that could have been held illegal under the old approach are now presumed to be pro-competitive, hence lawful, at least until a plaintiff who bears the onus of proof can demonstrate otherwise.

However, the new approach that the AGLIP reflect seems to go far beyond that. The AGLIP seem to go beyond simply embracing and advocating rule-of-reason analysis in departure from an earlier jurisprudence of *per se* rules; this had already been done by the Antitrust Division in the early 1980’s, as Lipsky’s speech clearly demonstrates. That speech and the AGLIP, although reaching similar conclusions, are based on different assumptions. In his speech, Lipsky concurred with the notion that IP rights confer market power,<sup>36</sup> yet assumed that “there is nothing inherently wrong or anticompetitive about the market power conferred by a patent grant [because] ... it is safe to presume that whatever market power may arise from the possession of the exclusive rights to make, use, or sell has been earned by useful inventive activity.”<sup>37</sup> Furthermore, Lipsky assumed that “the value of the patent monopoly arises from the patentee’s ability to exploit his patent-based market power.”<sup>38</sup> In Lipsky’s view “[t]hese two basic assumptions seem to lie beyond the realm of useful debate.”<sup>39</sup>

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<sup>29</sup> *Id.* § 2.2.

<sup>30</sup> *Id.* § 2.0.

<sup>31</sup> Competition Bureau Intellectual Property Enforcement Guidelines (2000) *available at* <http://strategis.ic.gc.ca/pics/ct/ipege.pdf> (last visited June 18, 2004).

<sup>32</sup> *Id.* at 1.

<sup>33</sup> Tom & Newberg, *supra* note 13, at 174.

<sup>34</sup> *Id.*

<sup>35</sup> *Id.*

<sup>36</sup> To be precise, Lipsky’s speech is only about patents, not about copyright and other forms of IP.

<sup>37</sup> Lipsky, *supra* note 24, at 55,986.

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

In 1995, however, the Antitrust Division and the FTC seemed to have debated these very assumptions. The AGLIP offer a completely different view of the relationships between antitrust and IP rights. In Lipsky's view, there is nothing inherently wrong or anticompetitive about the market power conferred by a patent grant, and even if the congressional decision to reward invention in this way could be debatable, as a matter of policy "antitrust analysis ... is bound to accept the legality of the patent holder's monopoly position."<sup>40</sup> The AGLIP agree that there is nothing inherently unlawful in having market power, but in their view this is not an issue because in most cases such market power does not exist.<sup>41</sup> The AGLIP first principle is that "for the purpose of antitrust analysis [IP rights are] essentially comparable to any other form of property,"<sup>42</sup> and although IP law "bestows on the owners of intellectual property certain rights to exclude others ... [a]n intellectual property owner's rights to exclude are similar to the rights enjoyed by the owners of other forms of private property."<sup>43</sup> In the same vein, the AGLIP second general principle is that "the Agencies do not presume that intellectual property creates market power in the antitrust context".<sup>44</sup> The AGLIP further elaborate on this statement and explain that "the Agencies will not presume that [an IP right] *necessarily* confers market power upon its owner"<sup>45</sup> because "although the intellectual property right confers the right to exclude with respect to the *specific* product, process or work in question, *there will often be sufficient actual or potential close substitutes* for such product, process, or work to *prevent* the exercise of market power."<sup>46</sup> Conjoining this principle with the first principle, the inevitable conclusion is that "intellectual property is ... neither particularly free from scrutiny under the antitrust laws, nor particularly suspect under them".<sup>47</sup>

The statement that IP is not particularly suspect under the antitrust laws is similar to Lipsky's statement that antitrust policy is bound to accept the legality of the patent holder's monopoly position in its result, but the grounds are entirely different. According to the AGLIP, there is no conflict between antitrust and IP laws *not* because Congress had made a decision – presumably a wise one - to reward inventors by granting them a legal right to exploit market power, but rather because on economic grounds, as a general matter, no such market power exists.

To be sure, the presumption that IP rights necessarily confer market power has been eroded (to the extent that it had ever been robust) by some courts long before the AGLIP. For example, as early as 1965, the US Supreme Court in the *Walker Process*<sup>48</sup> case

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<sup>40</sup> *Id.*

<sup>41</sup> AGLIP, § 2.2.

<sup>42</sup> *Id.* § 2.0(a).

<sup>43</sup> *Id.* § 2.1.

<sup>44</sup> *Id.* § 2.0(b).

<sup>45</sup> *Id.* § 2.2 (italics added).

<sup>46</sup> *Id.* (italics added).

<sup>47</sup> *Id.* § 2.1

<sup>48</sup> *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.*, 382 U.S. 172 (1965).

refused to infer market power necessary for a monopolization claim from the mere existence of a patent. In remanding the case, the Court explained that

“it would ... be necessary to appraise the exclusionary power of the ... patent claim in terms of the relevant market for the product involved. Without a definition of that market there is no way to measure [the patent owner’s] ability to lessen or destroy competition. It may be that the [patented] device ... does not comprise a relevant market. There may be effective substitutes for the device which do not infringe the patent. This is a matter of proof ...”<sup>49</sup>

Similarly, in the *Jefferson Parish*<sup>50</sup> case in 1984, while the majority repeated the view that the grant by the government of a “patent or similar monopoly over a product” makes it fair to presume that the seller has market power,<sup>51</sup> four Justices, in a concurring opinion, thought that a plain presumption that “a patent or copyright, a high market share, or a unique product that competitors are not able to offer suffices to demonstrate market power” is a “common misconception.”<sup>52</sup> According to Justice O’Connor,

“[w]hile each of these three factors might help to give market power to a seller, it is also possible that a seller in these situations will have no market power: for example, a patent holder has no market power in any relevant sense if there are close substitutes for the patented product.”<sup>53</sup>

Yet the AGLIP seem to go beyond that. They go beyond simply stating that a presumption of market power is inappropriate because there could be instances when as a result of the existence of close substitutes IP rights would not confer market power upon their owners. Such a statement is not inconsistent with a presumption of market power, as long as the presumption is rebuttable.<sup>54</sup> By invoking a substantial similarity between intellectual property and other forms of property, and the similar right of each type of property owners to exclude others, and by stating that there will often be sufficient actual or potential close substitutes to every IP protected product, process or work, the AGLIP reject any special connection between IP and market power, just as

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<sup>49</sup> *Id.* at 177-78.

<sup>50</sup> *Jefferson Parish Hospital District No. 2 v. Hyde*, 466 U.S. 2 (1984).

<sup>51</sup> *Id.* at 16.

<sup>52</sup> *Id.* at 37 n7.

<sup>53</sup> *Id.*

<sup>54</sup> There has never been clear guidance on the issue. According to Hovenkamp et al., the presumption is rebuttable, *see* HERBERT HOVENKAMP ET AL., *IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW*, § 4.2e7 (2002), *see also* *Digidyne Corp. v. Data General Corp.*, *supra* note 2, at 1344 (“The RDOS [software] copyright created a presumption of economic power sufficient to render the tying arrangement illegal *per se*. The burden to rebut the presumption shifted to defendant.”) However, the court restricted the ability of the defendant to provide evidence to rebut the presumption. Citing *Lowe’s*, the court concluded that “[T]he mere presence of competing substitutes for the tying product, here taking the form of other programming material as well as other feature films, is insufficient to destroy the legal, and indeed the economic, distinctiveness of the copyrighted product.” *Id.* at 1345, *citing* *Loew’s*, 371 U.S. at 49. *But see, Independent Ink*, *supra* note 3, at 1352 (reaffirming the existence of the presumption of market power in tying cases but clarifying that it is rebuttable, yet stressing that “[t]he presumption can only be rebutted by expert testimony or other credible economic evidence of the cross-elasticity of demand, the area of effective competition, or other evidence of lack of market power.”).

market power is not generally expected to be conferred by traditional property rights. Therefore, the AGLIP essentially adopt an “anti-presumption” - a presumption that IP rights *do not* confer market power upon their owners.

The AGLIP approach is in line with the views of many contemporary commentators. The presumption of market power has been rejected, even scorned, by a wide range of lawyers and scholars. According to Professor Hovenkamp, for example, “to presume market power in a product simply because it is protected by intellectual property is nonsense.”<sup>55</sup> According to Areeda and Hovenkamp, “market power cannot be inferred, even presumptively, from the possession of intellectual property”<sup>56</sup> because “[t]rademark, copyright, or patent, excludes others from duplicating the covered name, word or product (etc.) but does not typically exclude rivals *from the market*.”<sup>57</sup> According to Nancy Gallini and Michael Trebilcock there should not be a presumption that intellectual property rights create market power because it is an “important well-known fact that the scope of a patent is not commensurate with an antitrust market”<sup>58</sup> since most “products and processes face a large number of substitutes.”<sup>59</sup> In Edmund Kitch’s view, the assumption that IP rights confer economic monopoly is an “elementary but persistently repeated error.”<sup>60</sup>

In addition, reflecting this approach, several legislative initiatives to overrule the presumption have been pursued. In 1988, US Congress indirectly overruled the presumption, in the related area of patent misuse,<sup>61</sup> by amending the Patent Act. The amendment added Section 271(d)(5), which reads that a patentee shall not be denied relief or deemed guilty of misuse or illegal extension of the patent right if he “has conditioned the license of any rights to the patent or the sale of the patented product on the acquisition of a license to rights in another patent or purchase of a separate product, unless, in view of the circumstances, the patent owner has market power in the relevant market for the patent or patented product on which the license or sale is conditioned.”<sup>62</sup> The requirement that patent misuse be based on the existence of market power, while hardly contentious, reflects an assumption by Congress that not all patents confer market power on their owners. In addition, in 1989 and 1995 the Judiciary Committee of

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<sup>55</sup> HOVENKAMP, *supra* note 23, §3.9d at 142 (conceding, however, that the presence of intellectual property is not absolutely irrelevant to market power questions).

<sup>56</sup> 2A PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW* ¶1523 (2002).

<sup>57</sup> *Id.* (emphasis original).

<sup>58</sup> Nancy T. Gallini & Michael J. Trebilcock, *Intellectual Property Rights and Competition Policy: A Framework for the Analysis of Economic and Legal Issues*, in *COMPETITION POLICY AND INTELLECTUAL PROPERTY RIGHTS IN THE KNOWLEDGE-BASED ECONOMY* 17, 22 (Robert D. Anderson & Nancy T. Gallini eds. 1998).

<sup>59</sup> *Id.*

<sup>60</sup> Edmund W. Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 *VAND. L. REV.* 1727, 1729 (2000).

<sup>61</sup> Patent misuse usually refers to an affirmative defense to an action of patent infringement or for royalties under a license, which may apply when the patentee’s conduct is regarded as an improper attempt to “extend” the scope of the patent, or violates the antitrust laws. If misuse is found, the patent is rendered unenforceable until the misuse is “purged”, *see* George Gordon & Robert J. Hoerner, *Overview and Historical Development of the Misuse Doctrine*, in *ABA SECTION OF ANTITRUST LAW, INTELLECTUAL PROPERTY MISUSE: LICENSING AND LITIGATION* 1-2 (2000).

<sup>62</sup> 35 U.S.C. § 271(d)(5).

the House of Representatives considered proposals to restrain courts hearing antitrust cases from drawing a presumption of a relevant market or the existence of market power on the mere basis of the possession of a patent or copyright.<sup>63</sup> Although no legislation has been enacted yet, such initiatives occasionally recur.<sup>64</sup> Nevertheless, as the Court of Appeals of the Federal Circuit has very recently clarified, the Supreme Court has so far failed to overrule its prior decisions that established the presumption of market power, so that as a matter of law the presumption still exists, notwithstanding the criticism.<sup>65</sup>

### III. THE PUZZLE

The denialist approach to the connection between IP and market power seems, at least on its face, to be inconsistent with the economic analysis of intellectual property. After all, economic analysis of IP often makes the assumption that IP rights do confer market power, in the sense of enabling their holders to set a price above marginal cost in order to recover the fixed cost of creation.<sup>66</sup>

In addition, it may seem inconsistent with a significant body of IP law which imposes limitations on IP owners, attempting to minimize the social cost associated with IP. Put simply, if IP rights do not confer market power, and if close substitutes are generally abundant, who cares if IP rights are perpetual; why bother requiring that only non-obvious inventions be patentable? If copyrighted works are generally priced at the competitive level, what difference does it make if the copyright owner can or cannot control the distribution of her works after the first sale? Why worry about fair use?<sup>67</sup>

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<sup>63</sup> “Intellectual Property Antitrust Protection Act of 1989”: Hearing on H.R. 469 Before the Subcomm. on Econ. & Com. Law of the House Judiciary Comm., 101<sup>st</sup> Cong., 2d Sess. (1989); “The Intellectual Property Antitrust Protection Act of 1985”: Hearing on H.R. 2674 Before the Subcomm. on Econ. & Com. Law of the House Judiciary Comm., 104<sup>th</sup> Cong., 2d Sess. (1996),

<sup>64</sup> See Charles P. Baker, Statement on behalf of the Am. Bar Assoc. on Market Power and Intellectual Property Litigation before the Subcomm. on Cts., the Internet, & Intell. Prop. Comm. on the Judiciary of the U.S. House of Rep. (Nov. 8, 2001), *available at* <http://www.abanet.org/intelprop/marketpower.pdf> (last visited, Mar. 30, 2004); Article, *Antitrust “Market Power” and Intellectual Property: Why the FTC and DOJ Action is Necessary*, 58 THE RECORD 10 (2003).

<sup>65</sup> Independent Ink, *supra* note 3.

<sup>66</sup> See e.g., Landes & Posner, *supra* note 8, at 327 (“Since the decision to create the work must be made before the demand for copies is known, the work will be created if the difference between expected revenues and the cost of making copies equals or exceeds the cost of expression.”); Stanley M. Besen, *Intellectual Property*, in 2 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 348 (Peter Newman ed. 1998) (“During the period of protection, the competition faced by the innovator is limited and he is thus able to earn supranormal returns that permit him to cover the costs and risks of undertaking the search for the innovation. The extent to which the innovator is sheltered from competition depends on both the scope of protection and the availability of imperfect substitutes for the innovation.”) Besen’s use of the term “supranormal returns” is probably inaccurate. The purpose of IP rights is to allow the innovator to set prices above marginal cost in order to cover the costs and risks of undertaking the search for the innovation. This does not require, and there is no reason to assume that the return on the investment will be “supranormal”.

<sup>67</sup> It is not my intention to reduce all those limitations and doctrines to the single issue of market power. Clearly, many of them have other justifications: economic and non-economic (see e.g., Wendy J. Gordon, *Excuse and Justification in the Law of Fair Use: Commodification and Market Perspective*, in THE COMMODIFICATION OF INFORMATION 149 (Niva Elkin-Koren & Neil W. Netanel ed. 2002) discussing transaction costs and other

This potential inconsistency is not left unnoticed by the market-power denialists, and many of them offer one or more explanations attempting to resolve this tension. Unfortunately, many of those attempts to reconcile this apparent tension, while clarifying some important points, ultimately lead to more confusion than clarity. Even worse, if IP and market power are inherently connected, as I shall establish below, then the denialist approach and the resulting anti-presumption may lead to two types of potential errors. One type of error is that without a presumption of market power the burden on antitrust plaintiffs challenging IP conduct could increase, resulting in fewer challenges to some practices of IP holders. Depending on one's view of the social benefits and costs of IP rights and on the magnitude of the cost of erroneous decisions this increased burden may be a vice or a virtue.<sup>68</sup> The other type of error is the potential condemnation of too many IP related practices, because at least in the absence of an alternative definition to what market power is, many IP owners will be found to possess *significant* market power regardless of the anti-presumption. In this sense, if the purpose of the anti-presumption was to create a safer haven for IP owners (compared to the approach of the Agencies towards IP-related restraints in the previous era), in the expectation that this would stimulate innovation and dissemination of knowledge, the unintended result of this approach could be a trap, because while the anti-presumption creates a procedural safe-haven, by placing the burden to prove market power on plaintiffs, courts may assume, in the cases when market power is proved, that these are exceptional cases that do warrant antitrust relief.

#### IV. THE ATTEMPTS TO RESOLVE THE TENSION

Faced with the tension between the economic theory of IP rights, market-power denialists offer several arguments, often intermingled with each other, to resolve this tension. The first argument is that IP rights do confer *some* market power, but "not in an antitrust sense" (or "not in the antitrust context" in the AGLIP language).<sup>69</sup> This definitional argument is usually combined with a second argument – an empirical assertion that most intellectual goods have many close substitutes. The third argument, closely related to the first, is that an IP holder's right to exclude is not different from owners' of tangible property right to exclude. The fourth argument is based on the empirical assertion that most IP rights have no commercial value whatsoever and therefore cannot possibly entail any market power. I will now turn to examine these arguments. I will begin with the first argument; the others will be discussed below.

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justifications for fair use). However, it seems to me that the significance of such limitations would be much smaller if the exercise of market power had not been an important concern.

<sup>68</sup> Since we do not know whether from an overall social standpoint current IP regimes provide too much or too little protection it is hard to assess the benefit of increasing IP holders' potential antitrust liability. Increased antitrust liability may be beneficial if current IP regimes are excessive and vice versa.

<sup>69</sup> AGLIP, §2.0(b).

### A. *'Market Power in the Antitrust Sense'*

Professor Lemley provides a typical exposition of the first argument. He explains that “In economic terms, intellectual property rights prevent competition in the sale of the particular work or invention covered by the intellectual property right, and therefore allow the intellectual property owner to raise the price of that work above the marginal cost of reproducing it. ... This means that in many cases fewer people will buy the work than if it were distributed on a competitive basis, and they will pay more for the privilege,”<sup>70</sup> but immediately adds: “This does not mean that intellectual property rights automatically confer market power or create “monopolies” in an economic or antitrust sense, as some courts have erroneously presumed.”<sup>71</sup> Lemley neither defines, however, what ‘market power’ or ‘monopoly’ is, nor explains, what is the difference between the attributes that he ascribes to IP and the term ‘monopoly’ in its economic or antitrust sense.<sup>72</sup>

The AGLIP, nonetheless, adopting a similar view, do define what market power is. In Section 2.2 they explain that “market power is the ability to maintain prices above, or output below, competitive levels for a significant period of time” and although the sentence contains an ambiguous term—‘the competitive level’—this ambiguity should not be much of a difficulty for an antitrust lawyer or antitrust economist. In fact, this definition of market power is the traditional definition of market power in the antitrust context. The same definition can be found in the 1992 Horizontal Merger Guidelines.<sup>73</sup> It is the definition often used by the courts<sup>74</sup> and by many commentators. Therefore the term ‘the competitive level’, despite its apparent ambiguity, has a rather clear meaning in antitrust: the competitive level in antitrust law’s tradition usually means that price equals marginal cost. For example, this definition opens Landes and Posner’s classic article “Market Power in Antitrust Cases”<sup>75</sup> and throughout that article the term ‘the

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<sup>70</sup> See e.g., Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 996 (1997).

<sup>71</sup> *Id.* at n26.

<sup>72</sup> To illustrate the confusion: Lemley distinguishes between market power in ‘economic or antitrust sense’ on one hand and some ‘other’ sense on the other, that is, he views the economic sense and antitrust sense as synonyms. Klein and Wiley, however, make a similar substantive argument but instead suggest that the distinction should be made between market power in economics and market power in antitrust, see Benjamin Klein & John S. Jr. Wiley, *Competitive Price Discrimination as an Antitrust Justification for Intellectual Property Refusals to Deal*, 70 ANTITRUST L. J. 599, 624 (2003).

<sup>73</sup> U.S. Department of Justice and the Federal Trade Commission, Horizontal Merger Guidelines §0.1 (1992), available at <http://www.usdoj.gov/atr/public/guidelines/hmg.htm>. The Merger Guidelines explain that “in some circumstances, a sole seller (a “monopolist”) of a product with no good substitutes can maintain a selling price that is above the level that would prevail if the market were competitive.”, *id.* However, the ultimate question of merger analysis is the effect of the proposed merger on market power; “whether the merger is likely to create or enhance market power or to facilitate its exercise”, *id.* at §0.2.

<sup>74</sup> See e.g., NCAA v. Board of Regents, 468 U.S. 85, 108 n.38 (1984) (“[m]arket power is the ability to raise prices above those that would be charged in a competitive market”); *Jefferson Parish*, *supra* note at 27 n46 (“As an economic matter, market power exists whenever prices can be raised above the levels that would be charged in a competitive market.”).

<sup>75</sup> William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937 (1981).

competitive level' means that price equals marginal cost.<sup>76</sup> It does not mean however, that for antitrust law every deviation of the price above marginal cost has legal significance, because "the *fact* of market power must be distinguished from the *amount* of market power."<sup>77</sup> And "when the deviation of price from marginal cost is trivial, or simply reflects certain fixed costs, there is no occasion for antitrust concern."<sup>78</sup> The last point, that as long as the deviation from marginal cost reflects certain fixed cost is indeed fundamental for properly identifying the antitrust concerns in the context of IP rights, and I will return to this later, but for the moment, in the antitrust tradition, 'monopoly power' or 'market power in the antitrust sense' do not refer to situations in which price is slightly above marginal cost but means substantial deviation of price from marginal cost.<sup>79</sup> Although different antitrust offences may require different degrees of market power,<sup>80</sup> the use of the term 'market power' in antitrust will usually be shorthand for 'substantial' market power.

In addition, antitrust tradition acknowledges that in practice, markets are never perfectly competitive and prices are usually set somewhere above marginal cost. This is particularly true when the products in a market are differentiated, because in this case some consumers will have stronger preferences for one product over another and the seller would have some control over price. Yet, as Posner put it, "to infer that every seller who faces a downward-sloping demand curve has monopoly power in a sense interesting to antitrust law would be a profound mistake. In fact most sellers of non-fungible commodities do not face a completely horizontal demand curve; but when it is *almost* horizontal, the reduction in output (and rise in price) that result from the seller's reducing his output from the competitive level to the point at which marginal revenue equals marginal cost will be too slight to worry about."<sup>81</sup> In sum, the term 'market power' in antitrust traditionally means **an ability to set prices in substantial deviation from marginal cost.**

Having understood what market power in the antitrust sense means it is easier to understand the AGLIP and reconcile what could otherwise be seen as two contradictory statements. In Section 1.0 the AGLIP explain that: "In the absence of intellectual property rights, imitators could more rapidly exploit the efforts of innovators and investors

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<sup>76</sup> *Id.* at 941, 974, *see also* HOVENKAMP, *supra* note 23, §3.1a, at 79 ("Market power is a firm's ability to deviate profitably from marginal cost pricing. Further, marginal cost, or competitive, pricing is an important goal of the antitrust laws. Marginal cost is therefore a useful base from which to measure market power: the greater the ratio of a firm's profit-maximizing price to its marginal cost, the more market power the firm has."); DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION, 610 (3<sup>rd</sup> ed. 2000) ("A firm ... has market power if it is profitably able to charge a price above which that would prevail under competition, which is usually taken to be marginal cost").

<sup>77</sup> Landes & Posner, *supra* note 75, at 939 (italics added).

<sup>78</sup> *Id.*

<sup>79</sup> *See e.g.*, *Reazin v. Blue Cross and Blue Shield of Kansas, Inc.*, 899 F.2d 951, 967 (10th Cir. 1990) ("Market power and monopoly power differ only in degree--monopoly power is commonly thought of as 'substantial' market power.").

<sup>80</sup> Landes & Posner, *supra* note 75, at 937, 955-56.

<sup>81</sup> RICHARD A. POSNER, ANTITRUST LAW 22 (2<sup>nd</sup> ed. 2001), *but see* Klein & Wiley, *supra* note 72, at 627-28 ("we disagree with the basis for this conclusion, which is the unsupported empirical assertion that these firms face "almost horizontal" demand curves so that the monopoly power involved is "too slight to worry about").

without compensation. Rapid imitation would reduce the commercial value of innovation and erode incentives to invest, ultimately to the detriment of consumers.” In other words, the AGLIP share the view that IP laws are designed to prevent ‘rapid imitation’ (*i.e.*, restrict competition) that would ‘reduce the commercial value of innovation’ (*i.e.*, the price that could be charged for it). This view is seemingly compatible with the view that IP rights *do* confer market power. But the AGLIP approach is that IP rights *do not* necessarily confer market power in the antitrust sense. This apparent contradiction is solved in Section 2.2. According to the AGLIP, IP rights only confer “the power to exclude with respect to the *specific* product, process, or work in question” but no substantial market power necessarily results from this ability because “there will often be sufficient actual or potential close substitutes for such product, process, or work to prevent the exercise of market power”. This description echoes Posner’s description of markets with differentiated products and ‘almost horizontal’ demand curves. The distinction is between a right to exclude with respect to a specific product, which has no *perfect* substitutes and therefore confers some power to control the price of that specific product and set it in some deviation from marginal cost but not to control the price in the *market* (which presumably is populated by other close substitutes). The AGLIP view therefore, is that usually, although the prices of intellectual goods are set above marginal cost, this deviation is not substantial and therefore inconsequential for antitrust purposes.

However, this theory of the relations between IP and market power is internally inconsistent. One cannot hold the view that laws that prevent rapid imitation and allow prices to be maintained at higher levels are necessary (and assume that they are effective), and at the same time assume that prices will not be set at that higher level because there are plenty of close substitutes, which, by definition, have the same effect on prices as imitation has. If the existence of close substitutes does not cause prices to fall towards marginal cost the only logic explanation is that such substitutes are in fact not very close.

***B. Why the Price of Many Intellectual Goods Can Be Expected to Deviate Substantially from Marginal Cost***

Although contrary examples are probably abundant, for a variety of reasons that I will set below, it can be expected that the price of many intellectual goods will deviate from marginal cost substantially. This means that under the traditional definition of market power many holders of IP rights are expected to possess market power ‘in the antitrust sense’ – contrary to the AGLIP view. This fact, however, should be distinguished from two separate, yet not unrelated, questions. One is what the normative consequences of a finding of market power are, and the second is whether, as a matter of legal policy, courts should presume the existence of market power. These questions will be discussed separately below. But first, let me turn to the positive correlation between IP and market power.

### i. Marginal Cost of Many Intellectual Goods is Very Low

The basic assumption of IP law is that the cost of inventing or creating is often high, while the cost of reproducing the work or using the invention is often very low.<sup>82</sup> The examples are abundant. A copy of a feature film can be produced on VHS or DVD for less than a dollar; the manufacturing cost of an additional copy of a hardcover book is less than three dollars; the typical cost of making an additional copy of many paperbacks, magazines or sound recordings is typically less than 25 cents.<sup>83</sup> Many of these products, however, are sold at significant price multipliers.<sup>84</sup> Similarly, the price of many patented drugs often far exceeds their production cost.<sup>85</sup>

The fact that many such products are often sold (or licensed) at prices that exceed marginal cost by several multipliers is not really surprising. Unless a firm faces perfect competition (and IP law often prevents perfect competition),<sup>86</sup> when its marginal cost is very low it can set the price far above marginal cost even when the demand for its product is not highly inelastic.<sup>87</sup> This result can be easily derived from the Lerner Index that is often used to quantify market power.<sup>88</sup> The simplest formulation of the Lerner Index is  $L = (P - MC) / P$  (where  $P$  is the firm's price at its profit-maximizing level of output and  $MC$  is the marginal cost at that level). The index can have values on a spectrum from zero to one: zero in perfect competition (when  $P = MC$ ) and one when  $P$  approaches infinity or as marginal cost approached zero.<sup>89</sup> If, as in many instances involving IP, marginal cost approaches zero, the index approaches its highest possible level. Interestingly, this happens at any price higher than zero. That is, when marginal cost approaches zero, almost *any* positive price will be *substantially* higher than the competitive level (measured by marginal cost), and any firm setting this price will be a monopolist 'in the antitrust sense' – at least in the absence of alternative definition.

In such circumstances, the existence of substitutes only sets an upper limit on the profit maximizing price; their existence determines where the firm will set its price, but often this price will be *substantially* higher than marginal cost. As long as the

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<sup>82</sup> A distinction should be made between the invention or work itself (the protected information) and the product that embodies that information. The marginal cost of an additional use of the information protected by the intellectual property is very low, although the marginal cost of making an additional final product that embodies the intellectual property is often (*e.g.*, books, CDs, drug pills), but not always and not necessarily low (*e.g.* nuclear reactors).

<sup>83</sup> PETER S. GRANT & WOOD CHRIS, BLOCKBUSTERS AND TRADE WARS: POPULAR CULTURE IN A GLOBALIZED WORLD 47 (2004).

<sup>84</sup> The phenomenon of piracy of many intellectual goods is a good indicator for the marginal cost of production. The price of the pirated good will often be very close to marginal cost.

<sup>85</sup> Ian Ayres & Paul Klemperer, *Limiting Patentees' Market Power without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-injunctive Remedies*, 97 MICH. L. REV. 985, 1018 (1999).

<sup>86</sup> IP law may enable the IP owner to prevent the making of *identical* copies. It does not preclude the possibility that non-infringing product will function as perfect substitutes although the probability that they such substitutes will be perfect, rather than reasonable substitutes, is low, *see infra* Part IV.B.ii. Nevertheless, contrary examples undoubtedly exist. As Jon Putnam pointed out to me anyone can photograph a mountain and copyright her work.

<sup>87</sup> Landes & Posner, *supra* note 75, at 942-43.

<sup>88</sup> A. P. Lerner, *The Concept of Monopoly and the Measurement of Monopoly Power*, 1 REV. ECON. STUD. 157 (1934).

<sup>89</sup> HOVENKAMP, *supra* note 23, at, §3.1a, 79.

competitive level is understood to reflect marginal cost and market power means the ability to deviate substantially from this level, the Guideline's assertion that the "there will often be sufficient actual or close substitutes ... to prevent the exercise of market power" is unrealistic.<sup>90</sup>

ii. **Pricing Intellectual Goods at Marginal Cost is not a Viable Strategy**

A related important feature of many intellectual goods is that their sellers not only can set the price substantially above marginal cost, in fact they must do so. The standard cost pattern of many IP goods often requires large sunk investment but a negligible marginal cost. Under such conditions, setting the firm's prices at marginal cost will necessarily condemn it to losses.<sup>91</sup> This happens because in such conditions the firm's total revenue (its marginal cost times output) is necessarily lower than its total cost.<sup>92</sup> When this is the cost structure, no firm will enter the market in the first place unless it can expect that prices will be high enough above marginal cost that the sunk cost would be recovered.<sup>93</sup>

But a firm contemplating entry must also consider the possibility that *post* entry its goods will be copied or imitated by competitors who do not have to bear the sunk cost, thus forcing prices down towards marginal cost. This concern is generally addressed by IP law, which prevents this type of direct competition.<sup>94</sup> However, the firm must also consider the possibility of competitive entry by less direct copiers or imitators. IP law provides partial solutions to this concern. In patent law, for example, the doctrine of equivalents "prevents an accused infringer from avoiding liability for infringement by changing only minor or insubstantial details of a claimed invention while retaining the invention's essential identity."<sup>95</sup> In copyright law, two works may not be literally identical and yet, for purposes of copyright infringement, may be found to be substantially similar.<sup>96</sup> Thus in order to avoid liability a competitor must differentiate herself from the protected good. So the broader the scope of an IP right the more differentiated will be other non-infringing substitutes and the greater will be the market power conferred upon its holder.<sup>97</sup>

But relying on IP law – unless its scope is extremely broad - is only a partial solution for the potential investor. Theoretically, two sellers can offer two functionally equivalent products, which are perfect or almost perfect substitutes to each other even

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<sup>90</sup> An interesting comparison is the merger context, wherein an ability to sustain a price increase of five percent for the foreseeable future is generally deemed by the US antitrust authorities to be indicative of market power, *see* Merger Guidelines, *supra* note 73, at §1.11.

<sup>91</sup> William J. Baumol & Daniel G. Swanson, *The New Economy and Ubiquitous Competitive Price Discrimination: Identifying Defensible Criteria of Market Power*, 70 ANTITRUST L. J. 661 (2003).

<sup>92</sup> *Id.* at 668.

<sup>93</sup> *Id.* at 671.

<sup>94</sup> In addition, in some cases the fact of being a first mover to the new market can give an advantage high enough so that the sunk cost of developing the new product can be recovered even in the absence, or in the absence of effective, IP protection, *see e.g.*, LANDES & POSNER, *supra* note 9, at 40.

<sup>95</sup> *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.* 234 F.3d 558, 564 (Fed. Cir. 2000).

<sup>96</sup> MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT, Release 63 §13.03[A] (2004).

<sup>97</sup> *See e.g.*, Richard Gilbert & Carl Shapiro, *Optimal Patent Length and Breadth*, 21 RAND J. ECON. 106, 107 (1990).

though they utilize completely different technologies. In this case even with very broad IP rights price could rapidly drop to marginal cost.<sup>98</sup> In addition, an investor contemplating entry must anticipate an even worse scenario, the *post* entry introduction of a non-infringing product that is sufficiently superior to her own that will totally displace it, not only compete with it. IP laws, of course, afford no protection against such risks.

A related, yet different risk stems from the fact that a significant portion of the costs of creation are incurred well before it is known whether a product will be introduced and well before it is known what the demand for that product will look like. As Jorde and Teece describe it: innovation is a “process involving risk-taking and uncertainty, probing, reprobating, experimenting, and testing. “Dry holes” and “blind alleys” are the rule rather than the exception.”<sup>99</sup> Similarly, in the creative industries, such as films, literature or music, while there is no question that a product will be produced, there is complete uncertainty about whether it is going to be a commercial success or a flop; demand can only be discovered through direct experience<sup>100</sup> and it is often the case that the actual principle to predict demand is ‘nobody knows anything’.<sup>101</sup> This implies that in order to be viable, an investment would not be made unless the expected profits in case of success are high enough to compensate for the risk of failure.<sup>102</sup> This means that the observed profits of the winner (*i.e.*, the markup above cost) should necessarily be high.

Putnam and Roberts give the following illustrative example: Two firms each invest \$100 on R&D in period one. In period two the winner earns \$250 while the loser earns \$0, with probability of 0.5 to win (that is, to develop a commercial product). *Ex ante* each firm’s *expected* rate of return is 25%. However, *ex post* the winner’s *observed* rate of return is 150%.<sup>103</sup> If market power is measured by the deviation of price from marginal cost then the winner has substantial market power, yet if the cost of capital is 25% then in expectation the firm has just broken even.<sup>104</sup> In the second example the firms invest the same amount (\$100 each), have the same probability of developing a

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<sup>98</sup> The magnitude of this risk largely depends on the relevant technology. In technological innovations, the number of known ways to efficiently reach a certain result is finite or at least limited (*e.g.*, the number of methods to synthesize a certain compound is limited). In creative and cultural works, while the number of ways to express an idea could be thought of as approaching infinity, the mode of consumption dictates that two different works will only rarely be perfect substitutes. Consumers often have strong preferences to one product over another, even if the two are equivalent in their objective functionality, broadly defined.

<sup>99</sup> Thomas M. Jorde & David J. Teece, *Rule of Reason Analysis of Horizontal Arrangements: Agreements Designed to Advance Innovation and Commercialize Technology*, 61 ANTITRUST L. J. 579, 581 (1993).

<sup>100</sup> Arthur De Vany & Ross D. Eckert, *Motion Picture Antitrust: The Paramount Cases Revisited*, 14 RES. L. ECON. 51 (1991).

<sup>101</sup> *Id.*, citing WILLIAM GOLDMAN, ADVENTURES IN THE SCREEN TRADE: A PERSONAL VIEW OF HOLLYWOOD AND SCREENWRITING 39 (1983) (stating that ‘Nobody Knows Anything’ is the single most important fact of the entire movie industry).

<sup>102</sup> Landes & Posner *supra* note 8, at 328.

<sup>103</sup> Gary L. Roberts and Jonathan D. Putnam, *Allegations of Harmony Between IP and Competition Policies: In Search of the Lost Chord* 321, in 1999 ANNUAL FALL CONFERENCE ON COMPETITION LAW 311 (Glenn F. Leslie ed. 2000) (the expected rate of return is 25% ( $[(0.5 \times \$0 + 0.5 \times \$250)]/100 - 1$ )).

<sup>104</sup> *Id.*

commercial product (0.5). If only one is successful it gets \$300, and if both succeed each gets \$200; if neither is able to develop a product, both get zero. If there is only one winner its rate of return is 200%, but even in the case when both firms develop competing, yet differentiated, products, the observed rate of return is still 100%, despite the fact that the expected rate of return remains 25%.<sup>105</sup> If marginal cost is used to measure market power, then successful innovators are likely to be found to possess significant market power. Such finding could of course be highly attractive for antitrust plaintiffs if this finding may lead to a finding of antitrust liability and a resulting reduction of prices. However, if as a result prices are reduced so that the rate of return is below 150% in the first example and below 100% in the second, each firm, if it could anticipate that result, would rather have invested elsewhere.<sup>106</sup> Such result, which may have a deleterious effect on the incentive to invest in innovation, implies that we should be cautious about condemning those successful IP owners that exercise market power in the sense of pricing at substantial deviation from marginal cost but whose expected rate of return is normal. But this concern should be discussed when dealing with the normative consequences of the existence of market power; it should not be confused with the positive fact that innovators who succeed in bringing to the market valuable intellectual goods often set their prices in substantial deviation from marginal cost.

### C. *'A Presumption of Market Power is Empirically Incorrect'*

Alternatively, it could be that the AGLIP do not try to say anything about the *economic* connection between IP and market power and only argue that there is no place for a *legal presumption* of market power because IP rights do not *necessarily* confer market power, since there *could* be close substitutes and therefore it is ultimately an empirical question that needs to be proved. In fact, this is my reading of the corresponding statement in *Walker Process*: that "It *may* be that the [patented] device ... does not comprise a relevant market";<sup>107</sup> and "There *may* be effective substitutes for the device which do not infringe the patent";<sup>108</sup> and of Justice O'Connor's opinion in *Jefferson Parish* that "a patent holder has no market power in any relevant sense *if* there are close substitutes for the patented product."<sup>109</sup> If that was the case, the view that market power should not be presumed could be justified on grounds of judicial policy, for example to discourage nuisance litigation motivated by the lure of potential treble damages.<sup>110</sup>

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<sup>105</sup> *Id.* at 321-22.

<sup>106</sup> *Id.*

<sup>107</sup> *Walker Process*, *supra* note 48 (italics added).

<sup>108</sup> *Id.* (italics added).

<sup>109</sup> *Jefferson Parish*, *supra* note 50, at 37 n7, (italics added).

<sup>110</sup> William Montgomery, *The Presumption of Economic Power for Patented and Copyrighted Products in Tying Arrangements*, 85 COLUM. L. REV. 1140, 1151 (1985). In *Walker Process*, in fact, treble damages were the remedy sought by Walker Process in its antitrust counterclaim, *Walker Process*, *id.* at 173.

But the AGLIP go much further than that.<sup>111</sup> They do not merely suggest that there *may* be close substitutes to prevent the exercise of market power; they suggest that there will *often be* close substitutes to prevent the exercise of market power.<sup>112</sup> Sure enough, the word ‘often’ could be just another example of ambiguity in the AGLIP. The word covers a range of probabilities – so it is not entirely clear whether ‘often’ in this context means only that the number of cases in which IP rights do not confer market power is not insignificant, or does ‘often’ mean that in the majority of cases IP rights do not confer market power. Yet when read in conjunction with the AGLIP’ first principle - that for the purpose of antitrust analysis IP rights are essentially comparable to any other form of property<sup>113</sup> - it seems that the theory of the AGLIP is that, just like in any case not involving intellectual property, the starting point in any antitrust analysis is that until the contrary is proven, in markets for intellectual goods there are plenty of substitutes and prices are therefore expected to be set not far from marginal cost.

**i. IP is Just like Any Other Type of Property**

It is the AGLIP analogy between intellectual property and other types of property which in my view creates an ‘anti-presumption’, or a presumption that IP rights *do not* confer market power that goes beyond simply demanding that market power be proved. Areeda & Hovenkamp use the analogy to ordinary property to express their view in favor of an anti-presumption much more explicitly. They explain that:

“a patent is presumptively not a monopoly at all, but merely the right to exclude others from copying a particular process or product. As such it is no different than any other property right--for example, ownership of an airplane or pipeline entails the right to exclude others from using them. Thus the patent infringement action is nothing more than a variation on the common law trespass action. Neither ownership of the property right nor the power to exclude conveys monopoly power unless the property right in question dominates a properly defined relevant market. The great majority of patents do not.”<sup>114</sup>

While I agree that the existence or lack of market power in each specific case is a matter of fact, and therefore cannot be simply and conclusively presumed, I strongly disagree with the implicit opposite presumption: that the relationship between IP and market power is essentially similar to the relationship between any other form of

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<sup>111</sup> Clearly, the argument about nuisance litigation motivated by potential treble damages is greatly inapplicable to the antitrust agencies which cannot seek this remedy in their enforcement activities, unless in the rare occasions in which the US Government is the person suffers injury as a result of an antitrust violation, *see* HOVENKAMP, *supra* note 23, §15.1b.

<sup>112</sup> AGLIP, §2.2.

<sup>113</sup> *Id.* §2.0(a).

<sup>114</sup> 3 PHILIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 704a (1996), *see also* Frank H. Easterbrook, *Intellectual Property is Still Property*, 13 HARV. J. L. & PUB. POL'Y 108, 109 (1990) (“Patents give a right to exclude, just as the law of trespass does with real property. Intellectual property is intangible, but the right to exclude is no different in principle from General Motors’ right to exclude Ford from using its assembly line, or an apple grower’s right to its own crop.”)

property and market power. If this is the AGLIP and their intellectual allies' view (and even if it is not, there is always a possibility that people who rely on the AGLIP would interpret them in that fashion) this is an inaccurate and misleading view of the relations between IP rights, prices, and marginal cost, and as such might lead to erroneous decisions by those who adhere to or rely on this view.

With tangible assets scarcity is a given. The assets are rivalrous in consumption (which means that they cannot be simultaneously used without being depleted) and therefore the level of output that can be derived from them is finite. The grant of property rights in such assets determines who is entitled to the benefits that those assets create but not the amount of them.<sup>115</sup> If the owner of the asset has market power and therefore is able to control the level of price and output it is a result of factors that do not directly emanate from the fact of ownership in the asset; depriving the owner of her property rights in the asset and moving it to a regime of common ownership would not affect the fact of scarcity, and may actually result in lower output in the longer run as a result of overuse: the famous "tragedy of the commons".<sup>116</sup> Therefore, it is fair to reject any general connection between property rights in tangible assets and market power. In contrast, the grant of IP rights is designed to affect the price and output of intellectual assets. "It is a conscious decision to *create* scarcity in a type of good in which it is ordinarily absent in order to artificially boost the economic returns to innovation."<sup>117</sup> There is no guarantee that this intended result would always be achieved. But when it is achieved, market power and the grant of IP rights are inherently connected. The grant of an IP right is often the *sine qua non* for its owners' ability to exercise market power.

If any analogy is useful in this context<sup>118</sup> it is not an analogy to the ownership of an airplane or a pipeline, as Areeda & Hovenamp suggest, but rather to a governmental grant of an exclusive franchise to operate an airline between two destinations or to run the only pipeline between two regions, accompanied by a rule that makes it illegal for others to offer the same air service or lay additional pipelines. Clearly, just as with IP rights, such an exclusive franchise does not necessarily mean that the franchisee is a monopolist. It may turn out that such exclusive franchises are not worth much because there might be other equally efficient means of transportation between the two destinations or other methods to deliver liquids or gas between the regions, all of which are good enough substitutes to the specific airline or pipeline. Yet it does not seem unreasonable to expect that if such an exclusive franchise exists (and lobbied for), it might result in significant market power.

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<sup>115</sup> See Plant, *supra* note 9 (noting that with regard to tangible property "neither the withholding, nor the disposal of the property of any one owner will in general affect appreciably the price of the commodity in question.")

<sup>116</sup> Garrett Hardin, *The Tragedy of the Commons*, 162 *Sci.* 1243 (1968).

<sup>117</sup> Mark A. Lemley, Property, Intellectual Property, and Free Riding 31, Stanford Law School John M. Olin Program in Law and Economics Working Paper No. 291(2004).

<sup>118</sup> *Id.* at 56 (arguing that the needs and characteristics of IP are unique, and so are the laws that establish IP rights and they require their own analysis, not analyses borrowed from other areas).

## ii. Most Intellectual Property Rights Have No Commercial Value

One of the strongest arguments against the presumption of market power is based on the empirical finding that most IP rights have no commercial value. If most IP rights have no commercial value they *a fortiori* lack market power.<sup>119</sup> Such finding<sup>120</sup> may seem to be inconsistent with the previous prediction that facing the risks of innovation, those who finance it would tend to direct their efforts towards the creation of intellectual goods that would not be easily substitutable and would confer enough market power to cover the risk-adjusted cost of innovation. But there is no real inconsistency. First, innovators may seek to create only non-substitutable works but there is no guarantee for success. Some will succeed; many other will fail. Second, the law's requirements for IP protection are independent of commercial success - both successful and unsuccessful endeavors may result in protected intellectual goods. In addition, the thresholds for obtaining IP protection are sometimes very low: "virtually any combination of words, sounds, or images can be copyrighted";<sup>121</sup> and similarly, it does not require much to satisfy the novelty, usefulness and non-obviousness requirements for patentability.<sup>122</sup> The satisfaction of these requirements does not mean that the work in question will have a commercial value, not to mention market power.<sup>123</sup> Furthermore, the period of commercial success, even when an intellectual good is commercially successful, may not commensurate with the term of IP protection; it may be much shorter. Consequently, the fact that most patents or copyrighted works have no commercial value (and therefore no market power) should not be surprising.

But when considering whether there should be a presumption of market power, looking at the sample of all intellectual goods can be highly misleading. First, the number of IP rights that have no commercial value tells us very little about the prices and price-cost ratios of those that do, but only those that do have commercial value are involved in any meaningful trade that may or may not be restrained. If we narrow our observation to the subset of those intellectual goods that *do* have commercial value and assume that they are evenly distributed along a spectrum according to the level of available substitutes (and the associated degree of market power) and that marginal cost is very low, as is often the case, we can expect, applying the Lerner index, that the

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<sup>119</sup> See e.g. HOVENKAMP, *supra* note 23, §3.9d, at 141.

<sup>120</sup> See e.g., PHILLIP AREEDA & LOUIS KAPLOW, ANTITRUST ANALYSIS 441 n49 (1988) (between 80 and 90 percent of all patents may have no commercial value, *citing* Fritz Machlup, An Economic Review of the Patent System 12 (Study No. 15 of the Subcommittee on Patents, Trademarks, and Copyrights of the Senate Committee on the Judiciary, 85<sup>th</sup> Cong., 2<sup>nd</sup> Sess., Committee Print, 1958); F.M. Shcerer, *in* Salem M. Katsh, Jack E. Brown & F.M. Shcerer, *The Value of Patents and Other Legally Protected Commercial Rights – Panel Discussion*, 53 ANTITRUST L.J. 535, 547 (1984) ("Statistical studies suggest that the vast majority of all patents confer very little monopoly power – at least, they are not very profitable."). For more precise estimates of the value of patent rights see e.g., Mark Schankerman & Ariel Pakes, *Estimates of the Value of Patent Rights in European Countries During the Post-1950 Period*, 96 ECON. J. 1052 (1986).

<sup>121</sup> AREEDA & HOVENKAMP, *supra* note 56.

<sup>122</sup> *Id.*

<sup>123</sup> *Id.*

average “successful” intellectual good not only will not be priced at marginal cost, but will actually be priced substantially above it as we have previously observed.<sup>124</sup>

Moreover, since the presumption of market power is a legal concept it will always be invoked (or rejected) in the context of an actual legal dispute between an IP holder and her competitor, customer, or supplier (or an antitrust agency by extension). Any discussion of whether IP holders should be presumed to have market power or not outside the context of such disputes is inconsequential (at least for antitrust purposes). Therefore, the relevant sample for assessing the merit of the presumption could be narrowed even further to the subset of the IP rights whose existence or exercise is disputed and litigated. For the reasons that will be outlined below, those legal disputes would tend to concentrate on intellectual goods that have high commercial value, which are likely to be the ones that do not have many close substitutes. The size of this sample, of course, is not exogenous to the existence or absence of a presumption of market power. If a presumption exists, the burden on plaintiff is lower and more cases are litigated. This leads to a decrease in the amount of market power of the average defendant. This may undermine the validity of the presumption, which in turn leads to increased burden on plaintiffs and a narrowing of the size of the sample, which leads to an increase in the amount of market power of the average defendant and so on. This dynamic, however, does not change the fact that those IP rights which have no commercial value *at all* are unlikely to be part of the sample, although it may explain why courts’ willingness to presume market power may change over time.

#### ***D. Choosing the Correct Sample: Disputes Involving IP Rights and Market Power***

Even if empirically, when counting the sheer number of IP rights, most intellectual goods have sufficiently close substitutes that prevent the exercise of market power, it could be predicted that disputes would develop and litigation would concentrate on the more valuable intellectual goods, which are those that confer greater market power upon their owners.<sup>125</sup> This prediction has been confirmed empirically.<sup>126</sup>

For the current discussion I will characterize IP disputes as either horizontal or vertical. A dispute is horizontal if it occurs in a market where both parties are actual or potential competitors,<sup>127</sup> and in the typical horizontal case the plaintiff seeks “to impair the defendant’s performance in their shared market or even to exclude the defendant from the market completely.”<sup>128</sup> In a vertical dispute the parties do not compete with

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<sup>124</sup> See *supra* Part IV.B.i.

<sup>125</sup> Scherer, *supra* note 120.

<sup>126</sup> See e.g., Jean O. Lanjouw & Mark Schankerman, *Characteristics of Patent Litigation: A Window on Competition*, 32 RAND J. ECON. 129 (2001).

<sup>127</sup> Michael J. Meurer, *Controlling Opportunistic and Anti-Competitive Intellectual Property Litigation*, 44 B. C. L. REV. 509, 512 (2003).

<sup>128</sup> *Id.*

each other and the plaintiff's purpose is to seek settlement payments from the downstream defendant who uses the intellectual good.<sup>129</sup>

One of the factors that determine whether a dispute will arise and litigation ensue is the size of the stakes involved.<sup>130</sup> Therefore, a holder of an IP right would not attempt to exclude a competitor unless the expected gains from such exclusion are greater than the cost of litigation. Since the cost of IP litigation, especially patents, is often extremely high,<sup>131</sup> and may sometimes also expose the patent to the risk of being declared invalid, an IP plaintiff must expect to gain significantly by attempting to exclude her rivals. A horizontal IP infringement suit does not make a lot of sense if the IP holder has no market power. If the market is highly competitive because the technology has many close substitutes the plaintiff will gain very little (if anything) from the exclusion of a competitor, because the output reduction (and price increase) that will result from the exclusion of that infringing defendant will be rapidly offset by output expansion by non-infringing competitors.<sup>132</sup> Therefore if we assume that infringement suits are brought by rational IP holders, horizontal dispute are more likely to occur when market power exists and its maintenance is sought.<sup>133</sup> In some cases, nonetheless, an IP holder may sue her competitor only to increase her sales at the expense of the excluded competitor even if the market is competitive. In such cases the market share of the excluded competitor will be divided between the remaining competitors. Each of them would gain but the level of output and prices in the market would not necessarily change; a competitor would be excluded but competition may not necessarily be harmed. However, the larger the number of competitors and the smaller the market

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<sup>129</sup> *Id.* The distinction between the horizontal case and the vertical is nevertheless fuzzy. Even in a horizontal dispute, the plaintiff is claiming control over one of the defendant's inputs, so in that sense it is also a vertical dispute. Similarly, the distinction largely depends on the validity of the infringement claim. Even in the vertical case, if the claim is invalid the defendant can often produce the input independently (due to the non-rivalrous nature of the intellectual good) and in this sense could be seen as a competitor in the upstream input market. The distinction between the plaintiff's purposes may not be clear either. A plaintiff may seek settlement payments but use the threat of exclusion in order to improve her bargaining position towards such settlement. Professor Meurer deals only in anti-competitive and opportunistic IP litigation. The distinction in this context between horizontal and vertical disputes that include both the legitimate and the non-legitimate (anti-competitive or opportunistic) disputes is mine.

<sup>130</sup> Lanjouw & Schankerman *supra* note 126, at 132.

<sup>131</sup> See NATIONAL ACADEMY OF SCIENCE, A PATENT SYSTEM FOR THE 21ST CENTURY 38 (2004) ("The median cost to each party of proceeding through a patent infringement suit to a verdict at trial is at least \$500,000 where the stakes are relatively modest. Where more than \$25 million is at risk in a patent suit, the median litigation cost is \$4 million for each party.")

<sup>132</sup> In fact this is the flip-side of the usual skepticism in antitrust towards predatory pricing claims. In predatory pricing litigation the plaintiff asks the court to infer an exclusionary outcome from the defendant's conduct, and courts usually require a showing of market power, likelihood of exclusion and likelihood of recoupment, because otherwise the alleged predation is inconsistent with rational behavior, *see e.g.*, *Cargill, Inc. v. Monfort of Colorado, Inc.*, 479 U.S. 104, 119 n15 (1986). In the case of horizontal IP dispute the intent to keep prices high and the exclusionary purpose and outcome are overt; this is the remedy sought by the IP owner, and therefore rationality implies that the IP owner has market power and entry is unlikely.

<sup>133</sup> It should be noted however that some IP owners, owning a portfolio of IP rights, may initiate some weak infringement suit even when they will gain nothing in the particular case in an attempt to build reputation as aggressive IP holders, reputation that will help them prevent entry into those markets in which they do possess market power.

share of the plaintiff, the lower are the expected benefits to the plaintiff, who therefore, given the cost of litigation, is less likely to embark on the exclusionary operation. This implies that even such suits are more likely to be brought in markets with a small number of competitors and by the larger of them. In such circumstances the end result of the exclusion of one competitor could be not simply reallocation of market shares but lower output and higher prices, that is, an increase in the plaintiff's market power.

Vertical conflicts have a similar logic. If an IP right is an input into the production of another product but it is just as good substitute as many other potential inputs (whether IP protected or not) the margins of the dispute are narrow and both parties cannot gain much from litigation. The IP holder cannot expect to receive high royalties in a settlement because the user has competitive alternatives. The user cannot expect to save much from pursuing his costly defense and instead will switch to other alternatives. Therefore both parties have strong incentives to avoid litigation or to settle it at an early stage. The opposite is true if the IP holder possesses market power. In this case the plaintiff can expect to receive high royalties and the user can save the same amount by proving that the IP is invalid or not infringed. The stakes are high and both parties have good reasons to finance the costly litigation.<sup>134</sup> In sum, while not every dispute that involves intellectual goods necessarily implies the existence of market power a significant number of them probably do.

### *E. Intellectual Property Rights: Market Power or Rents?*

A different argument in the debate on IP and market power has been made by Edmund Kitch<sup>135</sup> and Kenneth Dam<sup>136</sup> who have argued that the use of the term "monopoly" in this context is incorrect because the right to exclude, granted by a patent

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<sup>134</sup> Of course, this does not mean that any IP right that is litigated should necessarily involve market power, because opportunistic litigation can be pursued even in a case where the IP in question does not confer market power but the party who is utilizing this IP has made significant specific investment in its utilization. For example, if a producer has already produced a film based on another writer's script without clearing copyright issues in advance, she cannot substitute other scripts for it and may find herself ending up paying high royalties if the film is successful, even if prior to the commencement of the production there were many more substitutes that could have been properly licensed for lower price. Professional users of IP may expect this outcome and try to clear all IP issues before making irrecoverable investments in utilizing other peoples' IP, but this may not always be possible. Contracts may be incomplete, so we can expect to see attempts to renegotiate *ex post*. In some case contracts may not be reached at all: the IP holder may be unknown or it could be too costly to locate, or the user may believe that her use of the IP is not infringing. Yet even then, the abundance of potential substitutes *ex ante* will supply courts with a benchmark for the appropriate compensation *ex post*, which in a competitive environment would be relatively low, and as in the previous case, the expected gains from such litigation may not justify the cost of litigation. The issue gets more complicated in purely opportunistic lawsuits in which for a variety of reasons, such as avoidance of the cost of litigation and the uncertainty about the exact scope of the disputed IP rights, may result in settlement payments even if the allegedly IP rights allegedly infringed have no commercial value, *see Meurer supra* note 127, at 513-524. Opportunistic litigation (and a resulting settlement) may also be encouraged by the remedies available to plaintiffs, such as, in the case of US copyright law, statutory damages and infringer's profits, *see* 17 U.S.C.A. § 504 (a) and (c), respectively or treble damages in US patent law, *see* 35 U.S.C.A. § 284.

<sup>135</sup> Edmund W. Kitch, *Patents: Monopolies or Property Rights?*, 8 RES. L. ECON. 31 (1986)

<sup>136</sup> Kenneth W. Dam, *The Economic Underpinnings of Patent Law*, 23 J. LEGAL STUD. 247 (1994).

(and possibly other IP rights)<sup>137</sup> is equivalent to any other property right and may only give rise to economic rents but not to any significant market power. The assumption of this argument, made with regard to patents, is that most patents cover technologies that reduce the cost of making another product that is sold downstream in a competitive market, rather than patents that cover actual final products.<sup>138</sup> According to Kitch “[t]he basic distinction ... is between a right which confers a comparative advantage in production which is sold into a market where the demand curve facing the firm has a slope of zero, and a right which confers the advantage of being able to sell into a market where the demand curve facing the firm has a negative slope.”<sup>139</sup> While a right of the second type confers market power (and could be adequately termed ‘monopoly’), a right of the first type is just an economic rent. The use of the term ‘rent’ rather than ‘monopoly’ is thought to be preferable because, as Dam points out:

“Economic rents are common in the economy. They are enjoyed wherever an economic actor has a cost advantage that competitors cannot match, for legal or other reasons. A legal reason might be some form of regulatory constraint or a subsidy, stemming, for example, from some form of industrial policy. But rents may arise from more natural causes. The advantage of superior location is a common example in real estate. Superior talent in the arts and professional sports is another.”<sup>140</sup>

The argument is that patents, being just property rights, give their owners, who produce products that are sold in competitive markets, a cost advantage over their competitors that allow them to make more money, yet the level of output in the product market will either remain the same compared to the pre-patent situation, or increase. In any event, granting the patent will not result in a decrease in production and increase in prices in the product market; the general concerns about monopoly, therefore, cannot be attributed to patents.<sup>141</sup>

There are two essential elements in the argument: one is an empirical assumption that most IP rights cover internal processes in the making of a final product, rather than final products.<sup>142</sup> The second element - the essence of the argument – is theoretical: that patents are at most comparable to economic rents that confer a competitive advantage but not market power.

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<sup>137</sup> Both papers by Kitch and Dam discuss patents, not IP rights generally.

<sup>138</sup> Kitch, at 47. No reference to substantiate this empirical assumption, however, is provided.

<sup>139</sup> *Id.*

<sup>140</sup> Dam, at 250

<sup>141</sup> Dam, 250-51.

<sup>142</sup> Although Kitch acknowledges that sometimes patents, such as drug patents do cover final products and that some of them that achieved dramatic and unique reduction in the cost and effectiveness of medical care probably have conferred monopolies upon their owners, yet suggests that these are very exceptional cases, Kitch, *id.* at 39. Dam argues that patents rarely confer market power, even when they do cover final products, Dam, *id.* at 249-50 (“without the benefit of empirical research, it is entirely plausible to conclude that in the great bulk of instances no significant market power is granted. We must bear in mind that leading companies may obtain 1,000 or more patents in a single year, and yet many such firms are unlikely ever to obtain even a single monopoly in any market.”)

Patents and other IP rights clearly cover both final products and services and technologies to produce other products and services, and it is surely helpful to acknowledge the difference between the two, when such differences are relevant to the question being studied. Yet the empirical assertion, assuming it is true, that patents mostly cover production technologies but not final products does not solve the question whether patents confer market power or not. When asking whether patents confer market power or not, the question is what is the effect of the existence of a patent right on prices in the market. When this question is asked it is rather obvious that the patent owner's right to exclude others from using the invention tends, other things being equal, to increase, or prevent a decrease, in the prices, compared to a situation where no such right existed.

The assertion that most patents cover only production technologies for products that are sold in highly competitive markets is, even if empirically correct, misleading for two reasons. First, in some cases, assuming constant or increasing return to scale, the cost advantage of the technology can be so substantial that the firm that has the exclusive right to use the technology can compete away any other competitor and have a monopoly in the final product. Even if there are diseconomies of scale that prevent that firm from effectively serve the entire market, it may still capture a large share of it and exercise some market power, which, depending on the elasticity of demand and the size of the market, may result in more or less significant deadweight loss.<sup>143</sup>

Second, and more important, a patented technology that improves the production of, say, a widget, can often be licensed to other producers of widgets, and sometimes to manufacturers of gadgets as well. Therefore, while a vertically integrated patent holder-manufacturer may face a horizontal demand curve in the market for widgets, the same firm is active, at least potentially, in another market – the market for the technology, in which it faces a down-sloping demand curve. The existence of such a market could be demonstrated in cases when the patent holder and the manufacturer are not vertically integrated and the patent for the technology that reduces the cost of producing widgets is held by one firm – a patent boutique for example - who licenses the technology to one or more manufacturers of widgets. Of course, it is not inevitable that the patent holder will have market power in this market; there could be several substitute technologies for making widgets or gadgets, and if they are perfect substitutes to each other no market power would exist. But if this is the case the technology is unlikely to yield any rents since the competitors who do not have access to the patented technology could use any of the other technologies. In this case the market price of the final product will fall and all the rents be dissipated.

Nevertheless, the fact that any patented technology could be licensed reveals the fundamental theoretical difficulty with the patent *qua* rent argument. Dam notes that rents can arise for a variety of legal reasons such as regulatory constraint or subsidy, or from more natural causes such as superior location or superior talent.<sup>144</sup> Although all

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<sup>143</sup> Landes & Posner, *supra* note 75, at 953-56.

<sup>144</sup> Dam, *supra* note 136, at 250.

types of rents provide some firms cost advantages that competitors cannot match, there are substantial differences between different sources of rents.<sup>145</sup> The distinction between rivalrous and non-rivalrous goods (or resources) is useful in this context.<sup>146</sup> Take for example the rent created by superior location in real estate markets.<sup>147</sup> This is an example of a rivalrous resource; other sellers in this real estate market cannot share this location and the advantage that it confers. So are other sources of rents such as a manufacturing location in proximity to the markets (which reduces delivery costs), a nearby waterfall that can provide cheap energy (when competitors, located elsewhere, have to pay the full market price for their energy inputs), material created as a byproduct in the manufacture of another product (when competitors have to purchase this input), etc.

Whether the source for a rent is rivalrous or non-rivalrous may critically affect the level of output and price in the market for the final product – the question that market power is all about. If a rivalrous resource confers a rent on a firm in a perfectly competitive market, the rent will have a positive effect on the profit of that firm but no negative effect on the level of output and price in the market.<sup>148</sup> The firm has no power to affect the total output and price in the market, and can only produce a given amount. The only difference between that firm and its competitors is that the firm earns higher profits. If the cost advantage is sufficiently large and the firm who possesses the cost-advantageous asset can expand its output, total output in the market might increase and price decrease, compared to the previous situation of perfect competition.<sup>149</sup> In the extreme case, when the cost advantage of that firm is substantial and it can supply the entire demand in the market, that firm might become a natural monopoly.<sup>150</sup>

When the rent is a result of one firm's possession of a rivalrous resource there will generally be no serious policy concerns with an exclusive possession of that resource by one firm. Since the resource is rivalrous there is a finite level of benefit that can be derived from it and there are important policy considerations for allowing only one person to possess the good; we can generally expect that such allocation will lead to optimal use of the resource, and increase the likelihood of its possession by this who value it most.

In contrast, when the rent is a result of one firm's possession of a resource that is not inherently rivalrous and that but for IP law would have been *non-rivalrous*, the

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<sup>145</sup> See generally, Margaret Sanderson & Ralph A. Winter, "*Profits" versus "Rents" in Antitrust Analysis: An Application to the Canadian Waste Services Merger*, 70 ANTITRUST L. J. 485 (2002).

<sup>146</sup> A good is non-rivalrous in consumption if more than one person can simultaneously derive the same consumption benefits from a given level of supply, and a good is rivalrous if consumption by one person diminishes the consumption benefits available for others.

<sup>147</sup> Dam, *supra* note 136, at 250.

<sup>148</sup> I assume here that the benefits available from that good are fully consumed and that are decreasing returns to scale so that the output produced utilizing the advantageous good is too small to affect the total output in the market.

<sup>149</sup> Dam, *id.*

<sup>150</sup> The firm becomes monopoly because it can outbid any competitor. Note however than in this case output will be higher and prices lower compared to the previous, competitive, situation

firm's right to exclude others from using this resource could directly affect output and prices in the market and should lead to more complex policy considerations. Had this non-rivalrous resource, an invention for example, not been patented and its use by all producers been open to all, as Dam correctly concedes, "all producers would gain the same cost advantage and the economic rent would be competed away; production would rise as cost fell."<sup>151</sup> If, however, the IP laws allow the firm to exclude others from using this resource, as they do, then the firm who owns it can effectively restrict production and increase price in the market for the final product. Now, ordinarily, when a firm has the power to control the level of output and price in a market, it would usually be said that the firm has market power. Dam does not dispute that. He acknowledges that "in that sense one could say that the patent restricts production and causes a deadweight loss"<sup>152</sup> yet argues that "even in this [...] case we can discern that the term "monopoly" does not add to our understanding."<sup>153</sup> However, the reason that according to Dam the term 'monopoly' does not add to our understanding is that we are all better off with patents than without them for all the ordinary reasons (*i.e.*, that benefit of innovation and the assumption that absent patent protection there would not be incentive to invent or incentive to disclose inventions, etc.). Yet replacing the term 'monopoly' with the term 'rent' adds even less to our understanding. Since the term 'rent' does not distinguish between inherently rivalrous resources and non-rivalrous resources that only become rivalrous as a result of the law, using it to describe contexts in which no market power and no policy trade-offs are required as well as in the context of IP where market power could exist and more complex policy trade-offs are required, creates vagueness, not clarity.

## V. PERFECT, MONOPOLISTIC, AND SCHUMPETERIAN COMPETITION

### A. *Perfect Competition vs. Monopolistic Competition*

Traditional antitrust analysis is rooted in the model of perfect competition. This model seldom applies to real-life situations, but it serves as a benchmark and as an ideal; real markets will be measured by their departure from this model, and the closer they are to the model the more efficient they will be considered to be. The model of perfect competition is based on the following assumptions: 1) all sellers sell a homogeneous product so that buyers are indifferent as to which seller to buy from if prices are the same; 2) each seller is small in proportion to the entire market so that his determinations about output and price do not affect output and price in the market; 3) all sellers have the same access to all kinds of inputs; 4) all participants have full knowledge about all the relevant factors in the market.<sup>154</sup>

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<sup>151</sup> Dam, *id.* at 251.

<sup>152</sup> *Id.*

<sup>153</sup> *Id.*

<sup>154</sup> See *e.g.*, HOVENKAMP *supra* note 23, at §1.1a.

In practice, albeit not always consciously or explicitly, antitrust analysis often uses the model of monopolistic competition.<sup>155</sup> The model, first developed in 1933 in the works of Joan Robinson and Edward Chamberlin, depicts a market populated by relatively small firms, selling differentiated products that are not considered by consumers to be perfect substitutes for each other, while entry and exit are unobstructed. Under conditions of monopolistic competition, each competitor faces a downward sloping demand curve and therefore sets its prices above marginal cost, and earns supranormal returns - but only temporarily. If entry is free, the existence of supra-competitive profits will attract new entrants offering other differentiated products. Extra profits will be wiped out and price in equilibrium will equal the long run cost of production.<sup>156</sup> That is, prices may be set above (short term) marginal cost, but will not exceed the total cost of production.

Indeed, the concept of ‘the relevant market’ reflects both the notion of perfect competition and the notion of monopolistic competition. Under perfect competition all that we have is a single homogeneous product, and all competing sellers sell the same product. In this case the product is that market. The antitrust ‘relevant market’, however, often includes not only the product in question and its perfect substitutes, but other, differentiated products that are often imperfect yet reasonable substitutes. But in both cases the focus is on the products that compete against each other within a single time period.

Even when antitrust analysis takes a more dynamic approach, under the concept of ‘potential competition’, for example, it looks at the firms that could, following a price increase, enter the market and supply the same or similar products within the geographic area. Although the concept of potential competition uses two time periods it still looks at the second period as a period in which multiple firms compete simultaneously, not sequentially, and prices are in equilibrium.

### ***B. Schumpeterian Competition***

The notion of innovation, which the grant of intellectual property rights—especially patents and copyrights—seeks to promote, reflects competition of another type, of which neither the perfect nor the monopolistic models of competition seem to apply. In the context of innovation, the crucial issue is not which products compete with each other *within* a single time period, but rather how new products compete with each other over time. In this context the focus is less on competing products that are sold simultaneously and on the resulting equilibrium, but rather on a process in which new products displace old ones, and which themselves will be later displaced by the next generation of products. In this “perennial gale of creative destruction”,<sup>157</sup> described and praised by Joseph Schumpeter, monopolies are common, but frequently swept aside by

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<sup>155</sup> *Id.* at §1.5 (arguing that the model of monopolistic competition has not had much explicit effect on antitrust policy, although judges must often consider how competition in the real world deviates from the model).

<sup>156</sup> EDWARD H. CHAMBERLIN, *THE THEORY OF MONOPOLISTIC COMPETITION* 83-85 (8th ed. 1962).

<sup>157</sup> JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* 84 (3rd ed. 1950).

new ones.<sup>158</sup> The competition that such monopolies face is not from many close substitutes but rather from “the new commodity, the new technology, the new source of supply, the new type of organization ... competition which commands a decisive cost or quality advantage which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives.”<sup>159</sup>

Schumpeter’s description of the process of Creative Destruction is not limited to cases involving intellectual property. In fact, his argument was a general defense of ‘bigness’ – of the large scale establishment that may occasionally resort to restrictive practices.<sup>160</sup> He believed that this model generally describes capitalist markets; that this process was “the essential fact about capitalism”.<sup>161</sup> Whether this is the general case or not, the logic of Schumpeter’s model is the same logic of intellectual property. When Schumpeter spells out the benefits of this system, his language sounds familiar to an ear trained to the language of intellectual property. He argues that “a system... that at *every* given point in time fully utilizes its possibilities to the best advantage [a system that seeks to promote perfect competition] may yet in the long run be inferior to a system that does so at *no* given point of time, because the latter’s failure to do so may be a condition for the level or speed of long-run performance”<sup>162</sup> The same arguments are made in favor of intellectual property rights<sup>163</sup> and the tradeoff implicit therein.<sup>164</sup>

It does not mean, however, that competition between copyrighted or even patented products will always be Schumpeterian. Since copyright law protects only expressions but not the underlying ideas, and since patents can often be narrow in scope or apply only to limited characteristics of otherwise competing products, no general conclusive argument can be made in this regard, and the examples of monopolistic competition in many copyrighted and patented products are of course abundant. Nevertheless, in those cases where Schumpeterian elements characterize the competitive landscape, as can be expected to be the case in many cases involving IP rights, the concept of a defined ‘market’ in which many producers compete against each other *simultaneously*, thus constraining any excess market power will often provide an inadequate view of that landscape.

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<sup>158</sup> Richard Schmalensee, *Antitrust issues in Schumpeterian industries*, 90 AM. ECON. REV. 192 (2000).

<sup>159</sup> SCHUMPETER, *id.*

<sup>160</sup> *Id.* at 106.

<sup>161</sup> *Id.* at 83.

<sup>162</sup> *Id.*

<sup>163</sup> The Schumpeterian model is mainly applicable to intellectual property rights such as patents and copyrights which are designed to stimulate innovation. Trademark law, for example, whose important function is to enable firms to name their products and create brands and differentiated products that consumers will be able to identify and distinguish between (*see e.g.*, LANDES & POSNER, *supra* note 9, at 166-67) is highly correlated with the case of monopolistic competition. Generally, trademark law does not prohibit the introduction of similar or even identical products, only the introduction of products bearing similar names or identifying characteristics.

<sup>164</sup> *Cf.* F. M. SCHERER & DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 613 (3<sup>rd</sup> ed. 1990) (opening their discussion on patents and technological innovation with the following statement: “Making the best use of resources at any moment in time is important. But in the long run, it is dynamic performance that counts.”).

The AGLIP ‘anti-presumption’ of market power clearly rests on a model of monopolistic competition, whereby “the intellectual property right confers the power to exclude with respect to the *specific* product, process, or work in question” but “there will often be sufficient actual or potential close substitutes for such product, process, or work to prevent the exercise of market power.”<sup>165</sup> This concept, however, is inapplicable to contexts that involve high degrees of innovation,<sup>166</sup> whereby the novel product displaces the old precisely because it is highly superior to it and the two cannot therefore be seen as close substitutes.<sup>167</sup> In such circumstances it cannot be expected that no (significant) market power will be exercised, as the AGLIP seem to assume. On the contrary, it could be expected that market power will be exercised by those firms who win the innovation race. This is precisely, given the risks of failure and the risks of appropriation by others, what IP laws are designed to achieve. The AGLIP view that this may happen only in exceptional cases, and that when it does antitrust law can be applied just as it applies to any other form of property, can therefore be highly misleading, or at least uninformative, because in such cases the application of antitrust law will be the most contentious: highly sought by some plaintiffs observing high profits, and strongly opposed by defendants seeking to preserve them.<sup>168</sup>

### C. *Many Markets for Intellectual Goods are Schumpeterian*

Although IP rights, as such, may not create market power, market power protected by IP can be expected to be found in many industries for innovative and creative products. Many markets for intellectual goods may fit the Schumpeterian model of competition. This can partially be a result of some demand-size economies of scale characterizing many markets of IP goods, or a combination of demand-side and supply-side economies of scale.

Demand-side economies of scale exist when a product becomes more valuable as more people consume it (at least until some level).<sup>169</sup> Telephones, fax machines, or operating systems for personal computers are among the well-known examples.<sup>170</sup> When this is the case, the number of actual substitutes can be very low, even if in isolation, there are plenty of equally functional substitutes. Such demand-size economies of scale have been widely discussed, and litigated, in the case of the software industry, as well as in many electronic consumer goods, where issues of compatibility

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<sup>165</sup> AGLIP, § 2.2.

<sup>166</sup> This is true not only to technical innovations but also to cultural products where ‘new releases’ of books, films and music constantly enter the market and displace the older.

<sup>167</sup> The phrase, “there will often be sufficient actual or *potential* close substitutes” could refer to the prospect of subsequent innovation. But the AGLIP do not say how long one should expect to wait for such a substitute, or whether “potential” means “products that are in development that we can actually see” vs. “products that will be developed tomorrow in response to today’s high prices.”

<sup>168</sup> Roberts & Putnam, *supra* note 103.

<sup>169</sup> See CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY 179 (1999).

<sup>170</sup> See Ariel Katz, *A Network Effects Perspective on Software Piracy*, 55 U. TORONTO L. J. 155, 164-65 (2005).

are important.<sup>171</sup> But similar effects appear, although not necessarily to the same extent, in other intellectual goods as well. Jorde and Teece make such an argument about innovative products generally. They attribute such effects to “cumulative learning”.<sup>172</sup> “Once a technology is selected and used” they explain, “it is likely to generate further learning by user-developed enhancements, while the old technology will have no user interaction and thus will remain relatively stagnant.”<sup>173</sup> The result is that consumers often tend to favor a single product at any given point in time and lesser substitutability of other technologies of similar intrinsic functionality than is generally argued. It does not mean that the market power of the successful technology is unchecked, because higher profits will induce entry that might displace the current technology, but it means that until such entry occurs, an assumption that the exercise of market power is impossible is misleading.

Similar “network effects” exist in many cultural goods such as music, novels, and films, in which, like in some software and other technology markets, ‘winner-take-all’ or ‘winner-take-most’ situations are frequent.<sup>174</sup> Such effects exist because although many of these products may have an intrinsic value regardless of the number of other people consuming them, it is often the case that the value of such goods increases with their consumption by other people because part of what consumers get from those goods is the relevant social interactions;<sup>175</sup> “we do not want to read books nobody else reads, we do not want to see movies nobody else sees. We want to discuss, rave, slaughter and define ourselves by the things we like.”<sup>176</sup> Another cause for this feature of cultural goods is that their quality is often hard to discern before consumption, and sometimes even after, therefore consumers’ choices will depend in part on what other people think, and how many of them think so.<sup>177</sup> As in the case of information technology, cultural goods may have direct network effects, whereby the value of the work increases with the number of other people consuming it because of the opportunities to interact and exchange views with other people (just as having the same software or hardware platform allows consumers to exchange files with each other), and indirect effects, whereby the increased number of users induces the development of complementary products and services (e.g., compatible software and hardware, support services and

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<sup>171</sup> See generally SHAPIRO & VARIAN, *supra* note 169, at 173-225. Network effects played an important role in the Microsoft antitrust litigation, see *U.S. v. Microsoft, Corp.*, 253 F.2d 36, 49 (D.C. Cir. 2001), see also Schmalensee, *supra* note 158.

<sup>172</sup> Jorde & Teece, *supra* note 99, at 582.

<sup>173</sup> *Id.* Cumulative learning is just one aspect of positive externalities that characterize such markets. More generally such externalities induce a positive feedback in which one technology attracts more complementary products and services than other.

<sup>174</sup> See Guy Pessach, *Copyright Law as a Silencing Restriction on Noninfringing Materials: Unveiling the Scope of Copyright's Diversity Externalities*, 76 S. CAL. L. REV. 1067, 1084 (2003) (“media products consist of cultural network effects. In many cases, the value of a media product to each individual is derived, at least partially, by its centrality and significance for other individuals.”); see generally ROBERT H. FRANK & PHILIP J. COOK, *THE WINNER-TAKE-ALL SOCIETY* (1995).

<sup>175</sup> Cass R. Sunstein & Edna Ullmann-Margalit, *Solidarity Goods*, 9 J. POL. PHIL. 129, 138 (2001).

<sup>176</sup> Martin Kretschmer et al., *Increasing Returns and Social Contagion in Cultural Industries*, 10 BRIT. J. MGMT. 61, S63 (1999).

<sup>177</sup> *Id.*

literature in the case of information technology; commentary, critique, parody, academic courses, fan clubs, in the case of cultural products). Of course, many cultural networks are short-lived and narrow in scope,<sup>178</sup> yet some may be persistent and wide in scope (think of the cultural network of the Bible, for example); and unlike the case of many information technology markets where positive feedback may lead consumers to be locked-in, thereby increasing the market power of the sellers, cultural products have a much lower tendency towards lock-in; seeing one movie does not prevent us from seeing another.<sup>179</sup> Nevertheless, the existence of such effects suggests that copyright, the domain of most cultural products, may be associated with more market power than is usually assumed.<sup>180</sup>

Another important factor that can contribute to ‘winner-take-all’ (or most) outcomes is “instant scalability”. Instant scalability means “that a firm's output can be increased very rapidly without the usual additional costs associated with rapid increase in output.”<sup>181</sup> Economists Liebowitz and Margolis have explained that instant scalability is a property of many industries in which products consist principally of intellectual property. In such industries, production of the good itself consists largely of reproduction of the tangible form of the intellectual property and this often requires generic reproduction equipment rather than specialized fixed investments in new factories, new tools that are often large, product-specific and irreversible. In industries that are subject to instant scalability, winners can rapidly win big because they can rapidly scale up, and losers leave quickly because their investments in generic capacity are reversible. Thus one seller, whose product may be slightly better than the other, can rapidly satisfy the entire market.<sup>182</sup>

A similar observation on the contribution of supply-side economics to situations of ‘winner-take-all’ in many creative products was made by Sherwin Rosen in his study of the economics of superstars. Rosen noted that the technology of supply may be part of the explanation for the growing phenomenon of Superstars “wherein relatively small numbers of people earn enormous amounts of money and dominate the activities in which they engage.”<sup>183</sup> According to Rosen, Superstars will be found where the cost of reaching large audiences is low, and this often happens in cases of joint consumption, which allows “relatively few sellers to service the entire market. And fewer are needed to serve it the more capable they are.”<sup>184</sup> Many cultural products exhibit this tendency because “the costs of production (writing, performing, etc.) do not rise in proportion to

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<sup>178</sup> Pessach, *supra* note 174, at 1085.

<sup>179</sup> Kretschmer et al., *supra* note 176, *id.* Religion, at least in its monotheistic forms, of course, can be a counter example; monotheistic religions usually demand exclusivity from their worshippers.

<sup>180</sup> See e.g., Kitch, *supra* note 60, at 1730 (arguing that among IP rights, patents are “the strongest candidate for the monopoly case”, whereas copyrights cover only forms of expressions but not the underlying ideas, and therefore confer less power on their owners).

<sup>181</sup> STAN J. LIEBOWITZ & STEPHEN E. MARGOLIS, WINNERS, LOSERS AND MICROSOFT: COMPETITION AND ANTITRUST IN HIGH TECHNOLOGY 137 (1999).

<sup>182</sup> *Id.*

<sup>183</sup> Sherwin Rosen, *The Economics of Superstars*, 71 AM. ECON. REV. 845 (1981).

<sup>184</sup> *Id.* at 847.

the size of the seller's market",<sup>185</sup> and because the technology of supply allows the seller to deliver the service to many buyers simultaneously: "Once the author tell his tale to the publisher, it can be duplicated in writing as many times as desired. A performer appearing on television literally clones his performance to whomever happens to tune in."<sup>186</sup> Technical changes such as motion pictures, radio, television, phono-reproduction equipment and communications, have all in made it possible for sellers of cultural products to increase the scope of their audiences substantially.<sup>187</sup>

The resulting picture of all the above is that whether as a result of supply side economies of scale, such as large sunk costs, instant scalability or joint provision, or demand side economies of scale such as direct and indirect network effects, or both, markets of intellectual goods will quite often be dominated by few or even single sellers - much more often than the AGLIP acknowledge. In such cases competition will often take the form of competition for the market rather than within the market - competition of serial monopolies displacing each other. The danger of being eventually displaced by a new monopolist has undoubtedly a restraining effect on the behavior of the incumbent. It may restrain its ability to raise prices, decrease output or lower the quality of service, knowing that each would create an opportunity for the next monopolist. It may dissuade the incumbent from resting on his laurels and encourage him to continue innovating. When all of this happens, antitrust should not be concerned. But at the same time, the incumbent may seek to delay his demise by resorting to anti-competitive acts, aiming at discouraging aspiring competitors. When this is the case, antitrust law may be justifiably concerned. It will not always be easy to distinguish between what is pro- and what is anti-competitive behavior (*e.g.*, whether lowering the price in the face of rival entry is pro- or anti-competitive); and it may not be clear whether antitrust intervention can be cost-efficient, given the complexity of issues and the limitations of regulators and the courts.<sup>188</sup> In some cases, the market may be so small, or transitory, that the social cost from the existence of monopoly may not justify intervention.<sup>189</sup> And of course, one should not neglect the benefit to society from the existence of the innovative product and ignore the danger that the *ex post* application of antitrust laws might not be consistent with the *ex ante* promise of IP laws.<sup>190</sup> But these are all considerations that should be made once we face a monopoly. The AGLIP suggest that more often than not we will not face them; my suggestion is that on many occasions we will.

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<sup>185</sup> *Id.*

<sup>186</sup> *Id.* at 849.

<sup>187</sup> *Id.* at 856. See also LANDES & POSNER, *supra* note 9, at 49-50.

<sup>188</sup> See *e.g.*, Richard A. Posner, *Antitrust in the New Economy*, 68 ANTITRUST L. J. 925 (2001).

<sup>189</sup> Landes & Posner, *supra* note 75, at 953, see *infra* Part IX.

<sup>190</sup> Roberts & Putnam, *supra* note 103, at 319.

## VI. ASKING THE CORRECT QUESTIONS

The major source for the confusion about the relationship between IP rights and market power and the presumption of market power is that much of the discussion about this relationship has occurred in the abstract, as if markets and market power are ‘things’ that have an actual presence in the world. But the term ‘market’, when used in antitrust and antitrust economics, does not have such actuality. ‘Markets’ in antitrust are unlike ‘markets’ in urban geography. St. Lawrence Market in Toronto, for example, is a real place, at the corner of Front Street East and Lower Jarvis Street. Any product sold there can be categorized as belonging to one or more antitrust markets.<sup>191</sup> Markets in antitrust are only concepts used to answer specific questions; to decide whether an alleged practice is anticompetitive, which is ordinarily understood as being able to allow the party or parties in question to raise or maintain their price, reduce output, or perhaps cause other injuries that the law seeks to prevent.<sup>192</sup> As Professor Salop explains: “Market definition and market power should be evaluated in the context of the alleged anticompetitive conduct and effect, not as a flawed [threshold] filter carried in a vacuum divorced from these factors.”<sup>193</sup>

Without a specific challenged conduct, a specific context and an identified antitrust question that demands an answer, the ‘market’ is an empty concept in antitrust analysis, and imprudent use of it may lead to some traps, which I will soon describe. This is why antitrust wisely uses the term ‘relevant market’ – seeking a definition of a market that is relevant for the understanding of the disputed restraint or conduct. This is why a product could be defined as being part of different markets without any necessary inconsistency, depending on the underlying antitrust question. Consequently, since the whole purpose of the inquiry is to assess the effect of a specific restraint or conduct, the effect should be measured against some benchmark, and the proper benchmark is the price (or equivalent measurement) that would prevail in the absence of that restraint or conduct.<sup>194</sup>

In addition, much of the discussion about IP and market power reflects a misguided notion that markets are either competitive or monopolistic; that firms either possess no market power because they face fierce competition or possess significant power because they are monopolies; that monopoly is the antithesis of competition.<sup>195</sup> The fact, however, is that unless the market is perfectly competitive (which is almost never the case) or unless we are dealing with a perfect monopolist who has control over the supply of all economic goods (which is never the case), both elements, competition and market power, always exist.<sup>196</sup> At some point, every non-perfect monopolist faces

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<sup>191</sup> The market complex itself, owned by the City of Toronto, could be part of a relevant antitrust market, for example, the market for “commercial retail real estate in downtown Toronto”.

<sup>192</sup> See e.g., the discussion about tying and consumers’ choice, *infra* Part VIII.B.

<sup>193</sup> Steven C. Salop, *The First Principles Approach to Antitrust, Kodak, and Antitrust at the Millennium*, 68 ANTITRUST L. J. 187, 191 (2000).

<sup>194</sup> *Id.* at 196.

<sup>195</sup> CHAMBERLIN, *supra* note 156, at 63.

<sup>196</sup> *Id.*

competition that prevents him from *further* increasing his prices, and at this point the monopolist may seem to behave like a firm in a competitive market in the sense that no further price increase can be profitably pursued. But identifying the market as competitive at this point may be misleading; this is the “Cellophane Fallacy” (more on which below).

Therefore, the only intelligent thing that can be said in the abstract, that is, not in a context of a specific restraint or conduct, is whether a specific firm has or does not have an ability to set the price of its product above marginal cost. If it does then it could be said that it has market power, which could be substantial or not. But for antitrust law the possession of such power has never been unlawful.<sup>197</sup> For any purpose other than analyzing a firm’s ability to raise its own prices above marginal cost, the concept of market power is meaningless unless related to some challenged conduct. Therefore, the key is not in an attempt to differentiate the concept of ‘market power’ in economics from the concept of ‘market power’ in antitrust;<sup>198</sup> nor is the difference merely a question of quantity, whereby a small deviation from marginal cost is ‘not in an antitrust sense’ but a significant one is.<sup>199</sup> The concept of market power in antitrust should be understood as it is in economics: the ability of a firm to set its prices above marginal cost. Yet unlike some regulatory regimes that focus on the measurement of the regulated firm’s *degree* of market power in order to set the ‘correct’ price, the focal point of antitrust is (or at least should be) the *change* in market power.<sup>200</sup> Antitrust looks at the effect of a specific restraint or conduct on the firm’s (or the involved firms’) ability to set their price higher or lower relative to a relevant benchmark, which should generally be the price (or other relevant variable) that would have existed but for the impugned conduct. Therefore, there is no need to have different meanings for the concept of ‘market power’; we only

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<sup>197</sup> This point has been reaffirmed recently by the Supreme Court in *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004) (“The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system. The opportunity to charge monopoly prices—at least for a short period—is what attracts “business acumen” in the first place; it induces risk taking that produces innovation and economic growth. To safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive *conduct*”) (italics original).

<sup>198</sup> See Lemley, *supra* note 70; see also Klein & Wiley, *supra* note 72, at 602 (“Antitrust market power as defined in case law thus is not an extreme form of economic market power, but is simply a different idea.”) Klein and Wiley argue that because markets are almost never perfectly competitive it is only when a firm has a significant impact on output and prices in an overall market, in contrast to impact on its own product’s prices, that the firm can be said to have antitrust market power, *id.* at 631. The problem with this argument is that it uses the concept of the ‘market’ as if it existed without connection to the alleged anticompetitive practice, whereas to define the market one needs to define what the proper benchmark for the analysis is. They argue that market power should be, and often is, measured against an appropriate benchmark that is not the firm’s price-cost margin. While this is correct it does not mean that market power in economics and market power in antitrust are different concepts. It only means that the market power will be measured against a benchmark which depends on the underlying antitrust problem.

<sup>199</sup> Landes & Posner *supra* note 75, at 939.

<sup>200</sup> This is an oversimplification of the case. As a matter of antitrust jurisprudence, in many cases it is not the *increase* in market power, but the *possession* of it, which triggers antitrust liability. Courts have found several techniques to overcome the difficulty that this causes antitrust defendants. One of them is fudging the concept of market power. I deal with this in more detail in Part VIII.B *infra*.

need to identify the relevant benchmark for the analysis. It does not mean, however, that the distance of that benchmark from marginal cost may not be important; as we shall see below, for some antitrust questions it may be very important.

Returning to the question of the relationship between IP and market power, if the question asked is what is the effect of the existence of IP protection on a firm's market power, then the challenged 'conduct' is the grant of the IP right and the question is how the grant of such right affects the ability of the IP holder to set the prices for her goods in (substantial) deviation from marginal cost.<sup>201</sup> Obviously, we cannot provide an absolute answer to this question without empirically testing the effect in every individual case. There is always a possibility that the good would have no commercial value and its protection by an IP right would not change its price which is zero. There is also the possibility that the existence of very close substitutes will force prices down to marginal cost. But as I have argued earlier, it is highly probable that this is *not* the general case and that at least in the cases that are legally challenged the existence of IP rights does allow its holder to set her prices in (substantial) deviation from marginal cost. And when this is the case and this is the question asked it is also reasonable to presume, at least on grounds of probability, that market power is a likely effect of the grant of IP rights.

#### A. *The Return of the Cellophane Fallacy*

The position that denies the inherent connection between IP and market power is a result of failure to frame the correct question, a failure that may lead to what is often called in antitrust law the "Cellophane Fallacy" or the "Cellophane Trap". The trap is the "mistaking of a firm's inability to exercise market power by raising price above the current price for an inability to have already exercised market power by raising price up to the current level, thereby mislabeling a completed anticompetitive act as a lack of market power."<sup>202</sup> This trap has often awaited those who have dealt with the question of IP and market power and unfortunately many have been caught. Take the following excerpt from Professors Hovnenkamp, Janis and Lemley's recent treatise on IP and antitrust, whereby they explain why in their view IP rights cannot generally give their owners market power:

"I might write an Italian cookbook that is protected by copyright. The copyright entails that no one else can copy my book or a significant portion of it. But notwithstanding the copyright, my book would enter a competitive field with hundreds of other Italian and perhaps more general cookbooks. My copyright confers substantial market power only

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<sup>201</sup> A legislative decision to grant IP rights and the effect on prices may be an important question of competition policy though usually it is not a question of antitrust laws.

<sup>202</sup> Salop, *supra* note 193, at 194. The trap is called after *U.S. v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377 (1956). The case involved allegations of monopolization by Du Pont, who produced almost 75% of the cellophane sold in the US and was engaged in a variety of practices that eliminated competition and enabled it to charge prices far above cost. The Court focused on the inability to profitably increase the current price and concluded that the market definition was much broader so that Du Pont lacked any market power. The Court's conclusions regarding lack of market power led it to forgo a detailed analysis of competitive effects.

if my book is sufficiently desirable and sufficiently differentiated from the others that consumers are willing to pay a monopoly price for mine before substituting one of those.”<sup>203</sup>

The excerpt defines a relevant market (“field”) for Italian cookbooks or even the broader market for cookbooks which in either case are assumed competitive, implying that no market power can be exercised in the form of ‘monopoly price’ above this competitive level. Accordingly, any attempt by the authors to raise their Italian cookbook price will cause consumers to purchase other cookbooks and render such price increase unprofitable. This might be true, but it is an answer to the wrong question.

The appropriate question if we want to address the relations between copyright and market power – the one that is not asked – is: What would have happened to price if no copyright protection had been in place? Presumably, in this case, other things being equal, without copyright protection the price of the Italian cookbook, as well as other books, would fall towards marginal cost. Instead, what the excerpt implicitly asks is whether the copyright holder is capable of profitably raising the price of the book above its current level. Presumably the answer is no; but this answer tells us very little about the existing market power, it only demonstrates that the exercise of market power, whatever its degree is, is limited. But recall that the fact that market power is limited is totally consistent with monopoly pricing - the monopolist will always try to raise its price up to the level where further increases will be unprofitable.

This does not imply that the question of the ability to further raise the current price is without merit in antitrust analysis, it may be a very important question but in a different inquiry than the present. For example, if the inquiry is into the possible anti-competitive effects of a proposed merger between the publisher of “The Italian Cookbook” and the publisher of the “The Complete Guide to Italian Cooking” a finding that no *further* price increase is possible is extremely relevant, and the merger is unlikely to be anti-competitive.<sup>204</sup> But that question, of course, is entirely different from the question of the relationships between copyright and market power. In this inquiry the question is the effect of the *merger* on the parties’ pricing abilities and the benchmark for the analysis is the pre-merger price. The fact that the publishers have already had the ability to set their prices above marginal cost by virtue of their IP rights, even substantially, is irrelevant, at least *at this stage of the investigation*. But the finding that no further price increase is possible should not be mistaken as an inability to raise the price up to the current level. A conclusion that copyright confers no market power on the copyright holder of the Italian cookbook is possible only if it has been established that because substitute Italian cookbooks are abundant the existing price of those books is close to the marginal cost of printing and distribution, and this, presumably, is not the case.

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<sup>203</sup> HOVENKAMP ET AL., *supra* note 54, §4.2.

<sup>204</sup> Such a merger can be pro-competitive if as a result of the merger the parties will be able to save some production costs and lower their price.

### ***B. When is Existing Market Power Relevant?***

Yet this analysis does not mean that the existing market power (*i.e.*, the degree of the existing deviation of price from marginal cost) cannot be relevant for antitrust analysis of the challenged restraint or conduct. If the challenged conduct is a proposed merger between the cookbook publishers, or an agreement under which one publisher distributes the book of the other, and the investigation reveals that a post-merger or post-agreement price increase is possible, then the fact that both publishers have already set their prices in substantial deviation from marginal cost by virtue of their IP can be relevant in assessing the overall impact of the merger, as will be explained below.

Ideally (setting asides problems of measurement), we would like to measure the potential efficiency gains from the merger (*e.g.*, reducing overhead costs of publishing) against the potential welfare loss from the price increase, and if we want to measure this balance correctly it matters whether the pre-merger price already contained a monopolistic rent or not. It matters because the deadweight loss from the last increment of monopoly pricing produces large amounts of deadweight loss,<sup>205</sup> a point to which I will return to. But note that now we have just asked a different question. Now the question is not whether price is likely to increase as a result of the conduct. Now the question is, assuming that such price increase is likely, what is the net effect on total surplus, that is, the combined effect of the efficiency gains and the deadweight loss. At this stage of the analysis the question whether the seller had already exercised market power can be crucial to the analysis, because the higher the market power that had already been exercised, the bigger the deadweight loss that any further price increase would produce, and therefore, the greater the efficiency gains that would be required to offset that loss under a standard of total surplus.<sup>206</sup> Consider the following example, based on an example given by Professors Mathewson and Winter in a slightly different context.<sup>207</sup>

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<sup>205</sup> Ayres & Klemperer, *supra* note 85, at 987 (arguing that uncertainty and delay in patent litigation is beneficial because it restrains the patentee's monopoly power at the margin where additional power creates significant deadweight loss with relatively small additional profit for the patentee, thus having insignificant effect on the incentive to innovate); *see also* Frank Mathewson & Ralph Winter, *The Analysis of Efficiencies in Superior Propane: Correct Criterion Incorrectly Applied*, 20 CAN. COMPETITION REC. 88 (2000) (criticizing the decision of the Canadian Competition Tribunal in *The Commissioner of Competition v. Superior Propane, Inc.*, [2000] Comp. Trib. 15, whereby the Tribunal approved a merger that was predicted to cause an average price increase of 9%, on the basis that the predicted efficiencies that the merger would create outweighed the loss from the price increase, while failing to consider that since the parties to the merger were already exercising market power by charging a price that was 50% above marginal cost, the actual deadweight loss was 8.5 times higher), *see also* Salop, *supra* note 193, at 195, n20, *citing* Raymond Jackson, *The Consideration of Economies in Merger Cases*, 43 J. BUS. 439 (1970).

<sup>206</sup> *Id.* I set aside the debate on the so called "Efficiency Defense" in mergers; the question whether and when expected efficiency gains could justify a merger that leads to an increase in price, and whether "total surplus" is the correct standard. For the purpose of this example, I assume that such defense exists and that the standard for its application is "total surplus". For a general discussion of the issue in US antitrust law see HOVENKAMP, *supra* note 23, §12.2.

<sup>207</sup> Mathewson & Winter, *supra* note 205, at 92.

Example 1: Let us examine the hypothetical proposed merger between the book publishers discussed above. Assume that prior to the merger there were 100 consumers and each purchases one (generic) book on Italian cooking. The market is highly competitive so that the initial price equals marginal cost of \$10, but as a result of the merger the price increases by 10% to \$11. Because the price has increased, those consumers whose willingness to pay was between \$10 and \$11 exit the market. Assume that there are 10 of them. The loss in surplus associated with each of them is the difference between each's willingness to pay and marginal cost, which is on average \$0.5 for each consumer, and the total loss is \$5 (10 X 0.5).

Example 2: Now consider a slightly different scenario. Marginal cost is still \$10; however the initial price is \$100 – a ratio not uncommon for intellectual goods. The percentage price increase as a result of the merger is still 10% and as before there are initially 100 consumers and 10 of them, who are not willing to pay \$110 are discouraged from buying. Now again the loss in total surplus associated with each of them is the difference between each's willingness to pay and marginal cost, which is on average \$95 for each consumer, and a total of \$950 (10 X 95). This is quite a large number and the difference between the magnitudes of the losses is remarkable. The cause of the difference is that in the first case, those consumers who were discouraged by the price increase were those who value such books only slightly above cost, whereas in the second those who were discouraged by the price increase were consumers who value the books highly.<sup>208</sup>

In a world of full and free information the decision whether to approve or condemn the merger would be easy; as long as the efficiency gains outweigh the deadweight loss caused by the price increase the merger should be endorsed, but condemned if the loss outweighed the gains. Regrettably, we do not live in a world of full and free information and it is not uncommon that we will not have sufficient and reliable information about the costs, even less so about the expected efficiency gains. This is when presumptions may be useful for making informed decisions. If we follow the AGLIP our assumption is that we are in Example 1; that pre-merger the publishers could not exercise market power. In this case, given the uncertainty about the expected efficiency gains, the cost of error in endorsing the arrangement is \$5 at the maximum (*i.e.*, when there is 10% increase in price and no efficiency gains), and given that this cost of error is very low we should endorse the merger even if the evidence for the existence of efficiencies is very weak. In contrast, if we can infer from the existence of IP rights that the price prior the arrangement is already set in substantial deviation from marginal cost – not an unreasonable proposition as we have seen – then it is more likely that we are in Example 2. The cost of error in this case is substantial - \$950 – and given the uncertainty about the magnitude of the expected efficiencies the arrangement should be endorsed only if there is strong evidence that they are substantial. This analysis is not exclusive to merger cases, but is applicable to many other antitrust inquiries, such as vertical restraints. A vertical restraint imposed by an IP owner which has no effect (or a

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<sup>208</sup> *Id.*

decreasing effect) on current prices should be legal, regardless of the IP holder's existing market power. But if the restraint is likely to raise current prices the fact that the IP owner has already had the ability to exercise market power affects the overall impact of the practice. The higher the degree of market power already exercised, the higher the deadweight loss caused by a further increase in prices, and the larger the efficiency gains required to outweigh this cost. It could be argued that in the case of IP there are additional offsetting benefits, in the form of incentive to innovate, which should justify a different, more lenient, antitrust standard to evaluate IP-related conduct. Such an approach, however, would be in contrast to the AGLIP, which suggest that the same antitrust analysis should apply to IP-related conduct.

I have shown that it is probable that many IP holders can be expected to set their prices in substantial deviation from marginal cost. Whether this fact justifies a legal presumption that they do is a different question that I will discuss shortly. What is already clear is that the answer to this question cannot be divorced from the underlying antitrust question that needs to be resolved and the underlying substantive antitrust rules. But before pursuing this question it is useful to better understand what legal presumptions are and the reasons for their adoption.

## VII. UNDERSTANDING THE PRESUMPTION OF MARKET POWER

So far I have shown that IP rights and market power are inherently connected and slightly touched upon the role that presumptions play. But in order to evaluate the merit, as a matter of policy, of having a legal presumption that IP rights confer market power it would be useful to begin by understanding what legal presumptions are.

### A. *Presumptions Defined*

A legal presumption is "a rule providing that proof of a designated fact has a predetermined effect in establishing the existence of another fact."<sup>209</sup> It is "a process or a legal consequence whereby we infer the existence of a presumed fact when certain other basic facts have been established by evidence."<sup>210</sup> Despite the fact the this branch of evidence law has been described as "the slipperiest member of the family of legal terms, except its first cousin, "burden of proof",<sup>211</sup> one that leaves every intelligent writer with "a sense of hopelessness ... and a feeling of despair",<sup>212</sup> I will make a modest effort to describe some fundamental and useful concepts.

A "true" presumption is one that is rebuttable by evidence to the contrary of the presumed facts. In the absence of contrary evidence, the presumed facts are deemed

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<sup>209</sup> ROGER C. PARK ET AL., EVIDENCE LAW §4.08, at 102 (1998).

<sup>210</sup> RONALD J. DELISLE, EVIDENCE: PRINCIPLES AND PROBLEMS 183 (5<sup>th</sup> ed. 1999).

<sup>211</sup> 2 CHARLES T. MCCORMICK, MCCORMICK ON EVIDENCE §342, at 449 (4<sup>th</sup> ed., John W. Strong, ed., 1992). It is clear that it is only the authors' expertise in evidence law and ignorance of antitrust law that led them to neglect considering 'market power' as a serious contender to the title.

<sup>212</sup> Edmund M. Morgan, *Presumptions*, 12 WASH. L. REV. 255 (1937).

proven whenever the basic facts are proven.<sup>213</sup> Some presumptions are “conclusive” or “irrebuttable”, which means that a proof of the basic fact mandates a conclusion of another fact, despite evidence to the contrary. In such cases evidence to the contrary is irrelevant and will therefore not be admissible.<sup>214</sup> Additionally, the concept of presumptions should be distinguished from the concept of a “permissive inference” which is a factual conclusion that the factfinder *may*, on the basis of simple everyday logic, draw from another fact or group of facts, but is not required to.<sup>215</sup>

Rebuttable presumptions can be either of two types, depending on the effect of the production of rebutting evidence. One type is the Thayer-Wigmore or the “bursting bubble” theory of presumptions. Under this theory, the effect of a presumption disappears with the production of evidence challenging the presumed fact.<sup>216</sup> In contrast, the Morgan-McCormick theory of presumptions asserts that once a presumption is raised by proof of the basic facts, the burden of persuasion as to the existence of the presumed fact shifts to the other party, that is the presumed fact is deemed to exist unless the other party persuades the factfinder that it is more likely than not that the presumed fact is not true.<sup>217</sup>

### ***B. Presumptions: Probability and Policy***

Presumptions exist for one or more of a variety of reasons. Generally, the most frequent reason is probability - when judges believe that the proof of one fact renders the existence of another so probable that it is sensible and timesaving to assume the truth of the presumed fact, at least until the fact is disproved by the adversary.<sup>218</sup> Some presumptions are created in order to “correct an imbalance resulting from one party’s superior access to the proof.”<sup>219</sup> This consideration is often seen as a matter of fairness,<sup>220</sup> although it could be equally framed in terms of efficiency: if one party has better access to the proof, having a presumption in favor of her opponent improves the judicial process by creating an incentive to produce the evidence by the party who can obtain it at lower cost. This may reduce both the cost of an erroneous decision and the system’s administrative cost.<sup>221</sup> Some presumptions are adopted to avoid an impasse, to reach some result, even an arbitrary one, when there is no factual basis to decide upon, while the creation of many other presumptions reflects some underlying social or economic policy and is closely tied to the pertinent substantive law.<sup>222</sup> Such presumptions are

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<sup>213</sup> PARK ET AL., *supra* note 209, at 103.

<sup>214</sup> *Id.* at 105.

<sup>215</sup> *Id.*

<sup>216</sup> *Id.* §4.10, at 109.

<sup>217</sup> *Id.* at 111-13.

<sup>218</sup> 2 MCCORMICK, *supra* note 211, §343, at 454-55; Park et al., *supra* note 209, §4.08, at 104.

<sup>219</sup> *Id.* at 454 (giving as example the rule that as between connecting carriers, the damage occurred on the line of the last carrier, if the shipper proves that he delivered the goods to the first carrier in good condition and received them from the last in bad condition).

<sup>220</sup> *Id.*

<sup>221</sup> On the economics of legal procedures see generally RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 599-600 (5<sup>th</sup> ed. 1998).

<sup>222</sup> 2 MCCORMICK, *supra* note 211, §343, at 454-55.

created “to encourage or discourage certain “primary” (non-litigation) behavior, or to effectuate a goal of the law.”<sup>223</sup> Despite the various reasons for the creation of presumptions, individual presumptions often exist for a combination of reasons, not only one.<sup>224</sup>

My analysis so far has focused on the issue of probability. I have shown earlier that it is highly probable that in many instances, even more so in the ones that are litigated, IP rights confer upon their owners the power to set prices for their intellectual goods in substantial deviation from marginal cost. While this may justify a presumption of market power based on probabilities,<sup>225</sup> it does not resolve the issue of whether, as a matter of policy, such a presumption should exist. One reason is, as I have noted earlier, is that the existence of a presumption makes it easier for plaintiffs to sue, thereby increasing the number of defendants and reducing the average amount of market power held by them, thus changing the probabilities that the very presumption is based on.<sup>226</sup> Another reason is that the matter will not be resolved even if the probabilities for the existence of market power in IP litigation were much higher or much lower than I expect. Every presumption, by definition, may require a fact-finder to reach a factual conclusion (that may sometimes mandate a certain legal conclusion) that does not reflect reality, or may even contradict it, if the presumption is not rebutted.<sup>227</sup> This is especially so if a presumption is created to further a certain social or economic goal.<sup>228</sup> Such policy goals can justify the existence of a presumption *despite* the fact that it will not reflect reality in a large number of cases, or reject a presumption even though it will be empirically correct.<sup>229</sup> While probability plays an important part in the creation of

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<sup>223</sup> PARK ET AL., *supra* note 209, §4.08, at 103-04 (providing as example the presumption of the death of a person not heard from for a specific period of years, which serves the goal of settling issues of title and estates).

<sup>224</sup> 2 MCCORMICK, *supra* note 211, §343, at 455.

<sup>225</sup> Recall, however, that the existence of a presumption makes it easier for plaintiffs to sue, thereby increasing the number of defendants and reducing the average amount of market power held by them, thus changing the probabilities that the very presumption is based on.

<sup>226</sup> See *supra* Part IV.C.

<sup>227</sup> PARK ET AL., *supra* note 209, §4.08, at 103.

<sup>228</sup> For example, *per se* rules in antitrust law create a presumption, often conclusive, “that certain agreements or practices are so “plainly anticompetitive,” and so often “lack ... any redeeming virtue,” that they are conclusively presumed illegal without further examination under the rule of reason generally applied in Sherman Act cases”, *Broadcast Music, Inc. v. Columbia Broadcasting System, Inc.*, 441 U.S. 1, 8 (1979). Such rules are adopted *despite* the fact that some agreements and practices, which fall into one of the categories to which *per se* rules apply, could in fact be pro-competitive. However, it is assumed that the cost of acquiring the relevant information in order to reach the right decision with regard to each and every one of them exceeds the marginal benefit from having a more accurate decision. See *e.g.*, HOVENKAMP *supra* note 23, §5.6, at 251. It is therefore assumed that the as a matter of policy it is better to err on the side of condemning some pro-competitive agreements rather than allowing some anti-competitive ones.

<sup>229</sup> Take for example the presumption that the child born to a woman during the time when she was married is the child of the husband. Apparently, this presumption is based on probability. It reflects a common reality that children are ordinarily the genetic product of the husband and wife who raised them, but it also reflects procedural efficiency because it would have been difficult to know even if they were not (see *e.g.*, Elizabeth Bartholet, *Guiding Principles for Picking Parents*, 27 HARV. WOMEN'S L. J. 323, 324 (2004). The presumption continues to stand (although the matter is controversial) despite the fact that DNA tests can provide a clear answer as to who the biological father is, and despite the fact that recent studies show that surprisingly high percentages of children born in the context of marriage or marriage-like relationships are not genetically related

presumptions, policy considerations play at least an equally important part. Policy considerations could theoretically support the creation of a presumption of market power despite the fact that in many cases IP rights confer no or a very small amount of market power, and can similarly support not adopting such presumption even if the number of IP holders that do have market power overwhelmingly exceeds the number of those who do not. For instance, if it is easier for an IP holder to prove that she does not have market power, because she has better access to the relevant information, and it is feared that the social cost of the exercise of that market power is significant and it is further assumed that the social cost of restraining some practices when no market power exists is relatively small, then a presumption of market power is a sensible policy under these assumptions. In contrast, if under different assumptions there is a concern that having a presumption of market power would result in the condemnation of too many benign practices, or in an inflation of justified and unjustified antitrust claims against IP holders, and it is further assumed that such developments would negatively affect the incentives to innovate and would consequently lead to a reduction in consumer welfare, then rejecting a presumption of market power may be a sensible policy even if most IP holders did possess significant market power. Therefore, in order to evaluate the merit of a presumption of market power we must first understand and define what is the specific issue that needs to be resolved, and if this is an antitrust issue, what is the challenged practice, what is its alleged anticompetitive results, and what are the legal consequences of a factual finding that the defendant has market power. Only then, and in conjunction with the underlying substantive laws and surrounding procedural rules, can we assess what are the potential benefits and costs from having or not having a presumption of market power. These, of course, may diverge across various antitrust contexts. In addition, since the existence or lack of a presumption of market power influences the empirical basis for the correctness of such presumption, a pendulum movement in courts' willingness to infer market power from the existence of IP rights

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to their mothers' partners, who have been functioning as their fathers, *id.*, thus undermining both the procedural efficiency and the probability rationales for the presumption. The presumption is upheld because there are important underlying policy considerations to uphold it: one is "to avoid the visitation upon a child of the sins of the parents caused by the social stigma of bastardy and the common law rules (now generally alleviated by statutes) as to the incapacities of the *filius nullius*, the child of no one", *see* 2 MCCORMICK, *supra* note 211, at 459. Another, more modern consideration is that the presumption promotes the view that children, who often cannot fight for their interests and are therefore at major risk, need permanent nurturing parents, and therefore their interests will be better served if biology will not be the determinative factor in defining parenthood, especially if a non-biological parent had been functioning as one, *see* Bartholet, *id.*

Another opposite example is criminal law's requirement that the prosecution proves the case against a suspect beyond reasonable doubt – the presumption of innocence. This presumption exists despite the fact that usually most suspects are ultimately convicted, *see e.g.*, J. M. Ramseyer & Eric B. Rasmusen, *Why is the Japanese Conviction Rate So High?*, 30 J. LEGAL STUD. 53 (2001) (conviction rates in the U.S. in 1995 were over 83% and over 87% in federal and state criminal courts (respectively) and in Japan over 99%). In this case, although probability and procedural efficiency could in theory support a presumption of guilt whenever a suspect has been properly indicted (say, after an impartial investigation had been carried by police) (and recall that law generally presumes that the official actions by public officers were regularly and legally performed) the law rejects such presumption on policy grounds, believing that the cost of some false convictions outweighs the benefits that a presumption could create.

can be expected and may be justified. In sum, without accounting for all of those considerations any discussion of the presumption or the lack thereof is futile.

In the next part I will evaluate the merit of having a presumption of market power in three different IP contexts. I will show that depending on the context and the relevant questions, a presumption of market power can be a beneficial instrument in some, while irrelevant or harmful in others. The three cases will be the design of IP rights and attempts by IP owners to deviate from the initial IP entitlements by contract or technology; tying cases; and cases involving attempts to enforce invalid IP rights.

## VIII. CAN A PRESUMPTION OF MARKET POWER MAKE SENSE?

### A. *The Design of IP Rights: Deviations from the Original Entitlements and IP Misuse*

The question whether IP rights confer market power upon their holders or not is important for the optimal design of IP rights. In fact, there is an implied assumption in the jurisprudence of IP and in its economic analysis that they do.<sup>230</sup> This assumption is reflected in the recurrent use of the term ‘monopoly’ when IP rights are described – despite some views that the use of this term is totally erroneous<sup>231</sup> – and in the traditional economic analysis of IP rights.<sup>232</sup> Moreover, as I have noted earlier, many of the restrictions that are built-in to IP law, such as limitations on the duration and scope of IP rights would not make a lot of sense unless understood as an attempt to mitigate the costs associated with the market power conferred by the grant of an IP right.<sup>233</sup> The design of the IP regime, therefore, is based on the assumption that IP rights do confer market power that is generally not eliminated by competition from other products or services. Using the terminology of presumptions, it could be argued that in the design of IP rights courts and legislators apply a presumption of market power. Moreover, this presumption is often conclusive because IP owners usually cannot avoid the limitations imposed by IP law by showing that they do not possess market power.<sup>234</sup>

But the scope of IP rights is not limited to the initial entitlement of those rights, that is, the duration, scope and general exceptions to the rights; it is also a function of the ability of IP holders to change the original set of entitlements by contract or technology; by what Professor Radin calls Efficacious Promulgated Superseding Entitlement Regimes (EPSEER’s): contractual or technological measures by which a licensor of an IP right imposes limitations on the ability of its customers to engage in activities that they would be permitted to engage in under the official IP regime, as created by the

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<sup>230</sup> See *supra* Part III.

<sup>231</sup> See e.g., Kitch, *supra* note 60; AREEDA & HOVENKAMP, *supra* note 114; Easterbrook *supra* note 109.

<sup>232</sup> See *supra* Part III.

<sup>233</sup> *Id.* It is true that many of these limiting doctrines do restrict the degree of market power conferred by IP rights, but this does not mean that such limiting doctrines eliminate, rather than restrain, that market power.

<sup>234</sup> See *supra* Part III.

legislature and the court.<sup>235</sup> Therefore, whether a presumption of market power exists or not can influence courts' approach towards EPSEr's and their readiness to intervene and impose limitations on their use, for example, by applying the doctrine of IP misuse.

The issue of market power is relevant to the debate on EPSEr's because if it is assumed that IP holders *do not* generally have market power there should be less concern, at least from an economic perspective, with the use of EPSEr's.<sup>236</sup> If it is presumed that EPSEr's are used in highly competitive environments it could be expected that different sellers will offer different terms and conditions, or even that every individual seller will offer different sets of terms and conditions at different prices; under such conditions each bundle of an IP right with its terms of use will be priced efficiently by the market;<sup>237</sup> consumers will be able to choose, for example, between products with permissive terms of use (presumably at a higher price) or products with restrictive terms of use (presumably at a lower price). Competition, of course, may not necessarily result in a variety of such bundles available for consumers. Competition may just as well lead to a situation in which one set of terms emerges but this is the one which has won out in the competitive process.<sup>238</sup> On the other hand, if it is presumed that IP rights do confer market power, courts and legislators should be more concerned with the ability of IP holders to supersede the limitations imposed by the official IP regime by the use of EPSEr's, for in this case it cannot be easily assumed that the market will sort out the most efficient set of rights and their accompanying terms of use.

Two cases from the US Seventh Circuit Court of Appeals demonstrate the different attitudes. The first case is *ProCD, Inc. v. Zeidenberg*,<sup>239</sup> written in 1996 by Judge Easterbrook and the second is *Assessment Technologies of WI v. Wiredata*<sup>240</sup> written in 2003 by Judge Posner. In *ProCD* the plaintiff compiled information from more than 3,000 telephone directories into a computer database, which was accessible by a computer program. ProCD offered two versions of the product, SelectPhone, which contained the database and the computer program. One version was sold with a license that limited the use of the application program and listings to non-commercial purposes; another version was sold to commercial users at a considerably higher price.<sup>241</sup>

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<sup>235</sup> Margaret J. Radin, *Regulation by Contract, Regulation by Machine*, 160 J. INST. THEORETICAL ECON. 1, 5 (2004), Margaret J. Radin, *Regime Change in Intellectual Property: Superseding the Law of the State with the "Law" of the Firm*, 1 U. OTTAWA L. & TECH. J. 173 (2004). One example that Professor Radin provides is an End User License Agreement in standard software package that contain terms that bar reverse engineering (often permitted as fair use) or copying of materials that are in the public domain that would otherwise be permitted. To the extent that those measures are adhered to they are "efficacious", they are "promulgated" because they are imposed unilaterally, they are "superseding" because they replace the law of the state with the "law" of the licensor, and they are "regimes" to the extent that their use is widespread.

<sup>236</sup> Economics may not necessarily exhaust the debate on EPSEr's which may raise some other, non-economic, questions, *see* Radin, *supra* note 235, at 13.

<sup>237</sup> *Id.* at 15.

<sup>238</sup> *Id.* at 15-16.

<sup>239</sup> *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996).

<sup>240</sup> *Assessment Technologies of WI, LLC v. Wiredata, Inc.*, 350 Fed. 3d 640 (7th Cir. 2003).

<sup>241</sup> *ProCD*, at 1449.

Zeidenberg, the defendant, bought a consumer package of SelectPhone in order to resell the information in the SelectPhone database. He set up a corporation that made the database available on the Internet to anyone willing to pay a price which, obviously, was less than the price that ProCD charged its commercial customers. It was assumed that the database, which contained mere facts, was not copyrightable, whereas the computer program was, and the question was whether ProCD could limit Zeidenberg's use of the non-copyrightable data by the terms of the software license. The court ruled that it could. It found the license a valid contract and found nothing in copyright law that prevents parties to a simple two-way contract from creating legal rights among themselves that prevent the copying of information in the public domain.

In *Assessment Technologies* the court reached a different result. In this case the plaintiff, Assessment Technologies ("AT"), developed database software that was licensed to municipalities in Wisconsin that collected and processed data about real property in order to assess the value of those properties for tax purposes. AT, however, did not collect the data; the municipalities did. AT only created the software that facilitated its collection and processing. WIREdata, a firm owned by a multiple listing services company, requested the raw data from several municipalities under Wisconsin's open-records law for use by real estate brokers but three of them refused, relying on an exception in that law that applied to disclosure of copyrighted materials. Those municipalities feared that the disclosure of the data would infringe AT's copyright in the computer program, because AT contended that the data could not be extracted without infringing its copyright. The question was whether AT could, by virtue of its lawful copyright in the computer program, prevent the extraction and use of data which was in the public domain. The court ruled that it could not. Moreover, it thought that "it would be appalling if such an attempt could succeed".<sup>242</sup> The court held that to try by contract or otherwise to prevent the municipalities from revealing the data might constitute copyright misuse.<sup>243</sup> The court further emphasized that if the data and the software could not be disentangled so that the only way to obtain the public-domain data was to copy the copyrightable material, such copying would be privileged, and warned AT against circumventing the court's decision by making the data inseparable from the protected material.<sup>244</sup>

What is the source of the difference between Judge Easterbrook's *ProCD*'s broad holding that a copyright owner may use contract to limit the copying of public-domain data and Judge Posner's *Assessment Technologies*' ruling that the use of contract or technology for similar purposes might constitute copyright misuse? What is the basis upon which *Assessment Technologies*, which clearly does not overrule *ProCD*,<sup>245</sup> is distinguished from it? One difference is that unlike *ProCD*, AT made no investment in the creation of the database; the data were collected by the municipalities' assessors and

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<sup>242</sup> *Assessment Technologies*, at 642.

<sup>243</sup> *Id.*, at 646-47.

<sup>244</sup> *Id.* at 645.

<sup>245</sup> *Id.* at 646 (stating that *ProCD*'s holding that a copyright holder can by contract limit copying beyond the right that a copyright confers is irrelevant to the case).

therefore did not require the contractual restrictions to recoup its investment. Another difference is that the contractual restrictions in *ProCD* were designed, according to Judge Easterbrook, for pro-competitive purposes. They were designed to discourage arbitrage in order to facilitate price-discrimination that would increase output; they allowed ProCD to sell more copies to non-business users at lower prices, compared to a situation in which it would be forced to charge a uniform price.<sup>246</sup> In *Assessment Technologies* however, no pro-competitive explanation for the restriction was offered. The restrictions, if permitted, would discourage the use of the data in another market in a manner that did not even compete with AT, and were seen by Judge Posner as an opportunistic attempt “to obtain property protection ... that copyright law clearly does not confer, hoping to force a settlement or even achieve outright victory over an opponent that may lack the resources or the legal sophistication to resist effectively.”<sup>247</sup>

But there seems to be a more fundamental difference between the underlying assumptions about the market conditions made by Judge Easterbrook and those made by Judge Posner. Easterbrook’s judgment reflects a *laissez-faire* approach to the issue of EPSEER’s. His judgment echoes an argument that he had made a few months earlier in a symposium on “The Law of Cyberspace” at the University of Chicago. In that symposium Easterbrook expressed his view that “contracts of adhesion” (or “shrinkwraps”, as he calls them in *ProCD*) are an integral part of any product sold; they are mediated by the product’s price, and it is essential to enforce them if markets are to work.<sup>248</sup> He advocated a *laissez-faire* approach to the evolving world of cyberspace and thought that the best thing to do was “to permit the participants in this evolving world to make their own decisions. That means three things: make rules clear; create property rights where now there are none; and facilitate the formation of bargaining institutions. Then let the world of cyberspace evolve as it will, and enjoy the benefit.”<sup>249</sup> Easterbrook’s *laissez-faire* approach is directly related to his view that intellectual property rights are essentially identical to other forms of property.<sup>250</sup> If they involve no real issues of market power then indeed letting the market evolve as it will and enjoy the benefit is the best prescription. In *ProCD* Judge Easterbrook applied this approach to the disputed terms of the license. He viewed the software as an ordinary consumer product sold with some accompanying terms<sup>251</sup> and therefore competition among

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<sup>246</sup> *ProCD*, at 1449. Whether or not ProCD’s price discrimination actually increased output is questionable, see Michael J. Meurer, *Copyright Law and Price Discrimination*, 23 CARDOZO LAW REVIEW 55, 80 (2001) and Wendy J. Gordon, *Intellectual Property as Price Discrimination: Implications for Contract*, 73 CHI.-KENT. L. REV. 1367, 1384 (1998) (criticizing Easterbrook’s assumption that ProCD’s actions increased output on the basis that this is an empirical issue that should have been discussed, not have been simply assumed).

<sup>247</sup> *Assessment Technologies*, *supra* note 240, at 647.

<sup>248</sup> Frank H. Easterbrook, *Cyberspace and the Law of the Horse*, 1996 U. CHI. LEGAL F. 207, 214-15 (1996).

<sup>249</sup> *Id.* at 215-16.

<sup>250</sup> Easterbrook, *supra* note 114, at 102.

<sup>251</sup> *ProCD*, at 1451.

vendors, not judicial revision of a package's contents, is the best guardian of consumers' interests.<sup>252</sup>

Perhaps it was the passage of seven years between the two cases and the accumulation of better knowledge about the dynamics of many technology markets, but Judge Posner, who has not gained his fame by being an opponent of free-markets, while accepting *ProCD's* view that copyright holders may use contract to limit copying beyond the right that a copyright confers, and that the scope of such contractual protection is, at least *prima facie*, whatever the parties to the contract agreed to,<sup>253</sup> leads his court in a more activist direction. Posner's perspective on the issues at stake is more removed from the ideal of the free-market; he does not adopt Easterbrook's *laissez-faire* prescription. He acknowledges that the existence of the copyrighted program reduced the likelihood that the data would be retained separately from the copyrighted material, and implicitly acknowledges the problem of *EPSEER's* -- that the technology itself can sometime override the relevant law.<sup>254</sup>

Posner's view that such a result is "appalling" would not be comprehensible if he believed that the AT was just a player in a highly competitive market in which its product was one of many close substitutes. In a highly competitive market rational municipalities would be reluctant to choose a software package that gave someone else a property interest in the data that *they* collect, especially if they were obliged by law to disclose that data.<sup>255</sup> It does not mean, of course, that no municipality would choose such software, for reasons of stupidity, poor management, neglect, or even because the price of the particular software was attractive for the municipality because the software publisher expected to charge third parties for the data and the municipality was indifferent to that. But if that were the case it is the behavior of the municipalities that should be termed appalling. The municipalities should be held accountable for their bad choices, not the sellers of the software. If the market is highly competitive it should be a matter of administrative law, not copyright or antitrust law. Posner, however, seems, at least implicitly, to have held the view that the market for this type of software is not highly competitive. He endorses the view that the doctrine of IP misuse should not be confined to the bounds of antitrust, and he is ready to use the doctrine to intervene not only in the contractual relations between a copyright holder and his licensee, but also in the unilateral technological choices made by the copyright holder in order to prevent the use of technology to circumvent the balance that the law seeks to maintain between what could be propertized and what should remain in the public domain. He believes that it may be justified to do so not only when an antitrust violation had been found, but at much lower thresholds.

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<sup>252</sup> *Id.* at 1453. Easterbrook presumed that such competition indeed existed: "ProCD has rivals, which may elect to compete by offering superior software, monthly updates, improved terms of use, lower price, or a better compromise among these elements", *id.*

<sup>253</sup> *Assessment Technologies*, *supra* note 240, at 646.

<sup>254</sup> Jordan M. Blanke, *Assessment Technologies of WI, LLC v. Wiredata, Inc.: Seventh Circuit Decision Reinforces the Noncopyrightability of Facts in a Database*, 20 SANTA CLARA COMPUTER & HIGH TECH L. J. 755, 761 (2004).

<sup>255</sup> Unless, for the fans of conspiracy theories, the municipalities prefer such software precisely for the ability to escape their legal obligation to disclose the data.

The difference between the approaches of Easterbrook and Posner may be viewed as reflecting different attitudes towards the issue of IP rights and market power. Easterbrook's approach is compatible with the AGLIP's approach that IP rights are essentially comparable to any other form of property and that they usually confer no market power upon their holders. His view that unless the contract is illegal or unconscionable there is no basis for judicial intervention sees nothing special about IP rights. Of course, antitrust violation could be a basis for intervention, but nothing that falls short of antitrust.

Posner's endorsement of the IP misuse doctrine for situations broader than antitrust recognizes that the market power conferred by IP rights, even when its degree is lower than that usually required in order to establish antitrust liability, may force consumers to accept terms that they would not accept under competition, and that this may sometimes warrant intervention. This view not only reverses an earlier ruling in which he declined to accept non-antitrust misuse claims,<sup>256</sup> it greatly resembles the Supreme Court's earlier decisions, such as *Loew's* in which the court presumed that IP rights, even when they do not create market dominance may confer enough economic power to induce consumer to accept terms that they otherwise would not.

Of course, Posner could be criticized precisely on those grounds, especially as he acknowledges that there was no attempt to show that the market was not highly competitive.<sup>257</sup> Such criticism should be rejected however. If I am correct in my analysis that IP rights often do confer upon their holders a non-trivial degree of market power, the market cannot be completely relied upon to assure that the use of EPSE's will generally lead to optimal results. Posner's 2003 relative suspicion towards the use of EPSE's seems, therefore, to be more realistic than Easterbrook's 1996 *laissez-faire* approach.

Does that mean the *ProCD* was wrongly decided? Not necessarily. The principles that I described earlier in Part VI, Example 2, can be applicable to both cases and explain the different results (although it may suggest that *ProCD's laissez-faire* reasoning is not the best). *ProCD* clearly had market power. The price of the cheap, non-commercial, version was \$150 for a set of five discs. Assuming marginal cost of \$1 for disc, the price of the cheap version was thirty times higher than marginal cost, and the Lerner index would give a value of 0.97, very close the maximum value of 1.<sup>258</sup> Nevertheless, Judge Easterbrook did not find this fact to be particularly relevant to his

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<sup>256</sup> See *Saturday Evening Post Co. v. Rumbleseat Press, Inc*, 816 F.2d 1191, 1200 (7th Cir. 1987) ("We decline to create a federal common law rule that would jostle uncomfortably with the Sherman Act. Noting the convergence of patent-misuse principles with antitrust principles, we said in *USM Corp. v. SPS Technologies, Inc.*, 694 F.2d 505, 512 (7th Cir.1982): "If misuse claims are not tested by conventional antitrust principles, by what principles shall they be tested? Our law is not rich in alternative concepts of monopolistic abuse; and it is rather late in the date to try to develop one without in the process subjecting the rights of patent holders to debilitating uncertainty." This point applies with even greater force to copyright misuse, where the danger of monopoly is less.").

<sup>257</sup> *Assessment Tech.*, *supra* note 240, at 647 ("no effort has been made by WIREdata to show that AT has market power").

<sup>258</sup> Marginal cost, *MC*, in this case is 5, and the Lerner index, *L*, is  $P-MC/P$ , which is  $(150-5)/150=0.967$ .

analysis (in fact he ignored it) and correctly so. Although ProCD's conduct allowed it to maintain its market power by preventing sellers such as Zeidenberg from offering the data to consumers at lower prices, there were clear efficiency gains that support the endorsement of its practices. ProCD incurred substantial costs in creating the software and compiling the database and, in the absence of copyright protection for the data themselves, might have needed to rely on the combination of copyright and contract in order to be able to recover its investment by setting its price in substantial deviation from marginal cost.<sup>259</sup> If so, there is nothing anti-competitive about this, and therefore the fact of market power was largely irrelevant. Moreover, ProCD used the license terms to facilitate price discrimination, which the court considered as output increasing.<sup>260</sup> Therefore, although Easterbrook may have been wrong in his portrayal of the software as an ordinary consumer product and in his assumption of a highly competitive market, this error should not change the result. The restraints that ProCD imposed on its costumers created efficiency gains and therefore were correctly upheld by the court.

Like ProCD, AT engaged in conduct – a contract – that enabled it to gain more than it could gain in a competitive market. Yet Judge Posner, implicitly presuming that AT had enough market power to achieve this result, believed that the practice, by withholding from the public domain certain non-copyrightable facts, created deadweight losses without any compensating efficiency gains. AT did not create or compile the data that it was seeking to sequester from WIREdata and the public domain; therefore it made no investment that needed to be recovered. True, it invested in creating the software, but WIREdata was not in the business of tax assessments and would not enter competition with AT.<sup>261</sup> Its attempt to assert property interest in the data was purely opportunistic. Recognizing that AT's conduct would create deadweight losses without any compensating gains, the court correctly condemned the conduct.

A presumption of market power in this type of cases could therefore be justified not only on the basis of probability but also on the basis of policy; it may assist in framing the debate on the proper scope of IP rights in its correct factual context. It may help condemn conduct that creates net losses such as in *Assessment Technologies* without harming cases like *ProCD* which probably created net gains.

### ***B. Tying Cases***

The second area in which I evaluate the merit of the presumption of market power is cases involving allegedly unlawful tying arrangements. This area is the one in which the presumption of market power has been applied most frequently.<sup>262</sup> Despite some ambiguity about the contents of the tests for illegality, and on whether a plaintiff needs to demonstrate 'anticompetitive effect', when certain conditions are met, tying

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<sup>259</sup> Note, however, that this might not have necessarily been true, *see* Gordon, *supra* note 246.

<sup>260</sup> *But see* Gordon, *id.*

<sup>261</sup> *Assessment Tech.*, *supra* note 240, at 643, 645.

<sup>262</sup> HOVENKAMP ET AL., *supra* note 54, §4.2e5.

arrangements, in which a sale of one product or service is conditioned on buyer taking another product or service, can be *per se* illegal under US antitrust law,<sup>263</sup> and the conditions for illegality are usually met by a showing that there are separate tying and tied products and that the defendant possesses sufficient market power.<sup>264</sup> It should be noted, though, that the *per se* rule for tying is not entirely *per se* (as is the rule against naked price-fixing), since proof of market power is required, and in some cases the seller may avoid liability by showing an efficiency-based justification for the tie.<sup>265</sup> But in any event, one of the requirements for a finding of an illegal tie is that the defendant possesses sufficient economic power, and in *Loew's* it was held that “[t]he requisite economic power [necessary for a finding of an antitrust violation] is presumed when the tying product is patented or copyrighted”,<sup>266</sup> thus substantially lowering the evidentiary burden on plaintiffs in IP-related tying cases.

The *per se* treatment of tying arrangement evolved by the courts without much regard to the possible economic functions of tying arrangements, and often by ignoring the likelihood of pro-competitive tying arrangements. Consequently, the tying doctrine is widely regarded today is irrational.<sup>267</sup>

Because the welfare effects of tying arrangements are ambiguous, they can be either efficient or neutral or harmful, and this is true even if the seller has market power, general ban on tying (that is a *per se* rule against it) is not a wise policy. A sensible analysis of tying cases would ask what is the effect of the tie on the output and prices of the products in question, and seek to condemn those arrangements that have negative effects. If the focus of the inquiry is the competitive effect of the tying arrangement, a presumption that the IP holder has market power is largely irrelevant, unless it is found that the practice is anti-competitive. The question should be the effect of the practice: how it *changes* the market power of the seller, not how much market power it had at the outset.

However, US doctrine has often failed to focus on the right inquiry. The result is that under current US doctrine, *if* sellers of intellectual goods are presumed to possess market power, then any tying arrangement in the sale of their goods is *per se* illegal, or at least potentially so, whether it has anti-competitive effect or not and even if it is in fact pro-competitive. Therefore, as long as the Supreme Court does not formally abandon

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<sup>263</sup> See HOVENKAMP *supra* note 23, §10.1 (Following *Yentch v. Texaco, Inc.* 630 F.2d 46, 56-57 (2<sup>nd</sup> Cir. 1980), Hovenkamp provides the following five tests: 1) separate tying and tied products; 2) evidence of actual coercion by the seller that forced the buyer to accept the tied product; 3) a seller possessing sufficient economic power in the tying product market to coerce the acceptance of the tied product; 4) anticompetitive effect in the tied market; 5) some interstate commerce in the tied product market. According to Hovenkamp, all circuits are close to unanimous in requiring elements 1, 3 and 5 and 5 is in fact pure formalism.)

<sup>264</sup> *Id.*

<sup>265</sup> See e.g., Edward M. Iacobucci, *Tying as Quality Control: A Legal and Economic Analysis*, 32 J. LEGAL STUD. 435, 436-37 (2003).

<sup>266</sup> *Loew's*, *supra* note 16, at 45.

<sup>267</sup> HOVENKAMP, *supra* note 23, at §10.6; see also William F. Baxter and Daniel P. Kessler, *The Law and Economics of Tying Arrangements: Lessons from the Competition Policy Treatment of Intellectual Property*, in COMPETITION POLICY AND INTELLECTUAL PROPERTY RIGHTS IN THE KNOWLEDGE-BASED ECONOMY (Robert D. Anderson and Nancy T. Gallini ed. 1998).

the *per se* rule,<sup>268</sup> all that is left for the Court and for lower courts and the US antitrust agencies in order to mitigate its potentially negative consequences is to reject a presumption of market power, thus increasing the burden on putative plaintiffs, or to carve out limited exceptions and limitations.<sup>269</sup>

What follows, however, is that the problem lies in the rule that whenever a seller with market power is engaged in tying the arrangement is *per se* illegal. This rule is based on an unsound economic theory that sees tying arrangements as generally anti-competitive, even if they are unlikely to increase the seller's market power; yet the problem is not necessarily with the presumption of market power as such.

The preceding discussion has focused on the rationality or irrationality of tying law from an economic efficiency perspective. However, although many believe that economic efficiency *should be* the ultimate goal of antitrust, it is unsettled that indeed it is. Because the question whether to have a presumption of market power is ultimately a question of policy, it is worth exploring whether different views about the goals of antitrust yield different answers to this question. One alternative perspective, advocated by Professor Lande, for example, has suggested that consumer choice is the ultimate goal of antitrust. According to this view “[t]he antitrust laws are intended to ensure that the marketplace remains competitive so that worthwhile options are produced and made available to consumers, and this range of options is not to be significantly impaired or distorted by anticompetitive practices.”<sup>270</sup> Under this standard, tying can be illegal because when a firm with market power over a product sells it only when packaged with a second product, consumers' choices are directly reduced and distorted by the arrangement.<sup>271</sup>

In fact, this concern has deep roots in the case law<sup>272</sup> and especially in the case law on cases involving tying of intellectual goods. In *Loew's* for example, the Supreme Court identified *two* concerns about tying: the first was that “they may force buyers into giving up the purchase of substitutes for the tied product”<sup>273</sup> – this is a concern about consumer choice, and the second is that “they may destroy the free access of competing suppliers of the tied product to the consuming market”<sup>274</sup> – this is a concern about foreclosure: the potential exclusionary effect of the tie. The connection between those concerns and market power is, according to the Court, that a seller with market power “by virtue of his position in the market for the tying product, has economic leverage

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<sup>268</sup> See *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 9 (1984) (“It is far too late in the history of our antitrust jurisprudence to question the proposition that certain tying arrangements pose an unacceptable risk of stifling competition and therefore are unreasonable “*per se*”).

<sup>269</sup> See e.g., *U.S. v. Microsoft*, 253 F.3d 34, 95 (D.C. Cir. 2001) (holding that as a result of the uniqueness of the products in question, rule of reason analysis, rather than *per se* illegality, should be made when the tying product is a *platform* software to which another software is bundled).

<sup>270</sup> Robert H. Lande, *Consumer Choice as the Ultimate Goal of Antitrust*, 62 U. PITT. L. REV. 503 (2001).

<sup>271</sup> *Id.* at 508 n23.

<sup>272</sup> *Id.* at 510 and the references therein.

<sup>273</sup> *Loew's*, *supra* note 16, at 45.

<sup>274</sup> *Id.*

sufficient to induce his customers to take the tied product along with the tying item.”<sup>275</sup> The second concern, foreclosure, is the one that the economic efficiency approach would often emphasize, and it is quite obvious that many tying arrangements could not have any significant exclusionary effect of this kind. The first concern – that a tying arrangement can reduce the choices available to consumers – however, is much more probable in markets which are not perfectly competitive.<sup>276</sup> Therefore, if the Court’s concern was with the elimination of choice, its ruling that the level for the requisite economic power for illegal tie is much lower than market dominance, and may be inferred from the tying product’s desirability to consumers or from uniqueness in its attributes,<sup>277</sup> is consistent with this logic.

If I am correct in my suggestion that the number of available substitutes in markets or IP goods is often smaller than it is perceived to be in the AGLIP world, then a court motivated by concern for consumers’ choice is adopting a sensible policy when it presumes that IP rights confer enough power to reduce the choices available to their customers. In other words, the Court was right in its understanding of the power that IP rights confer upon their owners, and was right when it concluded that this power may allow them to force their customers into arrangements that would reduce the latter’s choices. The Court was wrong when it concluded that this elimination of choice by consumers presumptively forecloses the market for the tied product, because such a conclusion requires an additional assessment of the competitive conditions in the market for the tied product. For example, an analysis of what share of the market for the tied product is affected by the tie.

In sum, as an instrument of legal policy, the presumption of market power in tying cases is a sensible policy if the ultimate underlying policy is the preservation of consumers’ choice but it does not make much sense if the ultimate underlying policy is welfare maximization because an IP holder’s initial market power tells us very little about her ability to use the tie to further her market power in the market for the tying or the tied product. But what makes the presumption a bad instrument in tying cases is the underlying substantive law, dictating that *whenever* a seller with market power ties other products or services the practice is illegal.

Because most of the cases in which the presumption of market power was applied have been tying cases, the AGLIP ‘anti-presumption’ of market power, rather than representing a universal truth about the relationship between IP rights, market power and antitrust policy, should be read as what they are: guidelines issued by the US antitrust agencies that state their policy with regard to the application of US antitrust laws to the licensing of IP rights. As a statement of enforcement policy, the AGLIP must (and do) respond to the existing jurisprudence as it has developed in the US; to the rules

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<sup>275</sup> *Id.*

<sup>276</sup> See e.g., HOVENKAMP *supra* note 23, §10.3a (“Anticompetitive tie-ins are implausible in perfectly competitive markets. Competition drives prices to marginal cost, and the forced purchase of an unwanted product will be treated by a purchaser as a price increase. Such an increase is possible only if the seller has some market power.”)

<sup>277</sup> *Id.*

that are set by the courts, not by the antitrust agencies. When the Agencies state they “do not presume that intellectual property creates market power in the antitrust context” they respond to, and perhaps seek to influence, the jurisprudence that has made such a presumption. Because under US *per se* rules such presumption almost dictates the legal outcome of a dispute, regardless of its economic merit, rejecting the presumption seems like a sound policy *in this context*. The problem, however, is that using the anti-presumption in other context may hinder, not facilitate, reaching the correct result.

### C. *Enforcement of Invalid IP Rights: Walker Process Litigation*

*Walker Process*<sup>278</sup> is one of the earlier case in which the Supreme Court refused to infer market power (necessary for a monopolization claim in this case) from the mere existence of a patent, noting that “It may be that the [patented] device ... does not comprise a relevant market. There may be effective substitutes for the device which do not infringe the patent. This is a matter of proof ...”<sup>279</sup> However, *Walker Process* is a case in which a presumption of market power, or at least a “permissive inference”<sup>280</sup> could be desirable, or at least sensible.

The issue in *Walker Process* was whether an attempt to enforce a patent obtained by fraud amounts to an act of illegal monopolization under s. 2 of the Sherman Act. Walker, the alleged infringer, and the United States, appearing as *amicus curiae*, argued that if Food Machinery & Chemical (“FMC”), the patent holder, obtained its patent by fraud and thereafter used the patent to exclude Walker from the market through 'threats of suit' and actual prosecution of this infringement suit, a proof of such conduct would establish a *prima facie* s. 2 violation.<sup>281</sup> FMC, on the other hand, argued that a patent monopoly and a Sherman Act monopoly cannot be equated.<sup>282</sup> The US Supreme Court, while accepting that an enforcement of a patent fraudulently obtained may amount to a violation of the Sherman Act, held that the other elements necessary in a monopolization case must be present in order to establish liability. The Court held that in order to establish the s. 2 claim “it would ... be necessary to appraise the exclusionary power of the illegal patent claim in terms of the relevant market for the product involved. Without a definition of that market there is no way to measure Food Machinery's ability to lessen or destroy competition.”<sup>283</sup> The Court hypothesized that it could be possible that the device in question does not comprise a relevant market, that there might be effective substitutes devices that did not infringe that patent, and concluded that this was a matter of proof by Walker, as was the amount of damages that it suffered.<sup>284</sup>

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<sup>278</sup> *Walker Process*, *supra* note 48.

<sup>279</sup> *Id.* at 177-78.

<sup>280</sup> *See supra* Part VII.A (classification of presumptions).

<sup>281</sup> *Walker Process*, *supra*, note 48, at 175.

<sup>282</sup> *Id.*

<sup>283</sup> *Id.* at 177.

<sup>284</sup> *Id.* at 177-78.

The Court was correct in holding that the ability of FMC to monopolize the market was ultimately a matter of proof by Walker. The question, however, is what evidence Walker had to furnish in order to meet this burden, and whether a court *could* infer that FMC had the requisite market power from the facts that were proven, and further, whether as a matter of policy the court *should* have inferred that. I argue that it could and that some policy considerations suggest that it should.

Admittedly, the position of Walker and the US was probably too simplistic and the Court correctly refused to adopt it. The mere fact the Food Machinery attempted to enforce a patent does not tell us much about the effect of that act on the competition in the market which is allegedly monopolized. However, it is an additional fact - that the patent is attempted to be enforced against a competitor - which tells us a lot about the effect of such attempt in the market in which they both compete, even without precisely defining what this market is. If both parties are engaged, actually or potentially, in the same economic activity within the same geographic market, *i.e.*, if they are competitors, then it is not unreasonable for a court to infer from an attempt by one competitor to exclude the other, that it faces an attempt to create, strengthen, or maintain market power. As I have noted earlier, if the market is highly competitive the plaintiff will gain nothing from the exclusion of a competitor, because the output reduction (and price increase) that will result from the exclusion of that infringing defendant will be rapidly offset by output expansion by non-infringing competitors.<sup>285</sup> It is the fact of exclusion (or its attempt) that defines the market.<sup>286</sup> Requiring a full-blown trial just to define the market in such circumstances is not only a waste of resources, but can also increase the risk of error.<sup>287</sup> Assuming that the enforcement of invalid IP rights should be discouraged, a rebuttable presumption, or at least a permissive inference that the plaintiff has sufficient market power necessary for a monopolization claim in such circumstances, or that he is attempting to monopolize the market can therefore promote this goal.<sup>288</sup>

Indeed, the history of the disputes between FMC and Walker supports my proposition. FMC and Walker were fierce competitors in the area of sewage treatment

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<sup>285</sup> *Supra*, Part IV.D.

<sup>286</sup> Bork made a similar argument to support the *per se* prohibition on naked price-fixing or market-division agreements. He noted that "very few firms that lack power to affect market prices will be sufficiently foolish to enter into conspiracies to fix prices. Thus the fact of agreement defines the market." ROBERT H. BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* 269 (1993).

<sup>287</sup> *Id.*

<sup>288</sup> Hovenkamp et. al., although arguing that a plaintiff in *Walker Process* claims must demonstrate that the IP owner has market power, HOVENKAMP ET AL., *supra* note 54, §11.4b, make a similar argument with regard to the anticompetitiveness of the act. They argue that "antitrust claimants who can demonstrate that a monopolist has engaged in sham litigation *against competitors* should be able to demonstrate anticompetitive conduct as a matter of course", *id.*, at §11.4c (*italics added*). However, if it is possible to prove an anticompetitive effect, an inquiry into the question of market power is superfluous. "Since the purpose of the inquiries into market definition and market power is to determine whether an arrangement has the potential for genuine adverse effects on competition, "proof of actual detrimental effects, such as a reduction of output," can obviate the need for an inquiry into market power, which is but a "surrogate for detrimental effects.", *FTC v. Indiana Fed'n of Dentists*, 476 U.S. 447, 460-61 (1986), *quoting* 7 PHILLIP AREEDA, *ANTITRUST LAW* ¶ 1511, at 429 (1986).

systems, and had a long history of patent litigation. From the facts stated in *FMC Corp. v. City of Greensboro*,<sup>289</sup> we learn that both firms used technology that presented substantial improvement over prior technologies. That technology reduced the treatment time from thirty days to ten days, thus allowing municipalities to better utilize their existing treatment facilities and avoid building new facilities. In that particular case the technology would save the City of Greensboro \$210,000.<sup>290</sup> FMC had some patents on several aspects of the technology. The patents would not necessarily be infringed by Walker's equipment; at least in one case Walker's process was found to be non-infringing. Nevertheless, the fact that Walker's equipment could be used in an allegedly infringing manner was used by FMC to raise Walker's costs. FMC tried to persuade prospective customers of its competitors to use its equipment in accordance with its patented technology, and encouraged them, if they chose the equipment of competitors, to purchase a license from FMC in order to avoid possible infringement. As a result, Walker often had to furnish "hold harmless" guarantees to defend its customers from infringement actions brought by FMC.<sup>291</sup> At least in one case, *FMC Corp. v. City of Greensboro*, FMC sued a customer of Walker and Walker had to handle the defense. Walker attempts to bar subsequent cases by seeking a declaratory judgment to determine the scope and validity of the patent failed on the grounds that there were no outstanding charges against Walker or its customers.<sup>292</sup> While this litigation does not present a full picture of the competitive landscape of the sewage treatment market, it is evident that substantial rents were available in that market that made it worthwhile for both FMC and Walker to fight over in three separate proceedings.

While all of that suggest that a presumption of market power in such cases is justified on grounds of probability and procedural efficiency, there are additional supporting policy considerations. As Bork noted in 1978, the harms to competition caused by sham litigation may be significant and create a special challenge for antitrust because such litigation, often pursued before other agencies, often has low antitrust visibility.<sup>293</sup> Professor Meurer has recently noted that predatory litigation seems more likely than classic predatory pricing strategies, and suggested that the problem of opportunistic IP litigation is serious and is getting worse.<sup>294</sup> The Federal Trade Commission, following a series of public hearings held in 2002, has expressed concerns that too many issued patents are of questionable validity and together with some existing legal standards and procedures may have anticompetitive effects, and made some recommendations to improve patent quality and minimize the anticompetitive costs of the patent system.<sup>295</sup>

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<sup>289</sup> 326 F.2d 581 (4<sup>th</sup> Cir. 1964)

<sup>290</sup> *FMC Corp. v. City of Greensboro*, 208 F.Supp. 494, 495 (D.C.N.C. 1962).

<sup>291</sup> *Walker Process Equipment v. FMC Corp.*, 356 F.2d 449, 450 (7<sup>th</sup> Cir. 1966).

<sup>292</sup> *Id.*

<sup>293</sup> BORK, *supra* note 286, at 347-49.

<sup>294</sup> Meurer *supra* note 127, at 516.

<sup>295</sup> FEDERAL TRADE COMMISSION, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY (2003), available at <http://www.ftc.gov/os/2003/10/innovationrpt.pdf> (last visited May 31, 2004).

However, despite those concerns and despite the fact that the US Supreme Court found almost forty years ago in *Walker Process* that an attempt to enforce a patent obtained by fraud may amount to an act of illegal monopolization, *Walker Process* claims are usually not successful.<sup>296</sup> A high degree of caution in accepting such claims is indisputably warranted; there should be no intention to chill the enforcement of *valid* IP rights. Therefore, in order to prevail, a *Walker Process* claimant must prove that the patentee acted intentionally to deceive the Patent and Trademark Office (PTO) and that the patent would not have been granted but for the patentee's fraud; good faith or an honest mistake "would furnish a complete defense."<sup>297</sup> This standard effectively bars many claims since the information asymmetry with regard to the facts necessary to prove those elements favors the patentee,<sup>298</sup> whose patent also benefits from a statutory presumption of validity.<sup>299</sup> All of these may be sufficient to filter out many (perhaps too many) *Walker Process* claims. Adding an additional burden to define the market and prove market power – a task which may be redundant as we have seen – creates an additional burden on potential claimants and can also increase the risk of error. The existence of a presumption that such sham litigation is aimed at increasing the market power of the plaintiff in such cases can therefore help extend the limited reach of antitrust to this type of anticompetitive behavior.<sup>300</sup>

## IX. AVOIDING OVERSIZED ANTITRUST LAW

One of the main points of this paper is that IP rights often confer upon their owners the ability to set price at substantial deviation from marginal cost, and this ability is 'market power in the antitrust sense'. Yet, I have also argued that for antitrust purposes the fact of market power should be distinguished from the question of whether a specific practice or conduct leads to an increase or maintenance of market power; that for most antitrust purposes only the last question matters, and the degree of market power that existed prior to the challenged conduct matters only if the conduct increases or maintains that market power. On the basis of this framework I have identified some cases in which a (rebuttable) presumption that IP rights confer market power on their owners may make sense.

One implication of this view – and one that might be contentious - is that this analysis may potentially result in greater risk of antitrust liability for many owners of IP rights because it could apply even to sellers of intellectual goods that would generally be

<sup>296</sup> HOVENKAMP ET AL., *supra* note 54, §11.2f.

<sup>297</sup> *Id.*, at §11.2c, quoting *Walker Process*, *supra* note 291, at 177.

<sup>298</sup> Meurer *supra* note 127, at 514.

<sup>299</sup> 35 U.S.C. §282. Note that the presumption in this case is particularly strong, even stronger than an ordinary Morgan-McCormick presumption, *see supra* Part VII.a, since the Federal Circuit has interpreted the statutory presumption of validity as imposing a 'clear and convincing evidence' standard on those who challenge the validity of patents, *see FTC, supra* note 295, at Ch. 5, 26-28 (recommending that legislation be enacted specifying that challenges to the validity of a patent be determined based on preponderance of the evidence).

<sup>300</sup> *See* Meurer, *supra* note 127, at 539 ("Trebled antitrust damages are a potent deterrent of anti-competitive activity, but in practice antitrust does little to control socially harmful IP litigation because its reach is very limited").

considered non-dominant under traditional methodology of antitrust analysis. Consider the following example:

Suppose there are two software publishers *A* and *B*, who sell differentiated, yet functionally similar, products (*e.g.*, word processors such as Word and WordPerfect) and that they enter, independently, into exclusive dealing arrangements downstream and these arrangement undergo some antitrust scrutiny. Traditional antitrust analysis would begin with defining the market, which may be defined as “word processing software for Intel compatible personal computers.” Assume that under this definition of the market *A* has a market share of 90% and *B*’s market share is 10%. Ordinarily, the inquiry with regard to *B*, being non-dominant, will end at this point; there is a strong presumption that a competitor whose market share is 10% cannot profitably behave anti-competitively.<sup>301</sup> However, suppose that as a result of the arrangements the prices of both firms’ products increase by 10%. Recall that both products are differentiated so it is not improbable that each of them could employ some strategies that, within limits, enable it to profitably raise its prices. Continue to assume, as in Example 2 discussed above,<sup>302</sup> that there are 100 consumers, that marginal cost is \$10, the initial price was \$100 and that 10 of them (9 for *A* and 1 for *B*) are discouraged from buying if the price increases by 10%, and further assume that no offsetting efficiency gains can be demonstrated. The total loss from *A*’s arrangement is \$855 and \$95 from *B*’s. The loss from *B*’s arrangement is still significant: 19 times higher than under the competitive assumption of Example 1.<sup>303</sup>

This example reveals that although “word processing software for Intel compatible personal computers” sounds like a plausible definition of the market, given that the two firms sell this type of software and compete with each other, this definition is largely irrelevant for assessing the effect of the challenged conduct.<sup>304</sup> If the challenged conduct was found to allow *B* to raise its prices, then under this proposed framework *B*’s software was a relevant market for assessing the effect of its exclusive dealership arrangement.

Few would challenge the proposition that if we actually have enough evidence that demonstrates that such price increase is possible *B*’s software should indeed be considered as the relevant market. Yet many could argue that the broad definition is nonetheless justified because ordinarily we do not have such evidence, so that the exercise of defining the relevant market enables us to determine the likelihood of such price increase by *B*. Finding that *B* is unlikely to be able to raise its price serves as a

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<sup>301</sup> The AGLIP, for example, define a “safety zone” of 20% or below of any of the markets affected by the restraint, *see* AGLIP, §4.3.

<sup>302</sup> *Supra* Part VI.B.

<sup>303</sup> *Id.* The total loss in Example 1, which resulted from a 10% increase in prices in a previously highly competitive market, was only \$5.

<sup>304</sup> It does not mean that this definition cannot be appropriate in other scenarios. If, for example, it was alleged that *A* and *B* colluded to enter into exclusive arrangements with their dealers in order to divide the market between them and prevent entry from third parties, or the challenged conduct was a proposed merger between them, the definition could be appropriate

screening devices that enables us to avoid the cost of antitrust litigation against *B*, acknowledging that the cost of error, the cost of letting *B* get away under the broader market definition, is not high. Note, however, that the magnitude of the cost of error depends on the amount of *B*'s existing market power. If *B* has no existing market power (as in Example 1) the cost of letting it get away is \$5, whereas if *B* does have market power (as in Example 2) the cost of error in letting it get away is \$95. If we assume that *B*, as many other owners of valuable IP rights, does possess market power, the methodology of initially defining the market without giving weight to the existence of IP rights may be a screening device that screens too much.

Does it mean that *B* should be considered a monopolist for antitrust purposes and found liable in such circumstances? Some may worry that a positive answer would imply very interventionist antitrust law, perhaps over-interventionist. But if we think that the answer should be negative, what would be the basis for that? What is the basis for not applying the antitrust laws against a practice that was proven to have raised prices, thereby creating deadweight losses, without compensating efficiency gains? Is there a more compelling answer than saying that *B* has market power but 'not in an antitrust sense'?

One important consideration that prevents such wide application of the antitrust laws against owners of IP is the magnitude of the *actual* effect of the challenged conduct on the economy - the actual size of the injury caused by the conduct. In this last example, if the numbers were real ones and the size of *B*'s consumer base actually reduced from ten consumers to one and the resulting deadweight loss was merely \$95, it is obvious that an antitrust proceeding may not be socially cost justified.<sup>305</sup> Time may equally determine the size of economic activity affected by the practice. The deadweight loss associated with an increase in the price of an intellectual good can be small even if the market is large (in terms of the number of consumers multiplied by the prices that they pay) but the commercial lifespan of the work is very short. Today's copyrighted newspaper article, which may be highly valuable today but of no value tomorrow, is an obvious example, just as with many other copyrighted works.<sup>306</sup> While it may not be practical, or even desirable,<sup>307</sup> to define a threshold of economic activity that would trigger antitrust scrutiny, the fact that pursuing antitrust actions against IP holders is costly creates *de facto* an important filter against the danger of oversized antitrust law.<sup>308</sup> *B* and its fellow IP holders can rest assured that they are unlikely to be antitrust defendants.

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<sup>305</sup> Landes & Posner, *supra* note 75, at 953.

<sup>306</sup> Although over time such an article may regain value as a record of historic events, which researchers or other creators might value. This may explain why many newspapers allow free online access to their Internet editions for the last seven or thirty days, but require payment for access to older materials.

<sup>307</sup> *Id.* (suggesting that the existence of deterrent benefits can occasionally justify bringing a suit against small monopolists).

<sup>308</sup> The same applies to IP law. The fact that consumers can often use intellectual goods in an infringing manner without being sued, because enforcing the IP is not cost-justified, creates a practical check to overreaching IP law.

Another consideration is that I *assumed* that *B* could profitably raise its prices and that the resulting deadweight loss was not larger than any potential efficiency gains. In practice, however, a plaintiff would have to *prove* that this is the case, and this might not be easy. A court may justifiably wonder why such price increase is not constrained by the availability of the other software. But the constraining impact is not symmetric. *B* is more likely to be constrained by *A* (for example, because its larger user base may indicate easier access to consumers) than *A* is likely to be constrained by *B*. Consequently the court may be more receptive to finding the allegation raised against *A* probable and rule against it, and more reluctant to rule against *B*. It does not mean that *B* will always be constrained by *A*, only that proving that this is not the case is more difficult.

But such institutional and practical considerations are not the only considerations against antitrust imperialism. The preceding analysis was essentially static, it focused on assessing the efficiency gains (or lack thereof) created by the challenged conduct. But since we are dealing with intellectual property, dynamic considerations, primarily the effect on the incentive to innovate, are no less important. It could be argued that the challenged practice of the IP holder should nevertheless be endorsed even if it does not create identifiable net efficiency gains, because the additional profit to the seller would eventually pay off in the form of greater incentives to innovate and a resulting increase in productivity, despite the static short-term deadweight loss; in other words, that condemning the practice would reduce the incentives to innovate and result in greater long-run losses than the immediate loss associated with the practice. The focus here is not on the expected efficiency gains from the practice itself (we assume that no such net gains exist) but with the effect that allowing or prohibiting the practice would have on the profits of the IP holder and thereby on the expected reward from innovation generally. In this respect, allowing IP holders to impose restrictions that create no static efficiency gains and whose only effect is to increase the IP holders' profits can be simply seen as part of the initial reward of the IP right. To this we should add the point made by Roberts and Putnam: that maintaining the proper incentives for investors in innovative activities requires that the measurement of the observed profits *ex post* will be adjusted to the risk involved, and that limiting IP holders' observed market power *ex post* to a degree that would not justify investment *ex ante* cannot be a sustainable policy.<sup>309</sup>

The last concern, however, should be taken with a grain of salt, because, as noted previously, the effect of the last increment of monopoly pricing on the IP holder's profits (and incentives to innovate) is relatively small compared to the large deadweight losses created by exercising that power.<sup>310</sup> In addition, the effect of restrictions on the exercise of IP rights on the incentive to innovate may differ across industries, because the importance of IP in inducing investment in R&D is not the same in all industries.<sup>311</sup> So it

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<sup>309</sup> Roberts & Putnam, *supra* note 103.

<sup>310</sup> Ayres & Klemperer, *supra* note 85, at 990.

<sup>311</sup> See e.g., Michael A. Carrier, *Unraveling the Patent-Antitrust Paradox*, 150 U. PA. L. REV. 761, 823-26 (2002), and the references therein.

might be justified to be more cautious in some industries than in others. If the development of *A* and *B* required a similar amount of investment and both faced the same risks (reasonable assumptions given that both products are functionally equivalent and compete with each other) it is more likely that *A*, whose market is nine times bigger than *B*'s (and the deadweight loss resulting from its conduct is nine times higher), would earn excessive (risk-adjusted) profits, than *B* would. In this case *A* would be a more suitable candidate for antitrust treatment, and given its larger consumer base it is more likely to be an antitrust defendant compared to *B*. This test provides no immunity for *B*, but if its conduct is not pro-competitive on balance, why should it?

## X. CONCLUSION

The purpose of intellectual property rights is to create artificial scarcity of intellectual goods; to allow their owner to set their prices in excess of marginal cost; to exercise market power. Therefore, it should not be surprising that on many occasions this is exactly what they do. It is even more likely that disputes would evolve around those IP rights that do confer market power. Consequently, on grounds of probability, and as a factual matter, a rebuttable presumption that IP rights confer market power upon their owners can be justified.

However, the fact that a firm has market power is irrelevant for most antitrust purposes, because the focal point of most antitrust questions is the *change* in market power resulting from a specific practice or conduct. The existing market power can nonetheless be relevant, but only if the conduct is found to be anti-competitive. It is relevant for measuring the magnitude of the harm caused by the anti-competitive outcome of the conduct and balancing this harm against potential efficiency gains.

Using this traditional definition of market power and this analytical framework I have identified some examples for cases and typical questions in which a presumption of market power can be justified on grounds of policy. This happens, for example, in cases involving attempts of IP owners to increase their market power and no plausible efficiency gains can be identified, such as in some license terms or infringement actions based on invalid IP claims. In such cases a presumption of market power can lower the burden on plaintiffs and reduce the cost of litigation and error that a full-blown inquiry into market definition and market power usually entails. I have not considered what exact type of presumption it should be: whether courts should adopt a Thayer-Wigmore presumption, Morgan-McCormick presumption or whether a rule of permissive inference would suffice. As I have noted, this is highly context specific, which depends on various factors such as the underlying substantive antitrust rules (*e.g.*, whether a finding of market power compels a finding of liability or not), and other rules relating to the legal process (*e.g.*, standing requirements, standards of proof, available remedies), to the combined effect of those substantive and procedural rules and to the expected effect of a presumption of market power on the likelihoods of plaintiffs to prevail. It also depends on one's approach towards the cost of error: whether we should err on the side of more active antitrust or stronger IP rights. I will therefore leave that kind of detailed

inquiry for another time. In addition to that, since the existence of a presumption of market power dialectically undermines its empirical underpinning (and the lack of such presumption dialectically strengthens the empirical grounds for having one) the overall merit of the presumption—the balance of all of those considerations—may change over time in a pendulous movement.

The long term benefits of innovation and the need to preserve the incentives to innovate provide good reason for not applying antitrust law too aggressively to practices adopted by IP holders. The fact that the markets for many intellectual goods are often tiny, short term, or both, creates a natural barrier against such antitrust imperialism and should this natural barrier accidentally fall, courts should re-erect it. In addition, when the markets are large enough or persistent enough to justify the cost of antitrust challenge, the system should maintain its dynamic consistency, by looking at the risk-adjusted profits rather than at simply observed profits, and should be more cautious when the size of the market of the IP owner is small relative to that of a competitor.

The presumption that IP rights confer market power has been heavily criticized. I have shown that much of this criticism results from attempts to analyze the relationship between IP rights and market power in the abstract; not in connection to a specific practice or conduct. The presumption was also attacked because it was often used in conjunction with *per se* rules that did not require identifying the exact anti-competitive effect of the challenged conduct. In such cases the presumption dictates the outcome of the case and may lead to condemnation of many pro-competitive arrangements. The true culprit, however, were the *per se* rules, not the presumption.

The purpose of intellectual property laws is to “promote the Progress of Science and useful Arts”<sup>312</sup> and the results are intellectual goods: innovative products, services and creative works. By definition, when this result is achieved and such innovative intellectual goods are created they do not have very close substitutes, and if such goods are valuable for consumers their owners can exercise market power. Both IP law and antitrust play important role in restraining this market power in an uneasy attempt to find and maintain the right balance between providing enough market power as incentive to innovate and minimizing its social cost. Much of the modern analysis of IP and antitrust is based on an ‘anti-presumption’ of market power; an assumption that most intellectual goods have close substitutes that prevent the exercise of market power, and on an attempt to distinguish between simple (and benign) ‘market power’ and (malignant) ‘market power in the antitrust sense’. This is unrealistic and unnecessary. Striving to focus on the precise anti-competitive effect of a challenged practice may help us find the proper role for antitrust without resorting to unrealistic assumptions. Surely, this is not going to be easy. But assuming that generally there are many close substitutes (when this is not the case), and asserting that IP rights are comparable to any other form of property (when relevant important differences exist), and consequently pretending

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<sup>312</sup> U.S.C.A. Const. Art. I § 8, cl. 8

that market power does not generally exist (when often it does) is unlikely to make it easier.