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INTRODUCTION

As is very well known, intellectual property rights throughout the world have recently experienced a massive expansionist trend. Patent law has slowly stretched the boundaries of patentable subject matter to cover DNA sequences, software and business methods, leaving com-

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1. I would like to point out that I have decided to limit this work only to patent and copyright laws. Therefore, I will not deal with the intersection of IPRs and antitrust with regard to trademarks.


mentators to wonder whether it still makes sense to inquire about what can and cannot be patented in the first place. Similarly, copyright law has been expanding in all possible directions: not just new subject matters have been added but new sets of rights created, but the length of protection has been extended, and even a new set of exclusive rights has been created to protect technological measures that, in turn, are meant to protect copyrighted works.

Such trends have been strongly backed by a reverse tendency in the application of antitrust laws towards anticompetitive practices involving

4. The American leading case for the patentability of software is considered In re Alappat, 33 F.3d 1526 (Fed. Cir. 1994). Europe issued a proposal of a directive on the patentability of computer-related inventions which was presented by the European Commission on February 20th 2002 (doc. COM(2002)92–C5-0082/2002-2002/0047), but the common position on such proposal has been rejected in second reading by the European Parliament on July 2005. Notwithstanding this precise legislative veto, it is well known that the European Patent Office has granted patents on computer implemented inventions since the end of the eighties (Vicom/Computer-Related Invention, T208/84, 1987 E.P.O.R. 74) and it does not seem willing to stop its trend. For a more extensive description of the European trend of protection with regard to software see Gustavo Ghidini & Emanuela Arezzo, One, None or a Hundred Thousand: How Many Layers of Protection for Software Innovation? (unpublished article) (copy on file with the author).

5. See State Street Bank & Trust v. Signature Fin. Group, 149 F.3d 1368 (Fed. Cir. 1998); see also the EPO case PBS Partnership/Controlling pension benefit systems, T931/95, 2002 E.P.O.R. 52 (giving a European perspective).


8. Think, for example, to the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, (so called Rome Convention), in Rome on October 26, 1961.


intellectual monopolies.\textsuperscript{11} After a period of hostility when antitrust laws, both in U.S. and E.U., severely constrained IP-owners' licensing practices and unilateral behaviors,\textsuperscript{12} the wind changed again toward a more pro-IP attitude.\textsuperscript{13} This new approach has played a central role in strengthening IP-owners' exclusive rights by allowing them to obtain a far greater monopoly than the one they were entitled to.\textsuperscript{14}

Despite the major commonalities of approaches taken by United States and Europe, it is important to point out that some discrepancies have occurred with regard to the way the two systems have assessed anticompetitive behaviors endorsed by dominant firms whose position of strength stems, in great part, from intellectual property rights. Indeed, as I will show in this study, American antitrust treatment of refusal to deal with cases has created a \textit{de facto} immunity from antitrust intervention for unilateral conduct of dominant undertaking holding intellectual assets. Conversely, European antitrust law has endorsed a more restrictive attitude, holding that when \textit{exceptional circumstances} do exist, the exclusive faculty of the IP-owner can be curtailed in favor of a more competitive structure of the market. As I will explain, the reasons for these discrepancies can be also traced back to more general differences of American and European assessment of anticompetitive unilateral conduct.

This study is divided into three sections. The first section will be devoted to a comparative study of American and European antitrust provisions dealing with unilateral exclusionary conduct. Here it will be explained that although section 2 of the Sherman Act and Article 82 of the EC Treaty seem to share several commonalities, many significant differences do exist regarding both the normative framework and the practical assessment of the cases. The second part will be specifically concerned with the analysis of American and European cases involving the inter-

\begin{itemize}
\item \textsuperscript{11} Note that in the United States this trend has been somewhat accelerated by the fact that many cases at the intersection between competition law and IPRs come under competence of the Court of Appeal for the Federal Circuit, the \textit{ad hoc} Appellate Court for patent cases, which has often been blamed for its over-protectionist attitude towards patents. For a critical overview on the role of CAFC within the patent system, see Arti K. Rai, \textit{Engaging Facts and Policy: A Multi-Institutional Approach To Patent System Reform}, 103 Colum. L. Rev. 1035 (2003).
\item \textsuperscript{12} For a reconstruction of these trends in the United States see R. Hewitt Pate, \textit{Refusals to Deal and Intellectual Property Rights}, 10 Geo. Mason L. Rev. 429 (2002); see also Rochelle Dreyfuss, \textit{Unique Works/Unique Challenges at the Intellectual Property/Competition Law Interface} (Hart Publishing 2006). Similarly, the seventies in Europe were characterized by a generalized hostility towards IPRs, merely perceived as an instrument to partitioning the market. Valentine Korah, The Interface Between Intellectual Property and Antitrust: The European Experience, 69 Antitrust L. J. 805 (2001).
\item \textsuperscript{14} On this specific point see infra chapter III.1.
\end{itemize}
section between intellectual property rights and antitrust law. The third and last part will comment on the economic significance of intellectual property rights, and thus on the proper weight they should be afforded in an antitrust analysis.

I. THE NORMATIVE FRAMEWORK: SECTION 2 OF THE SHERMAN ACT AND ARTICLE 82 OF THE EC TREATY

As mentioned, this contribution is meant to analyze how American and European antitrust laws have approached the issue of intellectual property and, specifically, to confront different attitudes shown toward unilateral behaviors of companies whose dominant positions can be attributed, inter alia, to the ownership of an intangible asset. In order to do that, it is significant to analyze how American and European antitrust laws differ in the treatment of exclusionary behaviors in the first place.

As is well known, the meaning of the word “monopolize” has been the subject of much discussion since the very issuance of the Sherman Act.\(^{15}\) Because the lure of monopoly profits represent the ultimate goal every firm tends to, it is easy to understand the skepticism that has surrounded Section 2 of the Sherman Act whose strict interpretation would allegedly risk punishing even companies that have acquired market power through legitimate means (so called competition on the merit). This tension has been recognized since the very early days of American antitrust history when the Supreme Court clarified that “the law does not make mere size an offense or the existence of unexerted power an offense.”\(^{16}\) In a statement later confirmed in the famous \textit{Alcoa} case, Judge Hand held that “the successful competitor, having been urged to compete, must not be turned upon when he wins.”\(^{17}\)

The difficulties in distinguishing competition on the merits from mere anticompetitive conduct are substantial, even more in the case of unilateral exclusionary behaviors. Unilateral behaviors adopted by dominant firms are called exclusionary because they aim at discouraging potential rivals’ entry into the relevant market or, conversely, they intend to gradually drive existing competitors off the market. In other words, exclusionary conduct is directly aimed at competitors, and only by damaging the latter does it cause a lessening of competition that ultimately damages consumers. Because there is a widespread consensus today, especially well rooted in the United States, that antitrust law must be intended as a “consumer welfare prescription”.\(^{18}\)

\(^{16}\) \textit{U.S. v. U.S. Steel Corp.}, 251 U.S. 417, 451 (1920).
\(^{17}\) \textit{U.S. v. Aluminum Co. of America}, 148 F.2d 416, 430 (2d Cir 1945).
exclusionary conduct does not always lead to a straightforward lessening of consumer welfare makes the overall assessment of the anticompetitive character of the conduct more complex. In particular, because the ultimate effects of the conduct on consumers is not always immediate — meaning that, as result of the conduct, consumers may not immediately bear a higher price or will not face a sudden shortening of quantities — there is a sensible risk that the anticompetitive harm stemming from exclusionary conduct may be underestimated.

The debate about the proper assessment of unilateral exclusionary conduct is very much discussed today both in United States and in Europe. Although it is not the topic of this specific study, I will address it from time to time with regard to refusal to deal with cases and the anti-

19. The idea the antitrust law, especially with regard to unilateral conduct, should be exclusively aimed at pursuing consumer welfare is still foreign to European antitrust law, although the recent debate on the reform of Article 82 has seen some scholars strongly proposing this view. In particular see Patrick Rey, Jordi Gual, Martin Hellwig, Anne Perrot, Michele Polo, Klaus Schmidt & Rune Stenbacka, Report by the EAGCP, An economic approach to Article 82, http://ec.europa.eu/comm/competition/publications/studies/eagcp_july_21_05.pdf (accessed Apr. 4, 2007).

20. In fact, unilateral exclusionary conduct often results in raising rival costs’ strategy. This means that the conduct is not aimed at causing (and therefore it does not cause) rivals’ immediate exit off the market, but rather it intends to weaken rivals’ position on the market so that they will not be able to offset dominant firm’s anticompetitive conduct. In such a scenario, the short-term effect of the anticompetitive conduct will be a lessening of competition in the market; such situation in the long run will cause the actual exit of weakened competitors which will progressively lose market share to the monopolist. See Thomas G. Krattenmaker, Robert H. Lande & Steven C. Salop, Monopoly Power and Market Power in Antitrust Law, 76 Geo. L.J. 241 (1987) (addressing more extensively the issue on raising rivals’ costs as manifestation of exclusionary market power); see also Thomas G. Krattenmaker & Steven C. Salop, Anticompetitive Exclusion: Raising Rivals’ Costs to Achieve Power over Price, 96 Yale L.J. 209 (1986).


22. The European Commission has recently engaged in a review process of exclusionary abuses under Article 82 EC Treaty. To this purpose, the Commission has released a Discussion Paper which has been published on the Commission website and has been asked for comments. At the beginning of 2007, the commission is expected to clear its position and frame an official document that will probably reshape to some extent the current assessment of unilateral conduct under the abuse doctrine. European Commission, DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary
trust treatment of exclusionary behaviors involving intellectual property rights.

1. Monopolization and Attempt to Monopolize Under U.S. Antitrust Law

Section 2 of the Sherman Act punishes, with a fine or by imprisonment or both, "every person who shall monopolize, or attempt to monopolize, or combine or conspire with another person or persons, to monopolize any part of the trade or commerce among the several States." The most important thing to keep in mind about section 2 of the Sherman Act is that it is meant to punish two different types of behaviors (that can be pursued by one or more undertakings): monopolization and the attempt to monopolize.

As far as the mere monopolization claim is concerned, the jurisprudence has recently clarified that "the offense of monopoly under § 2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market, and (2) the willful acquisition or maintenance of the power as distinguished from growth or development as a consequence of a superior product, business acumen or historic accident." While mere possession of monopoly power is not sufficient per se to trigger section 2 monopolization claims, it is a necessary precondition because monopolization can be described as the conduct of a firm that already has a position of strength on the market and adopts anticompetitive exclusionary strategies to the ultimate goal of preserving such position or further enlarging it.

Attempt to monopolize differs from monopolization because it regards conduct of a company that aims at achieving monopoly power in a certain market. Understandably, attempt to monopolization claims present an even harder case than mere monopolization because every firm tends to achieve a position of strength in the market. Therefore, in theory, each conduct could be characterized as an attempt to monopolize. This surely explains why American jurisprudence has crafted a some-
what more complex test for attempt cases, establishing that liability is found when there is proof of: 1) a predatory or anticompetitive conduct, 2) a specific intent to monopolize and 3) a dangerous probability of success.\footnote{27}

The first and the second elements are closely related in that intent is often inferred by the type of conduct adopted by the firm as well as the strategies chosen to implement it.\footnote{28} It is important to point out that, unlike general monopolization cases, attempt to monopolize cases require a 'stronger' proof of intent.\footnote{29} The reason for this can be easily understood. Because each competitor aims at winning the game of competition, a mere intent to exclude competitors, usually present in most section 2 cases, is not deemed enough for attempt cases.\footnote{30} The range of conduct that might constitute attempts to monopolize is quite broad. In this regard it is interesting to note that the word anticompetitive in the case of attempt to monopolize has been broadly interpreted by the jurisprudence in such a way to comprehend also unfair practices.\footnote{31}

The third requirement of the test – the dangerous probability of success – relies on structural factors: namely, market shares, number of competitors, barriers to entry and all other elements determining the degree of market power already held by the firm attempting to obtain monopoly power. Clearly, the stronger the power already detained by the firm, the bigger the chances that it will succeed in obtaining monopoly power, hence the more dangerous the conduct. It is interesting to note that until recently there was disagreement among the Court with regard

\footnote{27} This test has been first inferred from the case \textit{Swift & Co. v. United States}, 196 U.S. 375, 396 (1905), and it has been reaffirmed by the Supreme Court in 1985 in \textit{Spectrum Sports Inc. v. McQuillan}, 506 U.S. 447, 457 (1993).

\footnote{28} It is generally accepted that intent can be proved through both direct and indirect evidences, for the most part found in firms' actions. Edward T. Sullivan & Jeffrey L. Harrison, \textit{Understanding Antitrust and its Economic Implications}, Understanding Series, 305 (LexisNexis 2003).

\footnote{29} See \textit{Times-Picayune v. U.S.}, 345 U.S. 594, 626 (1953) (clarifying that "While the completed offense of monopolization under \$2 demands only a general intent to do the act, 'for no monopolist monopolizes unconscious of what he is doing,' a specific intent to destroy competition or build monopoly is essential to guilt for the mere attempt") (emphasis added). This holding has been confirmed in later judgments. See e.g. \textit{Aluminum Co. of America}, 148 F.2d at 432; \textit{Smith v. N. Michigan Hosp. Inc.}, 703 F.2d 942, 954 (6th Cir. 1983); \textit{Tops Markets, Inc. v. Quality Markets, Inc.}, 142 F.3d 90, 101 (2d Cir. 1998).

\footnote{30} Sullivan, supra n. 28, at 304.

\footnote{31} Note, indeed, that the category of attempts to monopolize seems to include also conduct such as false advertising, industrial espionage, disparagement of a competitor's product and other unlawful behaviors. Sullivan, supra n. 28, at 311; see e.g. \textit{Aldridge v. Microsoft Corp.}, 995 F. Supp. 728, 740 (S.D. Tex. 1998) Aldridge sued Microsoft, \textit{inter alia}, for violation of Section 2 of the Sherman Act for actual and attempted monopolization relying on the doctrine of product disparagement and essential facility. \textit{Id.} It is interesting to point out that such practices in Europe are generally banned by unfair competition laws.
to whether market power mattered at all in an attempt to monopolize claims. Nowadays, such disagreement has been settled. Indeed, commentators explain that market power assessment has a fundamental role in attempt claims. If too much focus were to be placed on the unfairness of the conduct and too little on market power, the offense would operate to protect inefficient businesses from more efficient rivals.

2. Abuses of Dominant Position in EU Antitrust Law

Article 82 of the EC Treaty expressly establishes that “any abuse by one or more undertakings of a dominant position within the common market or in a substantial part of it shall be prohibited as incompatible with the common market as far as it may affect trade between Member States.” The article provides a list of examples of abusive conduct, but EC founders purposefully left open both the concept of dominance and of abuse which have been elaborated upon by European Courts.

EU case law has adopted a rather comprehensive definition of dominance. A dominant position has been defined as a situation where a company detains such a position of strength on a certain market that it can make its own business strategy and decision without taking into consideration how competitors and customers will react and how consumers will be ultimately affected by it. In addition, dominance has been de-

32. Departing from the trends commonly accepted in other Circuits, the Ninth Circuit used to hold that evidence of the relevant market or of the firm's market power was not necessary to reach the level of “dangerous probability” whose analysis rested solely on the anticompetitiveness of the behavior. According to the Ninth Circuit, only if there were not sufficient evidences to prove the unfair or predatory conduct was it necessary to show defendant's market power. See Lessig v. Tidewater Oil Co., 327 F.2d 459 (9th Cir. 1964), cert. denied, 377 U.S. 993 (1964). The Supreme Court, on certiorari, clarified that proof of “dangerous probability of achieving monopoly power” rests on considerations of the relevant market and the defendant's ability to lessen or destroy competition in that market. Spectrum Sports Inc., 506 U.S. at 456.

33. Hovenkamp, supra n.24, at 279.


35. Art. 82 EC Treaty explains that an abuse may consist in: “(a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions; (b) limiting production, markets or technical development to the prejudice of consumers; (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage; (d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.” Id. In Continental Can, the European Court of Justice made it clear that the list contained in Article 82 is merely exemplificative and does not provide “an exhaustive enumeration of the sort of abuses of a dominant position prohibited by the Treaty.” Europemballage Corp. and Continental Can Co. Inc. v. Commission [1973] ECR 215 at para. 26.
scribed as the power to prevent effective competition being maintained in the relevant market.\textsuperscript{36}

According to some commentators, the European Court of Justice (ECJ) has purposefully linked the power to prevent the maintenance of a competitive asset in the market to the power to behave independently, as if the former can only occur if the latter has been found.\textsuperscript{37} This assumption seems reasonable because the concept of independence has often been referred to as the special feature of dominance.\textsuperscript{38} Nonetheless, some other commentators (usually economists) prefer the part of the definition that describes dominance as the power to prevent effective competition being maintained, as this may seem more closely related to the economic concept of market power.\textsuperscript{39}

Although it has become common, even in the language of the Commission, to talk about undertakings' market power as synonym of a position of strength in a certain market, the concept of dominance—at least until now\textsuperscript{40}—is more comprehensive than market power as it goes far

\textsuperscript{36} "The dominant position thus referred to relate to a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, its customers and ultimately of the consumers". See United Brands Company and United Brands Continentaal BV v. Commission of the European Communities, case 27/76, \textit{[1978] ECR} 207, para. 65; Hoffman – \textit{La Roche} v. Commission of the European Communities, case 85/76, \textit{[1979] ECR} 461, para. 38.

\textsuperscript{37} See Thomas Eilmansberger, \textit{Dominance-The Lost Child? How Effects-Based Rules Could and Should Change Dominance Analysis}, 2 European Competition Journal 15, special issue (2006). Although, for the sake of preciseness, Eilmansberger thinks this link is inappropriate as the power to behave independently would be causally linked to the power to prevent effective competition being maintained only in the case of leveraging practices and not for the remaining unilateral conduct.


\textsuperscript{39} Damien Geradin, Paul Hofer, Frederic Louis, Nicolas Petit & Mike Walker, \textit{The Concept of Dominance in EC Competition Law}, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=770144 (accessed Feb. 5, 2005). These commentators have argued that the definition of dominance as power to behave independently is somewhat vague and economically incorrect because all undertakings, even near-monopolists, face a downward sloping demand curve and the pressure of competition from substitute products or services. This clearly shows how economists are often incapable to grasp flexibilities inherent in words such as "to an appreciable extent". In fact, the ECJ has never described this peculiar freedom of action as absolute. Rather, the ECJ has explained that dominance enables the undertaking "if not to determine, to have an appreciable influence on the conditions under which competition will develop, and in any case to act largely in disregard of it so long as such conduct does not operate to its detriment". \textit{Hoffmann-La Roche} v. Commission at \textsection 39.

\textsuperscript{40} In its Discussion Paper [see \textit{supra} n. 22] the Commission presents dominance as the equivalent to \textit{substantial market power} [Discussion Paper, \textsection 23, 28]. The weight to be given to such a proposition is uncertain because the whole discussion paper has an ambiguous tone and the Commission seems torn between the intention to confirm well settled EU case law and the desire to introduce some changes towards a new assessment of exclusionary practices. For an more detailed discussion on the differences between dominance and
beyond the mere power over prices. Assessment of a position of dominance indeed takes into account a vast array of factors which can range from the exclusive possession of crucial inputs, to ownership of intellectual assets and many others. Moreover, the assessment of dominance is aimed at evaluating the overall commercial and economic position a certain undertaking has on a certain market vis-à-vis its competitors, but it does so without inquiring upon the conduct pursued by the firm.

European bodies have stressed that the mere existence of a dominant position does not exclude tout court a certain amount of competition as it would happen in case of monopoly. Rather, dominance is defined as a situation whereby normal competitive forces playing in a certain market are sensibly weakened. The EC case law has explained that the concept of abuse is an objective notion which is connected to dominance and it is distinct from it at the same time. It is linked to dominance in the sense that without domi-

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41. In this sense see Giorgio Monti, The Concept of Dominance in Article 82, 2 European Competition Journal, 31, special issue (2006). Following the discussion on the reform of Article 82, many scholars have expressed their view on how the concept of dominance should be properly framed. Among the most relevant contributions, see Duncan Sinclair, Abuse of Dominance at a Crossroads – Potential Effect, Object and Appraeciability under Article 82 EC, 25(8) E.C.L.R. 491 (2004); Thomas Eilmansberger, supra n. 37; Peter Oliver, The Concept of 'Abuse' of a Dominant Position Under Article 82 EC: Recent Developments in Relation to Pricing, 26 European Competition J. 315 (2005); Gunnar Niels & Helen Jenkins, Reform of Article 82: Where the Link between Dominance and Effects Breaks Down, 26(11) E.C.L.R. 605 (2005); Adrian Majumdar, Whither Dominance, 27(4) E.C.L.R. 161 (2006).

42. Hoffmann-La Roche v. Commission, [1979] ECR I-461, ¶ 41 (explaining that dominance was not merely given by a market share analysis; rather assessment of dominance required a balance of the finding of high market shares with other relevant economic factors such as the time dimension, the volume of production and the scale of supply).

43. Because market power is measured through price increases, it is often inferred by the very same conduct adopted by the firm. See Arezzo, supra n. 40.


45. In this regard, see the definition that Advocate General Konott gives of the scope of Article 82 and dominance in British Airlines v. Commission: “article 82, like the other competition rules of the Treaty, is not designed only or primarily to protect the immediate interests of individual competitors or consumers, but to protect the structure of the market and thus competition as such (as an institution), which has already been weakened by the presence of the dominant undertaking on the market” (emphasis in the original). British Airways v. Commission, Case C-95/04, ¶ 69 (Feb. 2006).
nance the behavior would not be punished. But it is distinct because the abuse amounts to a separate moment. The abuse takes place when competition on the market has already been distorted by the presence of the dominant position and it is punished expressly because it further disrupts this scenario by means different from competition on the merits.

3. **Similarities and differences between Article 82 EC Treaty and Section 2 of the Sherman Act**

Article 82 of the EC Treaty and Section 2 of the Sherman Act are often regarded as similar provisions in that they are both meant to prohibit unilateral conduct which influences a certain market, and have the effect of impairing trade between member States. In both cases the conduct becomes relevant when a certain degree of economic power is involved and in both cases the conduct, although generally adopted by a single undertaking, can also be pursued by more than one firm. Nonetheless, despite these apparent commonalities, several differences can be traced among the two provisions.

A first relevant difference can be found in that, as I hinted above, European competition laws do not punish conduct aimed at obtaining a dominant position. A finding of dominance is the fundamental prong for assessing unilateral abuses; therefore, whatever the means and the strategies implied to achieve it, the mere attainment of a position of dominance in itself will not punished. Only the abuse of such position can trigger liability under article 82; hence, no attempt claims can be pursued in Europe; not even in the case that clear evidence is provided.

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46. This is because the rationale of the overall architecture of EC antitrust law is that the stronger the position held by the firms in a certain market, the more dangerous will be the conduct for competition.

47. In the famous Hoffmann-La Roche judgement, the ECJ explained that: "The concept of an abuse is an objective concept relating to the behaviour of an undertaking in a dominant position which is such as to influence the structure of a market where, as a result of the very presence of the undertaking in question, the degree of competition is weakened and which, through recourse to methods different from those which condition normal competition in products or services on the basis of the transactions of commercial operators, has the effect of hindering the maintenance of the degree of competition still existing in the market or the growth of that competition. Hoffmann-La Roche v. Commission, [1979] ECR 461, ¶ 91. Similarly, NV Nederlandsche Banden-Industrie Michelin v. Commission, [1983] ECR 3461 ¶ 70.

48. The provision rests on the assumption that the very same conduct can or cannot be anticompetitive depending on who engages in it because the stronger the position the firm holds in the market, the stronger the effect of her behavior and the greater are the chances that her conduct is going to deeply affect the market structure.

49. Although it might be argued that, because a position of dominance has been found even when the undertaking has low market shares, the European abuse doctrine could be broad enough to comprehend practices that, under American law, would be assessed as attempt claims.
that the company has engaged in the practice with the specific intent to damage a competitor or competition in general. Indeed, a second substantive difference between the two doctrines is given by the fact that European assessment of unilateral conduct does not take intent into account.50

Another significant difference with regard to the assessment of abuse and monopolization (or attempt to monopolize) can be found in the defensive tools dominant firms have at their own disposal once their conduct has been found abusive. Under Article 82 EC Treaty, the firm can defend itself insofar as it can demonstrate that it has taken “reasonable steps as it deems appropriate to protect its interests, provided however that the purpose of such behavior is not to strengthen this dominant position and abuse it” (emphasis added)51. Also, a firm might justify its conduct asserting that it has been forced to undertake such behavior in order to minimize the losses it would suffer from rivals’ competition (so called “meeting competition defense”).52 Conversely, under American antitrust law, dominant firms can defend themselves by simply asserting that their conduct is likely to pass efficiencies on consumers and that a balancing of the pro- and anti-competitive effects caused by the practice shows that the latter does not have the ultimate effect of harming consumers.

This is surely a substantive divergence of approach. The European concept of ‘objective justification’ appears as a limited defensive instrument whereby the undertaking claims that the conduct was not abusive because it only engaged into the conduct to defend its own business.53

50. As clarified by the ECJ, the concept of abuse is an objective concept and, as a general rule, its assessment is not made dependent on evaluation upon intent of the dominant undertaking. Hoffmann-La Roche v. Commission [1979] ECR 461, ¶ 91; Compagnie Maritime Beige Transports and others v. Commission, [1996] ECR II-1201, ¶ 149. For the sake of preciseness, proof of intent has only been taken into account in a predatory pricing case (Akzo Chemie BV v. Commission, case C-62/86, ECR 1991, I-3359) but this is not likely to be the rule. Conversely, intent will usually be taken into account to determine the proper amount of the fine. See Guidelines on the method of setting fines imposed pursuant to Article 23(2)(a) of Regulation no. 1/2003, O.J. C 210, p. 2-5, ¶¶ 1 and 4. This is also likely a big difference between American and European Intellectual Property Laws. American statutory norms used to put great emphasis on intent to prove that conduct is anticompetitive or that a competitor was willing to infringe the patent or the copyright (think about the inducement theory in patent law, recently introduced into copyright law by the Supreme Court decision in Grokster. Metro-Goldwyn-Mayer Studios Inc. v. Grokster Ltd., 125 S.Ct. 2764 (2005)).


52. European Commission Discussion Paper, supra n. 22 at ¶¶ 81-83.

53. The objective justification defense is not easy to assert. The ECJ has often explained that undertakings do not have an unconstrained right to protect their commercial interests; rather, their defensive actions must be proportionate to the desired goal and not
the contrary, the American approach seems more like an affirmative instrument aimed at showing the overall pro-competitive character of the behavior. This difference is clearly stated by the wording of the Court of First Instance explaining that companies cannot justify their conduct on the basis that they bring about certain advantages for themselves or for consumers.\textsuperscript{54}

Recently, the European Commission seems to have endorsed a somewhat smoother approach towards so called \textit{efficiency defense} by asserting that exclusionary conduct may escape the prohibition of art. 82 if the dominant undertaking can demonstrate that its conduct produces efficiencies that outweigh the negative impact on competition. However, while the position of the Commission is not definitive as yet,\textsuperscript{55} it should be pointed out that the European defense based on efficiency seems reasonably narrower in scope than its American counterpart.\textsuperscript{56}

Eventually, the last but not least, a significant difference stems from the very same assessment of dominance and the concept of anticompetitive conduct.

As I have mentioned above, American antitrust law has evolved more and more towards the idea of antitrust as a "consumer welfare prescription".\textsuperscript{57} This view has led courts to specifically concentrate on conduct whose effect directly restrains output or increases price, to the immediate detriment of consumers, and to disregard practices that do not directly cause such an effect not distorting of competitive equilib-

\textsuperscript{54} "The sole purpose of those grounds of justification is to enable dominant undertakings to show not that the practices in question should be permitted because they confer certain advantages, but only that the purpose of those practices is reasonably to protect its commercial interest in the face of action taken by certain third parties and they do not therefore in fact constitute an abuse" (emphasis added). \textit{Atlantic Container Line AB and Others v. Commission}, Joined cases T-191/98, T-212/98 to T-214/98, [2003] ECR II-3275, ¶ 1114.

\textsuperscript{55} Please note that by the time this contribution was completed, the European Commission had not clarified whether it was going to amend the Discussion Paper and in which direction.

\textsuperscript{56} In fact, the efficiency defense, as framed by the European Commission in its Discussion Paper, presents a four-prong test which is not easy to comply with. Accordingly, the dominant company has to prove that: a) the allegedly abusive conduct has realized or is likely to realize efficiencies; b) the conduct is \textit{indispensable} to produce such efficiencies; c) the efficiencies benefit consumers; d) competition in a substantial part of the products concerned is not eliminated. European Commission Discussion Paper, supra n. 22, ¶¶ 84-92

\textsuperscript{57} Posner, \textit{supra} n. 18, at 194-95.
ria. Although actual proof of consumer welfare diminution is not expressly required by the Sherman Act nor by other statutory provisions, an exclusionary conduct will not be punished lacking clear evidence of consumer harm. As a consequence, the concept of anticompetitive conduct entirely reverts to whether the conduct harms consumers, in the sense that it actually diminishes consumer welfare.

On the contrary, European competition bodies have always regarded consumers welfare as one important goal of competition policy; however, they have shown equal concerns towards the protection and safeguard of competitive structures of markets and openness. More specifically, while the Commission explains that the protection of competition on the market is ultimately intended at enhancing consumer welfare, it has been clearly stated that competition as an institution must be considered the direct goal of competition rules. This substantial divergence regarding the policy goals of antitrust law bears a significant impact on the practical assessment of anticompetitive conduct in general and—with regard to the topic of this study—exclusionary unilateral conduct. In fact, European antitrust law does not require evidence of consumer welfare as further element to prove the abuse. Rather, consumers damage

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59. Openness and access to essential inputs are values carefully cherished by the European Commission. See, for example, Commission Notice, Guidelines on the Applicability of Article 81 of the EC Treaty to horizontal cooperation agreements, OJ C 3 [2001], where the Commission (talking about standards and standardization agreements) states that where a de facto industry standard emerges, "the main concern will then be to ensure that these standards are as open as possible and applied in a clear non-discriminatory manner. To avoid elimination of competition in the relevant market(s), access to the standard must be possible for third parties on fair, reasonable and non-discriminatory terms." Id. at ¶¶. 6.4.3, 174. Such an approach of the Commission and the superior European Courts finds its roots in the ordoliberal school of thought, of German origin. The members of the Freeburg school saw competition law as guarantor of undertakings' freedom of action in a scenario of open market structures governed by complete competition. The core principles and ideas of the ordoliberal school can be found in: David Gerber, Law and Competition in Twentieth Century Europe, (Oxford, 2001), chapter VII, and Walter Eucken, The Competitive Order and Its Implementation, (1949), English translation reprinted in 2 Competition Policy International 219 (2006).

60. European Commission Discussion Paper, supra n. 22, ¶¶ 4 and 54. See also the words of the ECJ in the Continental Can case where it clarified that Article 82: "[. . .] is not only aimed at practices which may cause damage to consumers directly, but also at those which are detrimental to them through their impact on an effective competition structure, such as is mentioned in Article 3 (F) of the Treaty." Europemballage Corporation and Continental Can Company Inc. v. Commission, case 6-72 [1973] E.C.R. 00215, para. 26.

61. See again the words of Advocate General Konott quoted supra n. 45.

62. Although there is currently a group of European economists who strongly argue that European assessment of abuse of dominance should move towards the American approach and only declare anticompetitive a conduct that causes an immediate consumer welfare diminution. See Rey et al., supra n. 19.
is presumed whenever the distortion of competition, already caused by the very same presence of the dominant firm on the market, is brought one step further by the abusive conduct.\(^{63}\)

The protection of competitive structure of the market as a value in itself to grant all undertakings the chance and the freedom to compete is also coherent with the so called "special responsibility" principle, according to which dominant firms, because of their peculiar position of strength in the relevant market, are precluded from engaging in behaviors often allowed to their smaller competitors.\(^{64}\) The special responsibility principle has surely been a determinant for the ECJ and the Commission in its refusal to deal with cases where the courts have often affirmed that dominant companies have a duty to deal and or supply with small competitors. Although such a principle has never existed in American antitrust law, I will examine how American jurisprudence in the past twenty years has gradually cut back on refusal to deal cases, especially when such conduct involves intellectual property rights.\(^{65}\)

4. FRAMING THE ANTICOMPETITIVE CONDUCT: ARTICLE 82 EC TREATY v. SECTION 1 AND SECTION 2 OF THE SHERMAN ACT

The way American and European bodies frame anticompetitive conduct is probably one of the most sensible differences in comparative antitrust law. As anticipated, the European abuse of dominant provision codifies a tentative list of anticompetitive conduct that falls under the category of abuse. Although, as said, the list is not exhaustive, when evaluating an allegedly anticompetitive practice, European competition agencies generally try to see whether it falls under one of the specified category of abuses.\(^{66}\) On the contrary, this attitude does not seem to per-

\(^{63}\) Arezzo, supra n. 40.

\(^{64}\) The concept of a special responsibility of dominant firms was first introduced by the ECJ in Michelin v. Commission where it held that: "[... ] the undertaking concerned has a special responsibility not to allow its conduct to impair genuine undistorted competition on the common market" (emphasis added). NV Nederlandsche Banden Industrie Michelin v. Commission, [1983] ECR 3461, ¶ 57. After that, the special responsibility principle was often confirmed: see Compagnie Maritime Belge Transports SA (C-395/96 P) and Dafra-Lines A/S (C-396/96 P) v. Commission, [2000] ECR I-01365, ¶ 37.

\(^{65}\) See infra chapter II how the Supreme Court in the case Verizon v. Trinko cut back on the duty to deal holding of the Aspen Skiing case.

\(^{66}\) This attitude of European antitrust enforcers has attracted several criticisms as it would lead towards undue attention over form rather than substance, i.e. the actual anticompetitive effects caused by the practice, and it would favour some sort of "conduct shopping" whereby undertakings would choose the conduct they deem are more unlikely to attract antitrust scrutiny. See Rey et al., supra n. 19. Although appealing at a first glance, these allegations are not correct.

As mentioned earlier, the list of abusive conduct contained at Article 82 is merely exemplificative and the Commission has shown many times that it has the discretion of finding an abusive conduct outside the realm of the ones expressly codified. A last important exam-
meate American antitrust law, where both Section 1 and Section 2 of the Sherman Act do not provide any tentative list of anticompetitive practices and merely set two big frameworks under which anticompetitive conduct might fall.

As a general tendency, modern American antitrust law does not seem concerned about framing conduct in order to fit within specific categories of anticompetitive behaviors. Rather, it seems more interested in finding when the conduct brings about an anticompetitive effect on the market.\(^6\) It is not clear, however, whether this actually represents a substantive difference between the two antitrust frameworks. In fact, even under American antitrust law, certain specific types of conduct have been codified by statutory provisions and have been specifically developed through the case law.\(^7\) In this regard, it is important to not to forget that in the European Union many member States are civil law countries where precedents do not have the same weight legislation has. Therefore, although competition law is surely one branch of the law where jurisprudence (especially EC jurisprudence) has a substantive weight (as source of law), the need to have some conduct codified in statutory provisions is surely stronger than in U.S.A.

In the following parts of this chapter, I will concentrate my attention specifically on how the two antitrust systems have approached and framed refusals to deal. I will analyze them separately.

4.1. *Framing refusals to deal in American and European antitrust law*

Broadly speaking, refusals to deal involve the conduct of a company that has exclusive control over a scarce resource, no matter whether tangible or intangible, or an infrastructure whose access is indispensable to compete in a certain market or in a separate but closely related market. The undertaking takes advantage of such strategic position and employs

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\(^6\) Spectrum Sport Inc., 506 U.S. 447 (noting that the jury had initially ruled for a violation of § 2 of the Sherman Act without specifying whether the allegedly anticompetitive conduct fell within a monopolization or attempt to monopolize a claim, not to mention a more specific kind of monopolization behavior within one of the two).

\(^7\) For example, price discrimination, or tying, can also be invoked, respectively, through recourse to § 2 or 3 of the Clayton Act (15 U.S.C. § 13, § 14) and each of these practice has been specifically developed through the case law.
it in order to preserve or strengthen its dominant position in that market or to acquire it in the second-related market.

American and European approaches towards refusals to deal differ with regard to both the normative framework and the practical assessment of the cases. American antitrust assessment of refusals to deal comes under section 2 of the Sherman Act as either monopolization or attempt to monopolize. It is widely acknowledged that a dominant firm's unilateral refusal to deal with a competitor may constitute \textit{prima facie} evidence of exclusionary conduct when the refusal harms the competitive process.\footnote{15 U.S.C. § 2.} Generally, harm to competition is presumed when the behavior causes a reduction in output and an increase in price in the relevant market, or by a decrease in overall efficiency level in the market that impacts negatively on consumers.\footnote{Sullivan v. National Football League, 34 F.3d 1091, 1097 (1st Cir. 1994).} Where proof of harm to the competitive process is given, the dominant firm may rebut the presumption by establishing valid business justification for its conduct.\footnote{15 U.S.C. § 2.}

American antitrust treatment of monopolization cases in general—and refusal to deal cases in particular—tends to focus its attention exclusively on the market where the conduct under analysis displays its effects.\footnote{Spectrum Sports Inc., 506 U.S. at 460 ("demonstrating the dangerous probability of monopolization in an attempt case also requires inquiry into the relevant product and geographic market and the defendant’s economic power in that market.").} This means that the monopolization claim under section 2 will be framed (as monopolization or attempt to monopolize) pursuant to the degree of market power held by the company in the market that will be ultimately affected by the anticompetitive conduct.

If an undertaking has exclusive control on a certain infrastructure which is necessary to provide a certain service (but does not represent a market in itself) and such undertaking denies access to the infrastructure to its competitors, the conduct will be framed as a monopolization case or as an attempt to monopolize depending on the level of market power held by the undertaking (thanks to the exclusive control on the facility) on the service market.\footnote{As it happened in the Aspen skiing case where a ski company owned three out of four skiing facilities in the Aspen Mountain and it employed its advantaged position to drive its only competitor off the market. Aspen Skiing Co., 472 U.S. 585.} However, it often happens, in refusal to deal cases, that the undertaking involved is active in two market segments and that the allegedly exclusionary behavior is aimed at monopolizing a distinct market where the undertaking has not a position of dominance. The most common example regards an undertaking producing both printer machines and compatible cartridges that engage in exclusionary conduct regarding the cartridge market where it does not
have (a substantive degree of) market power. Such conduct is often shaped as an attempt to monopolize. It can happen, nonetheless, that the company has a good degree of monopoly power in the very same (repair) market because, for example, it owns a (copyrighted) diagnostic software designed to pursue repair and maintenance services of a specific brand of personal computers or that the company is the sole owner of the relevant facilities to provide certain services. In such cases, the refusal might be framed as a monopolization claim. In any case, no matter whether the refusal is framed as monopolization or attempt to monopolize, the focus of antitrust authorities is always towards the market where the anticompetitive conduct is going to display its effects.

European antitrust law proceeds in a different way. As explained earlier on in this study, because refusals to deal cases are assessed as abuse of dominant position under art. 82, the conduct can only be punished if the undertaking is found to be dominant in the first place. The necessary precondition of finding dominance before further inquiring on the abusive conduct is of crucial importance for the overall abuse doctrine and for refusal to deal cases. In fact, the imposition of a duty to deal with third parties is a sensible constrain of undertakings' freedom of contract, which need not be curtailed randomly. In this sense, preliminary finding of dominance represents a fundamental guarantee that such a duty be only imposed on firms whose position of strength might allow them to unduly distort competition through the refusal.

However, one might rightfully notice that competition authorities are quite often confronted with market scenarios where a company is dominant in a certain market but the effects of its exclusionary conduct are going to be asserted on a second-related market where the company has no correspondent position of economic strength. Since European antitrust law does not punish "attempt" of abuses of dominant position, it

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75. See *Spectrum Sports Inc.*, 506 U.S. 447. In this case, a company, BTR Inc., had patent rights on an elastic polymer with shock-absorbing characteristics (sorbothane). Through its fully-owned subsidiaries, BTR Inc. was the sole producer and distributor of sorbothane which is an essential input to produce products such as medical, athletic and equestrian products. When BTR decided to enter the market for athletic products based on sorbothane, it cut off its commercial relationship with Shirley (formerly a distributor of sorbothane horseshoe pad) and it became (through its subsidiary, Spectrum Sports) the sole national provider of sorbothane-based athletic products. Such conduct was shaped as an attempt to monopolize because Spectrum Sports' conduct was deliberately aimed at achieving monopoly power in a distinct market where it did not have economic strength. *Id.*

76. See *Data General Corp.*, 36 F.3d 1147. It is not clear whether American antitrust envisages some form of leveraging of market power for essential facility cases where the doctrine seems to require, among other elements, the elimination of competition in the downstream market. See *infra* Chapter II, ¶ 1.3
could seem that such refusal to deal would risk going unpunished. This is not the case because European antitrust law regarding abuses of dominant position acknowledges the possibility that the anticompetitive conduct will produce its effects in a distinct market from the one where the undertaking is found to be dominant. Specifically, the jurisprudence regarding refusals to deal has developed around the principle that undertakings dominant in one market should not try to extend such dominance to ancillary markets. Therefore, the European Commission will first focus on the market where the company detains its competitive advantage and inquire whether it holds a dominant position in that market. Only then it will analyze the second-related market whose competition the dominant undertaking aims at distorting. Although it is not expressly stated in the EC Treaty, European treatment of refusal to deal cases envisages a form of leveraging of market power from one market to a second related one. This explains why European antitrust bodies often try to dissect two distinct markets: a first (upstream) market where the undertaking controls the strategic input and a second (downstream) market where such input is necessary to compete. As I will explain in a moment, this tendency is so cherished by EU competition law, that the ECJ has been keen in framing two markets even when there was just one.


79. The ECJ expressed the concept clearly in the case *CBEM v. CLT & IPB*: "[An abuse of within the meaning of Article 82 is committed where, without any objective necessity, an undertaking holding a dominant position on a particular market reserves to itself [. . . ] an auxiliary activity which might be carried out by another undertaking as part of its activities on a neighboring but separate market, with the possibility of eliminating all competition from such undertaking." *Centre belge d'études de marché – Télémédecine (CBEM) v. S.A. Compagnie Luxembourgeoise de Télédiffusion (CLT) and Information Publicité Benelux (IPB)*, [1985] ECR 3261, ¶ 27.

80. As we will see, this is not always the case when the necessary input is covered by an intellectual property right where often the input does not amount itself to a different upstream market.

81. *See, infra* at section II.2.3 the ECJ judgement in the *IMS Health* case.
The difference between the two approaches has some relevance, especially with regard to the attempt to monopolize cases. In fact, the possibility under American antitrust statutory provisions to raise a section 2 claim with no need to prove that the company already holds a substantive degree of monopoly power (but rather just a dangerous probability that market power will be achieved as result of the conduct), seems to increase, at least in theory, the chances that such an action will be filed. Nonetheless, because American assessment of refusal to deal does not take into account the strategic power that an undertaking might hold in an upstream market where it is dominant, demonstrating that market power will be actually achieved in the relevant market might not be easy in practice.82

Conversely, since claims related to article 82 require a finding of dominance and dominance might well be found in a separate-but-related upstream market, it may be more difficult to bring an action under art. 82, but once dominance has been found it could be easier to prove leveraging and tilt the balance for the finding of such abuses.

4.2. Abuse of dominant position and Section 1 of the Sherman Act: where do tying practices fall?

The analysis of two markets and an implicit finding of leveraging permeate tying practices both in the United States and Europe. Roughly speaking, both systems require the finding of two products which form different markets, that the company has some sort of market power in the market of the tying product and a form of constriction that compel customers to buy the two products at the same time. However, both the legal framework and the practical assessment of tying sensibly differ in European and American antitrust.

Under EU law, a behavior that conditions the conclusion of contracts to the acceptance by the other parties of supplementary obligations, which, by the nature or according to commercial usage, have no connection with the subject of such contracts, can be punished as an agreement in restraint of trade pursuant to Article 81.1(e) or as an abusive conduct under article 82(d) of the EC Treaty.83

Accordingly, it may happen that two or more competitors negotiate an agreement or simply engage in a concerted practice whereby they

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82. For example, in the Microsoft case the Court divided Microsoft's conduct into three sets of anticompetitive behaviors: violation of section 1 of the Sherman Act (tying practices); violation of section 2 of the Sherman Act (monopolization of the operating system market); and violation of section 2 of the Sherman Act (attempt to monopolize the browser market). Not surprisingly, only the monopolization claim was affirmed while the attempted monopolization of the browser market (where Microsoft was not dominant) was dismissed. U.S. v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001).

83. Article 82 EC Treaty, supra n. 34.
agree to make the supply of one product conditional upon the purchase of a second distinct product. Or, it may well happen that in a vertical relation the buyer is required to purchase a certain product as a condition of purchasing another distinct product. In both cases, the agreement will be assessed with regard to the market shares held by the parties and the likely effects produced. Nonetheless, the bulk of tying cases in the European Union has developed under the abuse of dominance doctrine.

Conversely, American antitrust assessment of tying cases has developed under section 1 of the Sherman Act, as arrangement in restraint of trade, and/or under section 3 of the Clayton Act, which expressly regulates exclusive dealing and tying arrangements. Although, at least in

84. The EU assessment of agreements in restraint of trade is strictly dependent on market shares' threshold held by parties. First of all, EU competition law envisages a safe harbor for horizontal agreement whereas the aggregate market shares held by parties does not exceed 10% on any of the relevant markets affected by the agreement and for vertical agreement whereas the market shares held by each of the parties to the agreement does not exceed 15%. [See Commission Notice on agreements of minor importance which do not appreciably restrict competition under Article 81(1) of the Treaty establishing the European Community (de minimis), O.J. C 368, 22.12.2001, p. 13-15, art. 7(a)(b)]. Secondly, EU competition law envisages a complex system whereby agreements having as their effect a restriction of competition may escape antitrust liability whereas all the conditions listed at Article 81(3) are fulfilled. Please note that agreements having as their object a restriction of competition – i.e. agreements intended to fix prices, limit output, allocate customers and or markets – are deemed anticompetitive per se pursuant to Article 81(1). In order to facilitate such an evaluation, EU legislators have adopted several block exemption regulations, applying to different categories of agreements, which carefully explain under what conditions the agreement might be exempted. Once again, market shares threshold represent the first hurdle firms must comply with. So, for example, Commission Regulation no. 2790/1999 holds that for a vertical agreement to benefit from the exemption contained therein, the supplier (part of such agreement) shall not have a market shares threshold exceeding 30% of the relevant market on which it sells the contract goods or services [Commission Regulation no. 2790/1999 of 22 December 1999 on the application of Article 81(3) of the Treaty to categories of vertical agreements and concerted practices, O.J. L 336, 29.12.1999, p. 21-25, art. 3.1]. Similarly, Commission Regulations no. 2658/2000 and no. 2659/2000 hold that specialization agreements and research and development agreements can benefit of an exemption on condition that the combined market share of the participating undertakings does not exceed 20% and 25% respectively of the relevant market [Commission Regulation no. 2658/2000 of 29 November 2000 on the application of Article 81(3) of the Treaty to categories of specialization agreements, O.J. L 304, 5.12.2000, p. 3-6, art. 4; Commission Regulation no. 2659/2000 of 29 November 2000 on the application of Article 81(3) of the Treaty to categories of research and development agreements, O.J. L 304, 5.12.2000, p. 7-12, art. 4.2].


86. Section 3 of the Clayton Act (15 U.S. § 14) reads: "[i]t shall be unlawful for any person engaged in commerce [. . .] to lease or make a sale or contract for sale of goods,
theory, a tie-in can also be framed under section 2 of the Sherman Act,\(^8\) tying case law has almost entirely been developed under section 1 of the Sherman Act and section 3 of the Clayton Act.

The above distinction explains why conducts that in Europe are shaped as abuses of dominant position — as for example Microsoft’s tying of the Mediaplayer middleware to Windows operating system — have been framed in the United States as violation of section 1 of the Sherman Act.\(^8\)

As we are about to see, most of the American cases regarding intellectual property rights have been framed as violations of both sections 1 and 2 of the Sherman Act, as tying cases and attempting to monopolize.\(^9\) In some circumstances, courts have even framed the conduct as tying plus both monopolizing and attempting to monopolize claims.\(^9\)

II. INTELLECTUAL PROPERTY RIGHTS AND EXCLUSIONARY PRACTICES: AMERICAN AND EUROPEAN CASE LAW COMPARED

Both American and European antitrust systems — although to different extents — seem to share a certain reluctance to employ antitrust instruments to intrude in the realm of intangible property. In the following paragraphs I will try to provide a critical overview of the leading cases in both United States and Europe in such a way to compare how the two antitrust policies have developed.

wares, merchandise, machinery, supplies, or other commodities, whether patented or unpatented [...] or fix a price charged therefore, or discount from, or rebate upon, such price, on the condition, agreement or understanding that the lessee or purchaser thereof shall not use or deal in the goods, wares, merchandise, machinery, supplies or other commodities of a competitor or competitors of the lessor or seller, where the effect of such lease, sale or contract for sale or such condition, agreement or understanding may be to substantially lessen competition or tend to create a monopoly in any line of commerce.”

87. See Hovenkamp, supra n. 24, at 302-303.
89. The most relevant American cases dealing with the interplay between antitrust and intellectual property rights have been framed as tying cases, under either section 1 of the Sherman Act or section 3 of the Clayton Act, and attempt to monopolize under section 2 of the Sherman Act. See Ill. Tool Works Inc. v. Indep. Ink Inc., 126 S.Ct. 1281 (2006); U.S. v. Microsoft, 87 F. Supp. 2d at 30 (D.D.C. 2000); Eastman Kodak Co. v. Image Technical Services, 112 S.Ct. 2072 (1992); Intergraph Corp. v. Intel Corp., 195 F.3d 1346 (Fed. Cir. 1999).
90. Microsoft Corp., 253 F.3d 34. This premise was necessary to explain why, although in the following of this paper I will focus my attention on cases regarding European abuses of dominant position and American cases regarding section 2 of the Sherman Act, some references to cases framed under section 1 of the Sherman Act might be necessary.
The relation between antitrust and intellectual property law has never been an easy one, especially in the United States where intellectual "monopolies" are protected directly by the American Constitution.\textsuperscript{91}

As is well known, the core of intellectual property right is the right to exclude third parties, for a certain amount of time, from the economic and commercial exploitation of authors' creations or inventions. On the contrary, the Sherman Act is meant to punish unilateral conduct aimed at excluding competitors from markets. Often, companies employ the excluding power assigned through an intellectual property right to pursue an exclusionary strategy (such as a refusal to license). When the firm holds monopoly power or has a dangerous probability of success of acquiring it, such conduct is very likely to attract antitrust consideration. This is precisely the bone of contention: allegedly, if sanctioned, a refusal to license would have the practical effect of nullifying IP-owners exclusive faculties, in addition to a severe compression of the freedom to decide with whom to deal; this explains why the application of section 2 of the Sherman Act to intangible monopolies has been severely criticized and, \textit{de facto}, restrained.\textsuperscript{92}

However, it must be pointed out that the treatment of refusal to deal cases in general—and probably of all exclusionary practices—in the United States has recently encountered a milder assessment in the sense that fewer cases seem to suit for antitrust liability.

In the aforementioned \textit{Alcoa} case, Judge Hand paradigmatically explained that antitrust provisions against monopolization practices were not merely concerned about economic effects; rather, the statutory provisions contained in the Sherman Act were based upon the belief that "great industrial consolidations are inherently undesirable, regardless of their economic results."\textsuperscript{93} Today, such view of antitrust policy seems quite outdated. The triumph of economic efficiency as the sole and ultimate goal of antitrust laws, measured against the benchmark of consumer welfare, has led to a judicial trend that is reluctant to condemn behaviors that do not clearly and directly result in a reduction of consumer surplus: i.e. in a reduction of output and a rise in price.\textsuperscript{94} Therefore, because conduct such as refusal to deals is directly aimed at

\begin{itemize}
  \item \textsuperscript{91} U.S. Const. art. I, § 8 ("Congress shall have the power \ldots to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writing and Discoveries.").
  \item \textsuperscript{92} As it will be shown by the analysis of the case law which follows in the next paragraph.
  \item \textsuperscript{93} \textit{U.S. v. Aluminum Co. of America}, 148 F.2d 416, 427-428 (2nd Cir. 1945).
  \item \textsuperscript{94} Fox, \textit{supra} n. 58, at 378.
\end{itemize}
damaging competitors, and only through such harm does it succeed in hampering the competitive structure of the market (hence, eventually restrict output), recent American antitrust courts have severely questioned the anti-competitiveness of such behaviors.

A striking proof of such attitude has been given by the recent case Verizon v. Trinko where Judge Scalia firmly stated that even when a refusal to deal concerns access to a tangible infrastructural facility, dominant firms have no duty whatsoever to open such facility to their competitors because, in Scalia’s words, compelling a dominant firm to share the source of her own advantage “is in some tension with the underlying purpose of antitrust law, since it may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities.” Although the peculiar circumstances of the case may explain (but not justify) the defensive attitude (towards dominant undertakings) of the Supreme Court in Trinko, the expansive wording of Scalia is going to have a massive impact over future refusal to deal cases and exclusionary conducts in general, not to mention cases where the monopolization conduct is pursued through the exploitation of an IPR.

1.1. Refusal to license IPRs as a presumptively valid business justification for any immediate harm to consumers.

The complex relation between antitrust and IPRs has been extensively analyzed by the Court of Appeals for the First Circuit in the Data

95. Verizon Commun. Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398 (2004). It is interesting to compare the Trinko case with the old Aspen Skiing case where the Supreme Court held that although a firm with monopoly power has no general duty to deal with third parties, “the absence of an unqualified duty to cooperate does not mean that every time a firm declines to participate in a particular cooperative venture, that decision may not have evidentiary significance, or that it may not give rise to liability in certain circumstances.” Aspen Skiing Co., 472 U.S. at 586. In this case, the Supreme Court held that the Aspen Skiing refusal to keep cooperating with its only competitor, Highland, in order to provide consumers with a weekly ski-pass ticket with access to the four slopes violated antitrust laws.

96. U.S. v. Colgate & Co., 250 U.S. 300 (1919) (“As a general matter, the Sherman Act 'does not restrict the long recognized right of a trader or manufacturer engaged in an entirely private business, freely to exercise his own independent discretion as to parties with whom he will deal.’”).

97. The concurring opinion signed by Justice Stevens (with Justices Souter and Thomas concurring) takes an entirely different tone. Justice Stevens does not address the antitrust claims; rather, he just states that AT&T's customers are not directly harmed by Verizon’s conduct, and because Verizon’s conduct has been already severely punished by both the Federal Communication Commission and the PSC, “respondent’s suit runs both the risk of duplicative recoveries and the danger of complex apportionment of damages.” Verizon Commun. Inc., 540 U.S. at 417.

98. Justice Scalia even reframes the Aspen Skiing case, the leading Supreme Court refusal to deal case, as a limited exception to the general principle that dominant firms have no duty to share. Aspen Skiing Co., 472 U.S. at 399.
Data General was a company active in the manufacture and repairs of personal computers. The case concerned its refusal to license third parties with a copyrighted software program it specifically designed to diagnose its personal computers' dysfunctions. Independent repairers claimed that the software was essential for them to repair Data General's computer properly. Among the several issues raised in the case, a central question regarded whether Data General's (attempt to protect its) exclusive rights on the diagnose program could amount to a legitimate business justification for the refusal to license and for the consequent harm suffered by consumers (in terms of elimination of competition in the provision of repair services).

As explained earlier, unilateral refusals to deal are deemed *prima facie* exclusionary for purposes of a monopolization claim if there is evidence that competitive process has been harmed; therefore, the Court first analyzed the likely consequences copyright law exerts towards competition and consumers. At this regard, the First Circuit found that copyright law may affect consumers in the short run and favor the creation or strengthening of monopoly power. However, the Court also pointed out that it may not be appropriate to "judge the effect of the use of a copyright by looking only at one market or one time period." At this point the First Circuit referred to the recent amendments of the Patent Act where, by amending Section 271(d) of the Patent Act, Congress stated that a refusal to license cannot constitute a misuse of the patent nor an illegal extension of the patent right. Although Congress had not expressly amended copyright law in a similar way, the Court held it was quite reasonable to assume that Congress would do so because "allowing copyright holders to collect license fees and exclude others from using their works create a system of incentives that promotes consumer welfare in the long term by encouraging investment in the creation of desirable artistic and functional works of expression" (emphasis added).

The Court did not hold that whatever exercise of the prerogatives granted by copyright law – and particularly a monopoly's refusal to license – will always amount to an entirely "pro-competitive" [conduct]
within the ordinary economic framework of the Sherman Act." 104 Nonetheless, the Court emphasized the need to preserve the incentive system copyright law creates in the long term to the benefit of consumers. The Court of Appeals explained that it would be unfeasible to require antitrust defendants to challenge and prove “the merits of this legislative assumption in every case where a refusal to license a copyrighted work comes under attack,” 105 therefore it introduced the principle that “an author’s desire to exclude others from use of its copyrighted work is a presumptively valid business justification for any immediate harm to consumers.” 106

The issue of when and how overcoming such presumption was not articulated by the Court who shortly mentioned, in a footnote, that there might be rare cases in which imposing antitrust liability is unlikely to frustrate the objectives of the Copyright Act. 107 In particular, the First Circuit simply held that the presumption could be rebutted by proving that the intellectual property right had been acquired through unlawful means. This issue has been the subject of the two following cases.

1.2. Is the presumption truly rebuttable?

Both the Kodak 108 and the Xerox 109 cases involved a refusal to supply repair parts (of copying equipments, copiers and printers) to independent service organizations (ISOs) who needed such components to provide repair and maintenance services. In both cases, the repair parts were covered by patents and/or copyrights, there was a disruption of previous levels of supply, and the Courts stated that the refusal to supply ISOs with patented/copyrighted parts would fall under the presumption held in Data General. Ironically, the outcome of the cases has been quite different.

In the Kodak case the Ninth Circuit relied largely on the specific intent held by the dominant firm, as requested by section 2 of the Sherman Act in attempt cases. The Court found out that only at a later stage of the trial Kodak had justified its exclusionary behavior as a strategy to protect its intellectual assets; therefore, it concluded that the company’s asserted motivation for the refusal was merely pretextual and that pretext amounted to a valid means to rebut the presumption held by the First Circuit in Data General. Quoting the Supreme Court certiorari on a

104. Id., at 1185.
105. Id. at 1187.
106. Id.
107. Id. Indeed, in the Data General case, the court simply reasoned that the presumption had not been rebutted because the copyright had been acquired in a lawful manner and there was no harm to TPM.
different but related claim concerning the same case, the Ninth Circuit held that "neither the aims of intellectual property law, nor the antitrust laws justify allowing a monopolist to rely upon a pretextual business justification to mask anticompetitive conduct."  

The Federal Circuit in Xerox severely criticized the Ninth Circuit’s holding in Kodak, accepting pretext as a valid means to rebut the presumption. The Federal Circuit explained that the Kodak holding amounted to a significant departure from the First Circuit’s central premise that rebutting the presumption would be an “uphill battle.” Therefore, despite the fact that attempt to monopolize requires proof of a specific intent, the Court refused to inquire into Xerox’s motivation for the refusal and (re)affirmed the principle that the presumption held in Data General could be overcome only by showing that the IPRs had been obtained with unlawful means or in the rare cases in which “imposing antitrust liability is unlikely to frustrate the objectives of the Copyright Act.”

1.3. The essential facility cases

The treatment of exclusionary conduct involving IPRs under the Essential Facility Doctrine has been, if possible, even more severe than under refusal to deal, in the sense that courts have been even more reluctant to consider ownership of an IPR tantamount to a tangible facility and, accordingly, to deem anticompetitive the dominant company’s refusal to give access to such facility. Some commentators have explained this reluctance with the fact that if a court were to hold that an input protected through IPRs is essential to compete in a certain market, then they ought to grant access to such input to every competitor in a fair and non-discriminatory way. As a general note, however, it should be pointed out that the application of the Essential Facility Doctrine (even when applied to tangible facilities) has not encountered great sympathy.

110. Image Technical Serv. Inc., 125 F. 3d at 1219. Kodak refused to sell repair parts to ISOs but had also forced independent manufacturers and equipment owners not to sell such parts to ISOs. Kodak defended itself by arguing that since it did not hold monopoly on the primary market for photocopying equipment, it was economically unfeasible for her to leverage such power in a downstream market. Kodak alleged, indeed, that she could not charge monopoly prices in the service market because this would have resulted in a loss of customers in the first market. The case went up to the Supreme Court that dismantled such thesis holding, inter alia, that information is difficult to acquire at the time of purchase and that switching costs will lock-in old customers preventing them from changing copying equipment because of the increase in repair service price. See Eastman Kodak Co., 504 U.S. at 483-86.


The possibility of configuring intellectual property rights as an essential facility has been specifically addressed in the cases Intergraph Corporation v. Intel Corp\textsuperscript{114} and Aldridge v. Microsoft Corp.\textsuperscript{115} Although in both cases the courts did not rule out explicitly the possibility that IPRs could amount to an essential facility, none of the complaint under section 2 of the Sherman Act has been upheld.

In the first case,\textsuperscript{116} the Court dismissed the essential facility claim and the refusal to deal claim on antitrust grounds, holding that because Intergraph and Intel were not competing in the same market an essential facility claim could not be claimed.\textsuperscript{117} The Court explained that "unrelated harm to an individual competitor or consumer is not sufficient" to integrate a violation of Section 2 of the Sherman Act, which is aimed at preventing conduct that harms competition and not competitors.

The Aldridge v. Microsoft case presented a very thorny issue. Aldridge was the producer of a utility program called Cache86 whose func-

\textsuperscript{113} The most relevant critiques come from Philip Areeda, Essential Facility: an Epithet in Need of Limiting Principles, 58 Antitrust L.J. 841 (1990); but see, with specific regard to software: David McGowan, Regulating Competition in the Information Age: Computer Software as an Essential Facility Under the Sherman Act, 18 Hastings Comm. & Ent. L.J. 771 (1995-1996), arguing that the doctrine "[...]

\textsuperscript{114} Intergraph Corp. v. Intel Corp., 195 F.3d 1346 (Fed. Cir. 1999).


\textsuperscript{116} Intergraph was an original equipment manufacturer (OEM) whose main activity involved the making and selling of computer workstations for which it used to rely on a microprocessor based on the so called "Clipper technology." Intergraph owned the technology and the related patents. In 1993, Intergraph switched to Intel microprocessor and one year later it became an Intel "strategic customer" and benefited from various advantages like proprietary information and technological know-how under non-disclosure agreements. Two years later, Intergraph started suing several Intel OEM customers for violating its rights on the "Clipper technology." Intel tried to negotiate a license for the technology at issue, but Intergraph showed strong reluctance. The more the attempt failed, the more the commercial relation between the two companies deteriorated to the point that Intel denied Intergraph all the benefits it had once provided. In 1997, Intergraph brought a suit against Intel for infringement of the Clipper patents. As the lawsuit went on, Intergraph added the antitrust violations. Intergraph Corp., 195 F.3d at 1357.

\textsuperscript{117} In MCI Communications Corp. v. American Tel. And Tel. Co., 708 F.2d 1081, 1132, (7th Cir. 1983), and Alaska Airlines Inc. v. United Airlines Inc., 948 F.2d 536, 544-45, (9th Cir. 1991), the Court listed the following requirements as necessary for an essential facility claim: "1) control of the essential facility by a monopolist; 2) a competitor's inability practically or reasonably to duplicate the essential facility; 3) the denial of the use of the facility to a competitor; 4) the feasibility of providing the facility;" and (5) the elimination of competition in the downstream market.

However, the Court explained that there could be no case for essential facility because such doctrine assumes that "there must be a market in which plaintiff and defendant compete, such that a monopolist extends its monopoly to the downstream market by refusing access to the facility it controls." Intergraph Corp., 195 F.3d at 1357.
tion was to accelerate the disk-writing functions of MS-DOS. In releasing the new operating system Windows 95, Microsoft cured the fallacies of MS-DOS—which made necessary the installation of the Cache86 on the computer – by creating its own utility program specifically tailored to interoperate with Windows 95. When the new Microsoft operating system was launched on the market, due to lack of compatibility between Cache86 and Windows95, Aldridge lost several customers. The Court was then faced with the issue of whether, and to what extent, a company that improves its own product line ought to be compelled to share the fruit of its labor with third parties and pre-disclose such information so that the latter would be able to keep producing their complementary products.

The case was easily settled because according to both parties, Microsoft – at that time – was not dominant in the market of operating systems, therefore access to a Microsoft specific operating system could not be held essential to compete in the downstream related market of applicative programs. However, the Court decided to go further with the analysis and explained that even a finding that Microsoft had monopoly power would have not been enough to change the outcome of the case because the disk-cache program represented a market that used to rely on an imperfection of MS-DOS and punishing Microsoft for improving its own product would have inhibited, rather than promoted, competition in that market.

The boundaries between innovation and predation are quite difficult to draw. Clearly the Court here adopted a rather protective approach

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118. *Aldridge*, 995 F. Supp. at 753 (noting that Aldridge did not present proof that the entire market for disk cache programs has disappeared because the relevant market is not the “disk cache programs operating within the domain of the Windows 95 operating system.”).

119. *Id.* at 754 (explaining that “even were the court to assume for purposes of argument that Windows95 could be an essential facility for application software, such as a word processing program, it is not essential to a market whose sole purpose is to improve on imperfections in the facility at issue.”).

120. *Id.* at 755 (stating “A manufacturer is under no obligation to pre-disclose or disclose its knowledge about its products so that competition may arise in the related peripheral hardware, software, and repair service markets.”). The Court compares the factual circumstances of the case to a hypothetical telephone company who controls the telephone network and the separate but related market of copper wire. The telephone monopolist, says the Court, should not be held responsible if, following its decision to switching from copper wire to faster fiber-optic lines, manufacturers of copper wire are driven out of the market. *Aldridge*, 995 F. Supp. at 754. However, these are not the facts at issue here because Microsoft has cured the imperfection within its operating system by releasing itself the SMARTDRV caches that uses the same technology used by Cache86. *Id.* at 738. Therefore, Microsoft has become a direct competitor to Aldridge. In this case, innovation rationales do not imply the elimination of a market segment but simply Microsoft wanted to become the sole provider of caches compatible with its operating system.
towards Microsoft and was worried about the likely consequences that might have derived for information technologies markets had it decided that Windows 95 amounted to an essential facility. The words of the decisions however seem too harsh. The decision seems to discriminate between programmers of common application programs and programmers of software aimed at ameliorating operating system functionalities, as if the latter had a lesser right to compete. Conversely, the Court chose not to put any emphasis on the circumstance that Microsoft, exactly as it later happened in the European Microsoft case, used to supply Aldridge with information and beta-versions of the new versions of its operating systems and only when it decided to enter the disk-cache program market it stopped supplying Aldridge with the test-version of the new Windows 95.

Several commentators have pointed out that in both cases analyzed above, plaintiffs were concerned about maintaining the level of privileged access they had previously, and not a level of access that could be provided to everyone. However, both Intergraph and Aldridge were not able to succeed neither under a refusal to deal claim. The Court in Aldridge explicitly questioned the possibility of extending the doctrine in cases not involving a natural monopoly or a physical infrastructure built with public funds which—it alleged—where the only circumstances where such doctrine had been applied.

Recently, the Supreme Court has brought this sentiment of skepticism towards the doctrine one step further by claiming that it has never officially recognized the validity of such jurisprudential creation by lower courts, nor does it intend to acknowledge the importance of the doctrine.

121. In the European Microsoft case, Sun questioned Microsoft conduct precisely because Microsoft decided to stop disclosing interoperability information necessary for group server operating system with PC client operating system when it decided to enter that separate market.

122. Indeed, the discontinuation of a previous business practice has always been evaluated by American Courts as proof of anticompetitive intent. It is worth recalling that the essential facility claim is construed in American antitrust law as an attempt to monopolize where specific intent has to be shown in order for the conduct to reach the level of "dangerous probability of success." Aspen Skiing Co., 472 U.S. 585.

123. It has been argued that the continuation of such access was "essential" for plaintiffs' business but was not considerable as an essential facility doctrine under antitrust law. Hovenkamp, Lemley, Janis, Unilateral Refusal to License in the U.S., supra n. 112, at 22.

124. In fact, both cases had been framed as refusal to deal and under the essential facility doctrine.

125. Aldridge, 995 F. Supp. at 755. As we will see later on, this criticism has been shared also by some European scholars: John Temple Lang, Compulsory Licensing of Intellectual Property in European Community Antitrust Law, paper delivered for the Department of Justice/Federal Trade Commission Hearings, Washington DC, http://www.ftc.gov/opp/intellect/020522langdoc.pdf (accessed Apr. 23, 2007); Korah, supra n. 12, at 801.
in the future.\textsuperscript{126}

2. \textbf{INTERPLAY BETWEEN IPRs AND ANTITRUST IN THE EUROPEAN PERSPECTIVE}

At the end of the eighties, the European Court of Justice was first confronted with the complex question of whether a refusal to license an IPR, by its legitimate owner, could amount \textit{per se} to an abuse of dominant position pursuant to Art. 82 – then 86 – of the EC Treaty.\textsuperscript{127} The case involved a refusal to license design rights for car wings by the well known automobile manufacturer Volvo to Mr. Veng, who allegedly used to manufacture and import such spare parts, without Volvo's authorization. The Court avoided directly answering the question raised by the High Court of the United Kingdom,\textsuperscript{128} but clarified that a refusal to grant a license by an IPR owner could not amount to an abuse of dominant position since the right to exclude third parties from the “manufacturing and selling or importing products incorporating the design constitute the very subject matter of [Volvo’s] exclusive right.”\textsuperscript{129} Accordingly, the Court did not condemn Volvo’s conduct. Nevertheless, the ECJ took the chance to further explain that different circumstances from the ones at issues might have justified the finding of an abuse.\textsuperscript{130} Specifically, the Court listed the disruption of previous levels of supply.\textsuperscript{131}


\textsuperscript{127} Volvo v. Erik Veng, case 238/87, [1988], ECR 6211; similarly see Consorzio italiano della componentistica di ricambio per autoveicoli and Maxicar v. Régie nationale des usines Renault, case 53/87, [1988], ECR 6039.

\textsuperscript{128} Id. The first question addressed by the British Court asked whether the mere ownership of an exclusive right over a registered design, conferring the exclusive entitlement to make and import the product at issue, was \textit{per se} sufficient to ingenerate a dominant position over such products.

\textsuperscript{129} Id. The ECJ, at paragraph 9, explained that a refusal to license an IPR “may be prohibited by art. 82 if it involves, on the part of an undertaking holding a dominant position, certain abusive conduct such as the arbitrary refusal to supply spare parts to independent repairers, the fixing of prices for spare parts at an unfair level or a decision no longer to produce spare parts for a particular model even if though many cars of that model are still in circulation.”

\textsuperscript{130} Indeed, disruption of previous levels of supply has always been condemned in the EU. Cf the leading case United Brands v. Commission, where the ECJ stated that “an undertaking in a dominant position for the purpose of marketing a product [...] cannot stop supplying a long-standing customer who abides by regular commercial practice, if the orders placed by that customer are in no way out of the ordinary. Such conduct is inconsistent with the objectives laid down in article 3(f) of the Treaty, which are set out in detail in Article 86, especially in paragraphs (b) and (c), since the refusal to sell would limit markets to the prejudice of consumers and would amount to discrimination which might in the end eliminate a trading party from the relevant market.” United Brands Company and United
2.1. **Magill and the exceptional circumstances test**

A few months later, the Commission had the chance to improve upon the non-exclusive list provided for in *Volvo* in the *Magill* decision, which was later confirmed on appeal by the ECJ. The facts in *Magill* were peculiar at best. The case involved the refusal to license copyright on TV listings by three television broadcasters to a small company which wanted to produce and market a comprehensive TV guide containing information regarding the three broadcasters' programming. Because each TV company marketed its own TV guide with only its programming, a comprehensive TV guide was missing and the Court reasoned that the copyright had been strategically employed to prevent the marketing of a product for which there was sensible consumer demand.

According to what has come to be known as the *Magill* test, the legitimate owner of an IPR who finds himself in a dominant position on the market is said to abuse such position if: a) he is found to be the exclusive holder of a raw material or input essential to run a certain business on the market and such input is not duplicable; b) his behaviors prevents the coming into the market of a product for which there is potential consumer demand; c) the refusal to license has no legitimate business justification; d) his behaviors had deliberately pursued the goal of reserving to himself a downstream market by foreclosing competition to other potential rivals.\\(^{132}\)

It is interesting to note that although it is common to address *Magill* as an essential facility case, neither the Commission nor the Courts mentioned the Essential Facility Doctrine. The Court underlined many times that RTE, BBC, and ITP detained a dominant position on a scarce resource – i.e. TV listing – which was fundamental in order to compete on the derivative market – i.e. weekly guides,\\(^{133}\) but it did not mention the Essential Facility Doctrine. The reason for this may be found in the fact that the test shaped by the Courts in *Magill* is kind of a hybrid test which draws in part from general refusal to deal cases and in part from essential facility cases. Indeed, the Commission has surely borrowed the essentiality element and requirement that the raw material be not duplicable from the essential facility cases,\\(^{134}\) while it has taken the element

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\\(^{133}\) *RTE, IPT vs. Commission*, case C-241/91, C-242/91, [1995], ECR 1141, para. 47.
\\(^{134}\) See the definition of essential facility and abuse under the Essential Facility Doctrine given in the case *Sea Containers v. Stena Sealink* — Interim measure, OJ 1994 L1 5/8, at recital 66: "An undertaking which occupies a dominant position in the provision of an essential facility and itself uses that facility (i.e. a facility or infrastructure, without access to which competitors cannot provide services to their customers), and which refuses other companies access to that facility without objective justification or grants access to competi-
INTELLECTUAL PROPERTY RIGHTS

of reserving a derivative market from the refusal to deal cases.135

The significance of the Magill case lies in that for the first time the ECJ upheld an issuance of compulsory licensing of intellectual property right in a competition law case. The importance of such a case, however, has been downplayed by the widespread belief that the European bodies were deeply influenced in their decision by the trivial nature of the copyright at issue.136

In any case, the Court of First Instance’s judgment on appeal in the Magill case has provided the most insightful analysis of the relation between intellectual property right and competition law. The CFI has clearly explained that IPRs are to be protected as long as they stay within the realm of the faculties granted by the law and not when their use goes beyond the scope of protection.137 When it emerges from the
tors only on terms less favourable than those which it gives its own services, infringes Article 82 if the other conditions of Article 82 are met.”

135. The EU case law regarding refusal to deal is conspicuous. The definition given in the leading case Commercial Solvens v. Commission, [1974] ECR 223 at para. 25: “an undertaking which has a dominant position in the market in raw materials and which, with the object of reserving such raw material for manufacturing its own derivatives, refuses to supply a customer, which is itself a manufacturer of these derivatives, and therefore risks eliminating all competition on the part of this customer, is abusing its dominant position within the meaning of Article 82.”

136. This has been confirmed in Advocate General Jacobs’ conclusion in the Oscar Bronner case, where the Advocate General justified the outcome of Magill and the compulsory licensing remedy issued therein with the “special circumstances” of the case and, in particular, with the peculiar nature of the copyright which, at that time, only existed in Ireland. Oscar Bronner GmbH & Co. v. Mediaprint, case C-7/97, [1998], ECR 1-7791, para. 63. Nonetheless, Jacobs went on explaining that “dominant undertaking’s monopoly over a product [. . .] may in certain cases lead to a permanent exclusion of competition in a related market.” In such cases, the only remedy to allow competition to develop is to compel the dominant firm to grant access to the facility. Id. para. 64.

137. Already in Deutsche Grammophon, paragraph 11 of the final judgement, the Court of Justice tried to limit the exclusive protection afforded to IPR owners only to “... the purpose of safeguarding rights which constitute the specific subject-matter of such property.” Deutsche Grammophon / Metro SB, case 78/70 [1971] ECR 487, para. 11. In Magill, the CFI has moved one step ahead in that it explained that: “[t]he relationship between national intellectual property rights and the general rules of Community law is governed expressly by Article 36 of the Treaty, which provides for the possibility of derogating from the rules relating to the free movement of goods on grounds of the protection of industrial or commercial property. However, that derogation is explicitly made subject to certain reservations. The protection of intellectual property rights conferred by national law is recognized, in Community law, only subject to the conditions set out in the second sentence of Article 36. Under that provision, restrictions on free movement arising out of the protection of intellectual property “shall not . . . constitute a means of arbitrary discrimination or a disguised restriction on trade between Member States.” Article 36 thus emphasizes that the reconciliation between the requirements of the free movement of goods and the respect which intellectual property rights are entitled must be achieved in such a way as to protect the legitimate exercise of such rights, which alone is justified within the meaning of that article, and to preclude any improper exercise thereof likely to create artificial partitions
circumstances of the case that the right is exercised in such a way to pursue an aim manifestly contrary to the objectives of Article 82, the CFI explained that the copyright is no longer exercised in a manner which corresponds to its essential function. Consequently, when the right is no longer suited “to protect the moral rights in the work and ensure a reward for the creative effort,” the Court established that Community principles – namely the above mentioned freedom of competition and free movement of goods – prevail over any national intellectual property provision. Unfortunately such a clear interpretation of the relationship between competition law and intellectual property rights has not attracted any attention by commentators nor has it been further improved in later cases.

2.2. Necessity of a ‘new product/market’ rule?

The so called exceptional circumstances set forth in Magill has been further explored, after several years, in the IMS case. IMS was the leading supplier of market reports concerning sales of pharmaceutical products in Germany. IMS allegedly held a copyright over a modular structure (so called 1860 brick structure) it used to gather pharmaceutical data and then fill its market report, and it strategically employed the asserted right to exclude its new competitor, NDC Health, from the market. After a careful economic analysis of the German market, the Commission concluded that IMS’ brick structure amounted to a de facto within the market or pervert the rules governing competition within the Community. The exercise of intellectual property rights conferred by national legislation must consequently be restricted as far as is necessary for that reconciliation (see the judgment of 14 September 1982 in Case 144/81, Keurkoop v Nancy Kean Gifts, paragraph 24).\[138\] Independent Television Publications Ltd v Commission of the European Communities, Case T-76/89, [1991] II-575, para. 52.

\[138\] Id., para. 56.
\[139\] NDC Health vs. IMS Health, [2001] Case COMP D3/38.044.

140. After several years of work, together with the companies of the field, IMS developed the “1,860 brick structure,” a modular system it used to collect data regarding mainly the sales of pharmaceutical products in Germany. The data gathered through this partitioning scheme constitute the raw materials IMS used to release market reports that it sold back to pharmaceutical companies. When NDC Health, IMS’ largest competitor, entered the German market to provide a similar service, IMS sued NDC for copyright infringement before the German Court. The Landesgericht Frankfurt am Main (German District Court) granted an interim measure inhibiting PI (Pharma Intranet Information AG) – the company NDC had bought – from using the 1,860, 2,847 or any structure that derived from the 1,860 structure on the basis that they constituted a personal intellectual creation belonging to IMS. However, the Frankfurt Court filed, at the same time, a request for a preliminary ruling asking the ECJ to clarify its position with regard to the relation between an abuse of dominant position according to Art. 82 EC Treaty and the refusal to license access to a database covered by copyright protection. At the same time, NDC Health lodged a complaint to the European Commission alleging IMS’ breach of Art. 82 through an unjustified refusal to grant access over an intangible asset deemed essential to compete on the market.
standard essential for operating in that relevant market. The conclusion was based on the fact that consumers (i.e. pharmaceutical firms) were practically locked-in to IMS’ product and would not switch to any other supplier. This is because the very same pharmaceutical firms had been significantly involved in the development of the structure which now represented the product perfectly tailored to satisfy their needs. Moreover, the Commission observed that even in absence of lock-in effects, the structure was not duplicable because of strong legal and administrative constraints.

The IMS case, however, differed sensibly from Magill because IMS’ refusal to license was not directed at preventing a new product from entering the market; instead, NDC Health simply wanted to compete in the provision of market reports, a product already offered by IMS. Accordingly, the identification of two separate markets was very controversial. In order to overcome such hurdle, the Commission reasoned that the Magill holding did not call for a cumulative application of the so called “exceptional circumstances” and it convincingly explained that in IMS other significant circumstances made the overall scenario exceptional: namely, the Commission referred to the explosive mixture of legal and economic barriers which impeded second-comers to enter the market.

141. The usefulness of sales data lies in pharmaceutical companies’ utilizing it to compare their sales percentage with competitors and to evaluate the performance of sales representatives along segments of the territory. Since all firms use the 1860 brick structure, the value of the structure itself has notably increased – i.e. this is a typical case of network effect where the value of a certain good increases proportionally to the number of users. If one undertaking would be willing to change their provider of regional sales data, it would then incur the costs of reverting the data into the format of the 1860 brick structure in order to make appropriate comparison with its old data and with old and present data of its competitors. Both comparability and the high switching costs would deter the firm from changing structure (see paras 93-106). Likewise, the evaluation of those sales representatives', whose sale territories are allocated with regard to the segmentation of the 1860 brick structure – each representative performs its activity within a certain number of bricks – and often are indicated in the working contracts: a change in sales territory pursuant to a different structure would cause a loss in relationship among sales representatives and doctors as well as modification of the working contracts (see paras 107-123).

142. Indeed, according to the Commission analysis adopting a partitioning of territories according to postal codes represented the best feasible way to segment the German territory. Recall also that the small number of segments required by the brick structure not only was needed to keep the structure stable (technical constraint), but was a compulsory requirement according to the German data protection law (which requires at least three pharmacies to be grouped in a brick). see Id., para 127 and ff.


144. In giving such interpretation, the Commission brought the reasoning of the Ladbroke case a step further. In the Ladbroke the Court of First Instance explained that: “the refusal to supply the applicant could not fall within the prohibition laid down by Article 86 unless it concerned a product or service which was either essential for the exercise of the
The requirement that the exclusionary conduct be directed at reserving to the dominant company a derivative market relating to a new product for which there is substantial consumers’ demand—hence at leveraging market power from an upstream market to a downstream one—has been central in the European debate concerning the interplay between antitrust and intellectual property laws. Some authors have strongly argued in favor of leveraging to be proved. In particular, some of them have motivated their opinion explaining that the element of the prevention of a new product for which there is sensible consumer demand serves the purpose of proving consumer harm as result of the conduct. Conversely, other commentators have shown some skepticism and have supported the Commission interpretation of the alter nativeness of the exceptional circumstances, claiming that even in Magill the finding of two separate markets amounted to an unnecessary and improbable construction of the circumstances of the case.

2.3. Leveraging of market power in IMS Health and in the Microsoft case

Unfortunately both the CFI and later the ECJ—in response to activity in question, in that there was no real or potential substitute, or was a new product whose introduction might be prevented, despite specific, constant and regular potential demand on the part of consumers.” (italics added, Tiercé Ladbroke SA v. Commission, Case T-504/93, [1995], ECR II-2537, para. 131). In the IMS case, the Commission brought Ladbroke reasoning it a step further by implicitly extending the alternative of the requirements to the element of the derivative market.


146. Id.


149. After less than a month, IMS appealed to the Court of First Instance which reversed the decision inaudita altera parte. The CFI alleged that this case differed substantially from Magill and claimed that the Commission misconstrued the scope of Magill in assessing that the applicant’s behavior amounted to a prima facie case of an abuse of dominant position. IMS Health Inc. v. European Commission, proceeding T-184/01 R 1, August 2001, para. 24. On a procedural ground, the Court further explained that the Commission order extended beyond the traditional powers afforded to it by the Camera Care jurisprudence in that it did not merely preserve the situation quo ante but it legitimized a conduct which was previously illegitimate. Indeed, according to IMS and CFI allegations, the interim measure had the effect of allowing IMS competitors to legitimately enter and stay on the market, while they could have done this earlier only through an infringement of copyright. IMS Health Inc. vs. European Commission, proceeding T-184/01 R 1, August 2001, para. 25; see also Korah, supra n. 12, at 828.
the preliminary reference of the Landgericht of Frankfurt am Main\textsuperscript{150}—cut back the Commission interpretation of the exceptional circumstances in \textit{Magill} and restated the importance that the exceptional circumstances be all cumulatively met and that only those behaviors that impede, by means of the refusal to license, the development of 'derivative' products/markets, be punished.\textsuperscript{151}

Nonetheless, the decision of the European Supreme Court is important in several respects. In particular, it is worth mentioning that the ECJ recognized the role of network and lock-in effects as economic factors rendering the data in question essential, together with the intellectual property right.\textsuperscript{152} Secondly, the ECJ has made a tentative step towards the clarification of the double-market requirement issue explaining that two markets can be found even when "two different stages of production may be identified and [...] they are interconnected, inasmuch as the upstream product is indispensable for the supply of the downstream product."\textsuperscript{153} The actual implications of this last sentence are not easy to


\textsuperscript{151} The ECJ explained that in order for an abuse to exist it is necessary, \textit{inter alia}, that "the undertaking which requested the license does not intend to limit itself essentially to duplicating the goods or services already offered on the secondary market by the owner of the copyright, but intends to produce new goods or services not offered by the copyright owner and for which there is a potential consumer demand" (emphasis added). See \textit{IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG, Case C-418/01 [2004] ECR I-5039, para. 49.}

\textsuperscript{152} Although the ECJ did not directly mention the terms network effect and switching costs, the Court held that: "[f]or the purposes of examining whether the refusal by an undertaking in a dominant position to grant a licence for a brick structure protected by an intellectual property right which it owns is abusive, the degree of participation by users in the development of that structure and the outlay, particularly in terms of cost, on the part of potential users in order to purchase studies on regional sales of pharmaceutical products presented on the basis of an alternative structure are factors which must be taken into consideration in order to determine whether the protected structure is indispensable to the marketing of studies of that kind". See \textit{IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG, Case C-418/01 [2004] ECR I-5039, para. 53, point 1.}

\textsuperscript{153} \textit{Id.} para. 45.
grasp. At a first glance, one might think that the ECJ intended somehow to amend the mistakes made in Magill when it confirmed that two distinct markets were present, indicating an upstream market for TV listings and a downstream market for TV guides. In stating that the upstream market can even be represented by a raw input employed in an upper segment of the production scale, the Court seems willing to ease compliance with the double markets requirement. However, if one reads this sentence together with the rest of the judgment it seems that it remains quite difficult to meet the terms of the overall test.

The question of the "new product/market" requirement came again with the European Microsoft case where Commissioner Monti ordered Microsoft to disclose the specifications of the interfaces (but not the source code) of the Windows workgroup server operating system to competitors (especially Sun Microsystems). This was ordered to enable competitors to achieve full interoperability of their server operating systems with Microsoft's, and in particular, to ensure them the same degree of compatibility that exists between the Microsoft's servers and the Windows operating systems for personal computers.

Once again the Commission framed the case as a leveraging case where Microsoft had attempted to shift its monopoly power from the upstream market (namely: client operating systems) to the downstream market of workgroup server operating systems. In fact, the Commission clearly explained that while it was true that Sun's request involved both client- to-server and server-to-server interoperability, the latter interconnections and interactions were functionally related to the client

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154. Indeed, in Magill there was not an actual separate market for TV listings as raw materials. As it has been pointed out, the three broadcasting companies used to grant licenses for free on their daily listings. Frank Fine, NDC/IMS: a Logical Application of Essential Facilities Doctrine, supra n. 148, at 459.

155. In particular, one should read it together with the last sentence of para. 49 [supra footnote 151] where the ECJ restates that the company asking for a license must be willing to "... produce new goods or services not offered by the copyright owner and for which there is a potential consumer demand."


157. Id. paras 177-178. According to the Commission, the functioning of a (Windows) work group network "relies on an architecture of client-to-server and server-to-server interconnections and interactions, which ensures a transparent access to the core work group server services [...]", where "The common ability to be part of that architecture is an element of compatibility between Windows client PCs and Windows work group servers". See the Commission Decision, dated 24.03.2004, relating to a proceeding under article 82 of the EC Treaty, case COMP/C-3/37.792, Microsoft, para 182. Pursuant to the Commission's analysis, Microsoft inserted specific code portions of the PC client operating system into work group server operating systems (Windows 2000) in such a way as to make the interoperability between client and server faster and more effective.
However, it is interesting pointing out that, unlike in the IMS case, the Commission eventually found that a refusal to disclose information essential to allow competition on the same market amounted to an abuse of dominant position, even if the conduct was not impeding the release of a new product.

III. INTELLECTUAL PROPERTY RIGHTS AND MARKET POWER

The widespread reluctance to dismantle IP “monopolies” through antitrust intervention is often explained by a common misconception that antitrust intrusion would interfere with the precise legal and economic rationales that ground intellectual property laws. Indeed, an order compelling a certain company, for example, to license a certain proprietary technology would directly interfere with the exclusive faculties which are the core of IPRs. As the argument goes, were companies to know that IP protection is easy to circumvent and curtail, they would not have adequate incentives to invest in the first place, to the damage of society at large.

Such a view is highly misleading because it runs contrary to the basic assumptions of intellectual property laws which were designed to create exceptional situations—lands of monopolies in a sea of competition—that prized the few creative minds to drive the many to the next level of innovation-based competition.

1. INTELLECTUAL PROPERTY RIGHTS AS ‘MICRO-MONOPOLIES’

As well known, intellectual property rights are commonly defined as exclusive rights in the sense that they vest in only some people, usually creators or inventors, with the exclusive right to dispose of their intellectual works. Such a definition, however, is often misunderstood and IPRs are intended as a constitutional guarantee towards the recoupment of the expenses incurred in the inventive/creative activity. Quite on the contrary, intellectual property rights come with intrinsic limitations. First of all, their duration is limited. Secondly, the faculties granted to inventors/creators bear limitations and they were never meant to confer absolute control over their intangible creations. Accordingly, several tradeoffs exist within intellectual property paradigms, which make the protection conditional on the fact that the intangible knowledge comes immediately to the enrichment of society at large. To mention just a couple of examples, the patentee’s exclusive right has never granted him

158. See id. para. 567. The Commission explained that: “the link back to the client PC operating system market implies that the competitive value of the information refused derives from Microsoft’s market strength in the client PC operating system market. Insofar as Microsoft’s refusal is considered abusive, the abuse derives from Microsoft’s dominance on the client PC operating system market.”
the right to impede the creation of competing products aimed at resolving the same technical problem.\textsuperscript{159} The moment patent protection is issued and the technical teaching contained therein spreads to the world, the patentee cannot impede others to try to supply the same utility provided by his invention through a different and independent process.\textsuperscript{160} Similarly, copyright law lies on the idea-expression dichotomy principle, whereby protection is only confined to the specific forms of expression and not the ideas embedded therein.\textsuperscript{161} As for patent law, even under copyright law the specific embedment of the author's creativity will enter the public domain only after legal protection expires. Nonetheless, the ideas expressed therein immediately come to enrich society at large.

Because commentators, generally economists, use to refer to intellectual property rights as \textit{monopolies}, there is a widespread misleading belief that patents and copyrights entitle the author to obtain a monopoly in the economic sense.\textsuperscript{162} This is very far from reality, for both IP paradigms. Patents and copyrights only afford authors a set of exclusive rights which are strictly limited to the fruit of their intellectual labor. As a general principle, the exclusive power to economically dispose of a certain product vests the author with a modicum of market power which will be inversely proportioned to the number of existing substitutes for such product. The smaller the number of competing products, the greater the power the owner will derive from the exclusive right.

In the case of copyright law, usually many substitute products will exist (think about the market for books, music, movies, software), therefore it is very unlikely that the IPR alone will confer substantial market power. The case of patents could be a little different. In the case of a blockbuster drug, for example, where no other medicines exist to cure a certain disease, the patent will vest the IP owner with a good degree of market power, maybe even with monopoly power (intended, as Hovenkamp explained, as substantial market power). This even more


\textsuperscript{160} Ghidini, \textit{supra} n. 2, at 25-26.

\textsuperscript{161} This principle has been affirmed in the famous \textit{Baker v. Selden}, 101 U.S. 99 (1879), and it is also codified at international level by the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), signed by the Members of GATT, April 15, 1994 at Marrakesh, Morocco, art. 9.2

\textsuperscript{162} Posner explains that the use of the word 'monopoly' with regard to IPRs "though common is unfortunate, because it confuses an exclusive right with an economic monopoly. [. . .] A patent or a copyright does carve out an area of exclusive rights, but whether the right holder can use his right to obtain a monopoly return depends on whether there are good substitutes for his product [. . .]". See Richard A. Posner, \textit{Transaction Costs and Antitrust Concerns in the Licensing of Intellectual Property}, Les Nouvelles, (Mar. 1, 2005).
apparent where patents are improperly granted too far upstream.\textsuperscript{163} However, it is nowhere guaranteed that such power will last along the entire twenty years of protection granted by the patent. A better drug, or gene-therapy, might be found a little later and the more the new product is effective, the more it will steel consumers away from the first drug. In other industrial sectors, like engineering or computing, inventions often take the form of improvement products or ameliorated processes and methods of productions; therefore, they always come about in a market that is already there and has some players. The same goes for a great part of the pharmaceutical sector where companies invest in new molecules and drugs to find better treatments for diseases which have already some sort of cure.

In conclusion, while the word “monopoly” does not seem appropriate for IPRs, we could affirm that intellectual property laws give a “micro-monopoly” over a specific technical solution for a certain problem, or over a certain form of expression. In systematic terms, an IPRs’ function is to protect inventors and authors from free riding\textsuperscript{164} against competition by imitation but not competition by substitution\textsuperscript{165}.

As hinted, the degree of market power associated with these micro-monopolies will often be quite low in normal market circumstances. Indeed, a likely attempt to increase the price of a product (be it patented or copyrighted) will often be unprofitable because consumers will turn to competing products. The price increase will be profitable only when no substitutes are present in the relevant market or where other specific circumstances exist that favour distortion of competitive market structures.

2. IPRs and increasing returns to scale

It is interesting to note that for the great majority, exclusionary conduct concerning an intellectual property right involves an improper attempt to use the protection beyond what has been granted by the statutory norms. This may happen because ip-owners try to stretch the protection in a way to cover mere ideas, whereas both copyright and pat-
ent law limit the exclusive right to the form of expression and to the technical embedment of the inventive concept; hence, they try to strategically employ their exclusive right in an attempt of monopolizing or preserving dominance in a certain market (a macro-monopoly covering the whole sector rather than the "micro-monopoly" covering only the fruit of their intellectual labor). This often occurs when the intellectual property right covers a certain raw material or input indispensable to compete in a certain market. Alternatively, it may also happen that ip owners employ the intellectual (micro)monopoly in a way to obtain market power in a separate but connected market segment. These strategic behaviours are quite common. Every undertaking tries to maximize its profits and employs its resources and strategic advantages in the best possible way. Nor does antitrust law condemn such behaviours tout court. Indeed, an exclusionary conduct operating through IP exclusive faculties is likely to attract antitrust scrutiny only insofar as the company holds monopoly power or there is a dangerous probability that it will acquire it as result of the conduct; or, in European antitrust law, if the company is first found to be dominant on a certain market.

It is important to stress that, as outlined above, only in rare circumstances an intellectual property right alone is capable of granting monopoly power. On the contrary, it may often occur that a company succeeds in strengthening its position in a certain market thanks to several legal and economic factors it is able to turn to its own advantage. In this latter scenario, IPRs can well be one of these factors that contribute, together with others, to the attainment of a substantial degree of market power, as well as a means to preserve and further strengthen such market power, once achieved.

166. See supra para II.1.1. This happened, for example, in the American refusal to deal cases analyzed above where the intellectual property right was improperly used to impede competition in the market of Data General's computer repairs.

167. See supra paras II.2.1. and II.2.3. This happened in the European Magill case where broadcasting companies implemented their presumed copyright on tv listing to impede competition in the tv guide market. Similarly, in IMS Health, IMS strategically implemented its copyright on the selection criterion to collect pharmaceutical data to prevent NDC Health from entering the market reports' market, where IMS was the only player. See supra paras II.2.1. and II.2.3.

168. See supra para. II.2.3. This occurred in both American and European Microsoft litigations whereby the Redmont company tried to expand its power to adjacent market segments by tying an application program to the sale of its operating system and, in the European case, by refusing to share interoperability information necessary for rivals to compete in the market of operating system for work group servers (where Microsoft also competed).
2.1. Increasing returns to scale

Among the several factors an undertaking can successfully employ to achieve dominance, network effects, more technically defined as 'economies of scale in consumption' have attracted a good deal of attention.\textsuperscript{169} The term network effect describes the phenomenon whereby the utility a consumer obtains from a given good grows proportionally to the number of other consumers using the same product.\textsuperscript{170} This phenomenon acts as a powerful 'catalyst' of consumer demand, in the sense that the more consumers buy the product, the more other consumers will desire the same product. The classical example is given by mobile phone networks. Because users know that they will get special tariffs to call users of the same network, they will choose the network mostly used by their friends and acquaintances. The greater the number of friends using a certain network, the more profitable it will be for them to join that specific network. This self-perpetuating mechanism, that continues to attract more and more consumers to the network, is generally called a direct network effect. Conversely, it also happens that the increase in the number of buyers of a certain product causes a consequential boost in the launch of compatible products, as other companies will find it profitable to invest in a product capable of use in connection with the widespread networked good (indirect network effects). This, eventually, will make the basic product even more appealing to consumers.\textsuperscript{171}


\textsuperscript{170} This definition has been provided by Katz and Shapiro (Michael L. Katz & Carl Shapiro, \textit{Network Externalities, Competition, and Compatibility}, 75 Am. Econ. Rev. 424 (1985)). Some other scholars give an even broader definition, explaining network effects as the situation where the value consumers attach to a certain good increases whenever another person acquires a compatible good (Joseph Farrel & Garth Saloner, \textit{Standardization, Compatibility and Innovation}, 16 Rand J. Econ. 70 (1985.). Therefore, according to both definitions, the more consumers buy a certain product or subscribe to a certain service, the more the latter becomes valuable and appealing to other potential buyers.

\textsuperscript{171} Ghidini & Arezzo, \textit{supra} n. 164.
The phenomenon of network effects can prove to be particularly troublesome in markets with a tendency towards 'tipping' — generally high tech sectors. The concept of a tipping market can be explained as a form of *de facto* standardization. Most of the times, standards are imposed from the above, by governmental units or by so called standard setting organizations, directly composed by firms expert in the technology at issue. Other times, however, the standard is not set and it will emerge as result of consumer preferences.

The phenomenon of tipping regards a market situation where two or more competing technologies or products cannot live together because consumers do not want to bear the cost of getting them all for the same use. Indeed, tipping normally happens either for technologies used to communicate in a broad sense or where *compatibility* is essential. To go back to the telephone example, let's assume that each telephone network company would provide a service that *only* allows users to talk with members of the same network.172 If it were so, consumers should subscribe to two, three or maybe four telephone networks in order to be able to get hold of all the people they know. Because a subscription to many networks is expensive, consumers would than accurately choose only one or two networks. At the end of the day, consumers would all move to one single network which would naturally emerge as the standard.

Tipping and network effects are strictly related. When network effects do exist in a certain market, they will have a pivotal role in determining the emergence of a product as a *de facto* standard. Indeed, chances are that the sooner a first cluster of demand is created around a certain product, the more likely it will be that network effects will tilt the overall demand towards such a product.

However, as many commentators have argued, the emergence of a certain product as a market standard over a competing one, as a result of consumers' choice, does not guarantee that the selection mechanism will sort out the best technology, nor even the most efficient one.173 On the contrary, it all goes back to the moment the first cluster of demand is created and the reason why such cluster forms around one product instead of another. At this regard, it has been pointed out that such a choice might well be the result of a sapient evaluation and comparison made by consumers, but, similarly, it might be attributed to random factors, like a successful advertising campaign or the launch of the product at a negligible price.174 The launch of a certain product at a negligible

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172. In this example, I assume that they cannot talk with people joining other networks at all, not even at a very high price.
price can prove particularly profitable whenever the firm knows that consumers are going to be trapped by it.

2.2. Lock-in effects and switching costs

Consumers are usually said to be locked-in a certain technology or product(s) whenever they feel that changing towards an alternative good would not be profitable for them in terms of either price or time or both. Where the product at issue is particularly expensive, consumers will not be willing to incur a second expense for a similar item and will rather prefer to update it. Similarly, once users get acquainted with a product embedding a complex technology they will be reluctant to turn to a substitute product—although the latter can well be more advanced and superior in technology than the one they have—because they are reluctant to incur learning costs all over again. While lock-in effects and switching costs are often found together with network effects, it is important to point out that they can also exist separately from the latter. Moreover, it is also worth mentioning that while both set of effects often take place in high tech markets, this does not preclude their presence in a more traditional competitive scenario.

3. The American and European approaches compared

From what explained above, it emerges that while IPRs alone are rarely sufficient to vest companies with a degree of market power likely to negatively affect market dynamics, when such rights are coupled with different kinds of economics effects the scenario changes drastically. The mixture of network effects, lock-ins and IPRs can sensibly alter competition leading to inefficient results such as the persistence of the second best technology, to the detriment of technological process; hence,

175. This even in the case of complementary products whereby consumers need to purchase, on a regular basis, a second product to be used together with the first (ex. printer and cartridges) and he later realizes that another company offers a better deal for the two products together but he does not want to incur the first expense (for the equipment) again.

176. Think about lock-in effects present in the Kodak case and the network effects present in the IMS Health case. In both examples, the markets at issue were not information technology markets.

177. I have purposefully chosen this order to signal the different moments of the business strategy where each factor usually is taken into consideration. In fact, usually the company will first act strategically to exploit network effects to its own advantage and capture the widest possible installed base. Secondly, lock-in effects take place as consumers realize they are unwilling to change to a competing product. Third, intellectual property rights enter the stage as they are usually implemented to keep competitors off the market by suing them for counterfeiting.
with a damage for society at large.\textsuperscript{178}

3.1. \textit{The American approach}

The American case law seems to have embarked on a rather stark trend towards refusal to deal in general and refusal to license in particular. The presumption that preserving the faculties granted by IPRs always amounts to an objective business justification for an exclusionary conduct, as lastly shaped by the Court of Appeal for the Federal Circuit in Xerox, seems to leave little room for rebuttal;\textsuperscript{179} not to mention for a case by case consideration of other significant factors like network effects.

In the Data General case, the First Circuit recognized a tension between the antitrust benchmark of static allocative efficiency and the dynamic rationale underlying IPRs and it held that "[. . .] at least, in a particular market and for a particular period of time, the Copyright Act tolerates behavior that may harm both consumers and competitors".\textsuperscript{180} But the Court provided a very reassuring explanation for the reader by asserting that the two policies are complementary and both designed "ultimately to improve the welfare of consumers in our free market system".\textsuperscript{181}

The First Circuit holding in Data General and the Federal Circuit holding in Xerox are emblematic of the change in economic theory towards a Schumpeterian view of intellectual property rights as necessary strategic tools that help big concerns to protect themselves against the "perennial gales of creative destruction".\textsuperscript{182} Schumpeter explained that "long-range investing under rapidly changing conditions [. . .] is like shooting at a target that is not only indistinct but moving - and moving jerkily at that". Assuming that only big concerns were capable of fostering economic and technological process, he cherished the view that undertakings ought to be allowed to recur to whatever defensive tools and strategies to protect their own businesses. In the basket of defensive tools, Schumpeter listed patents and trade secrets as well as other defen-

\begin{footnotesize}
\textsuperscript{178.} Indeed think that often (not always) the best technology that did not succeed in the standard race will leave the market therefore that entire technology path will be abandoned.

\textsuperscript{179.} \textit{See supra} para II. 1.1. This especially if the presumption is read in conjunction with Section 271(d) of the Patent Act as last amended by Congress. 35 U.S. 271(d)(4).

\textsuperscript{180.} \textit{Data General Corp.}, 36 F.3d at 1184-1185. The Court added: "[T]he primary purpose of the antitrust laws—to preserve competition—can be frustrated, albeit temporarily, by a holder's exercise of the patent's inherent exclusionary power during its term.", \textit{cert. denied}, 455 U.S. 1016, 102 S.Ct. 1708, 72 L.Ed.2d 132 (1982). 36 F.3d 1185.

\textsuperscript{181.} \textit{Id.} at 1186.

\end{footnotesize}
sive behaviors such as aggressive pricing policies or additional investments to produce excess capacity for aggressive or defensive purposes (behaviors which were and currently are condemned as anticompetitive conduct).183

It is not clear, however, whether such a shift towards Schumpeterian views comes at the right moment in time, given the underlying economic factors and phenomena that characterize new economy markets. As I have pointed out, the risk is sensible that a convulsive combination of intellectual property rights and economic effects will vest the dominant undertaking with the power not just to monopolize the market but to shift such power from one market to another, to create strong barriers to entry and, in so doing, granting the perpetuation of such dominance for quite a long time. In other words, not only the dominant undertaking will be able to surf through the perennial gales of creative destruction, but it would do that right on the top of the wave. At the extreme, it will be the very same dominant company who will set the pace of new innovation waves where locked-in customers will be forced to abandon the old technology to purchase the new (always provided by the dominant company).

In line with Schumpeter's assumptions, the First Circuit concluded static efficiency must be sacrificed in order to grant IP-owners the chance to maximize their profits and get the ad hoc incentives that will lead them to innovate. However, it is important to point out that lacking any consideration for these other relevant factors, there is a considerable risk that consumers will suffer a twofold harm: in fact, not only they will face an immediate restriction of competition in the short run, but chances are that such restriction will be for nothing, because it is not sure at all that such restriction will foster creativity nor that it will ensure that the best and most advanced product be affirmed in the market.

3.2. The European approach

The American case law, throughout the presumption set in the Data General case and confirmed in Xerox, seems to grant IP-owners a sensible advantage in that their unilateral conduct will always be presumed legitimate, unless the plaintiff is successful in proving the contrary. Conversely, the European system seems to have endorsed a more balanced approach. The focus of European assessment has not been placed upon

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183. Id. at 88. This passage is highly expressive of Schumpeter's views: "In analyzing such business strategy ex visu of a given point of time, the investigating economist or government agent sees price policies that seem to him predatory and restrictions of output that seem to him synonymous with opportunities to produce. He does not see that restrictions of this type are, in the conditions of the perennial gale, incidents, often unavoidable incidents, of a long-run process of expansion which they protect rather than impede."
whether protection of an IP may or may not amount \textit{prima facie} to a legitimate business justification; rather, European bodies have decided to concentrate on the overall market scenario where intellectual property, together with other market circumstances, exert their effects. In such a framework, consideration is given to the fact that the dominant undertaking might have acted to protect and safeguard its own business. However, such considerations are not simply based on IPRs but on the overall situation the dominant firm has been facing. Moreover, consideration of a legitimate business justification only takes place later on in the test (the so called Magill test), whereas the first requirement concerns a dominant undertaking’s possession of a raw material or input which is \textit{essential} to run a certain business on the market and such input is not \textit{duplicable}.\footnote{See supra, para. II.2.1. This is the first prong of the above mentioned Magill test.}

As further proof of the European attention to the overall market situation where IP protection is asserted, it is important to notice that even the ECJ, responding to the preliminary ruling in the IMS case, stressed the way network and lock-in effects had played in the overall situation, together with IPRs.\footnote{IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG, Case C-418/01, [2004] ECR I-5039, para. 53, point 1.} Overall, EU antitrust enforcement is concerned about preserving a competitive structure of the market and when such scenario are at risk, they do not exclude the possibility to constrain the use of an IPR insofar as this would be the only feasible way to restore competition;\footnote{With regard to the circumstances of the IMS case, Drexl has pointed out that “although it may not be denied that in IMS Health the copyright is not the cause of the dominant position, the copyright remains essential so that IMS Health can effectively exploit its dominant position”. He concludes, therefore, that even if the exclusive right does not represent in itself the cause of the overall monopolistic situation, “the competition problem may be cured by restricting the exercise of the exclusive right”. See J. Drexl, \textit{IMS Health and Trinko.—Antitrust Placebo for Consumers Instead of Sound Economics in Refusal-to-Deal Cases}, 7 IIC International Rev. of Intellectual Property & Competition L. 788 (2004).} this, although they acknowledge that the possession of patent or copyright is not in itself the cause of the abuse.

Having said the above, it is important to stress that the test adopted by the European bodies is not easy to comply with. European bodies are well aware of the potential dangers stemming from a too lenient imposition of a duty to share upon dominant firms.\footnote{At this regard, it will be important to recall Advocate General Jacobs’ words in the Oscar Bronner case: “[. . .] The incentives for a dominant undertaking to invest in efficient facilities would be reduced if its competitors were, upon request, able to share the benefits [. . .].” \textit{Oscar Bronner GmbH & Co. vs. Mediaprint}, case C-7/97, [1998], ECR I-7791, para. 57.} This is exactly why the Commission has elaborated an \textit{ad hoc} test (the Magill test) with its own prongs which makes it different from both the mere essential facility test
and the mere refusal to deal assessment.\textsuperscript{188}

It may even be argued that the European test is too restrictive insofar as it is interpreted to require all the exceptional circumstances (listed in the Magill test) to be cumulatively met.\textsuperscript{189} In particular, the requirement to show that the dominant firm intends to reserve to itself a separate derivative market for a new product is surely too cumbersome to comply with and, at the same time, unnecessary for several reasons. It is difficult to comply with such a prong because, as the cases have shown, it may but it also may not happen that the dominant company attempts to leverage its power on a secondary related market. Furthermore, in cases where such leverage takes place, it is very rare that the maneuver concerns an entirely new segment where neither the dominant company nor its rivals have competed before.\textsuperscript{190} It is unnecessary because such a prong seems to support the misleading assumption that IP-owners are allowed to monopolize the entire market relating to the item for which IP protection has been granted. Therefore, antitrust intervention would be justified only where IP-owners stretch their right to a second different market from the one they are allegedly entitled to conquer. As the very ECJ has stated, only in the latter case consumers harm should be presumed.\textsuperscript{191}

As I have described above, this assumption is intrinsically wrong as IP paradigms are not meant to work as a future guarantee for R&D expenditures, nor have IP laws ever been intended to grant monopolies in an economic sense. Moreover, it would be erroneous to assume that consumer welfare can only be damaged throughout the foreclosure of competition in a secondary market because, as explained above, foreclosure of competition in the very first market where the IP has been granted is not a necessary consequence of IP protection.

\textsuperscript{188} See supra, para. II.2.1.

\textsuperscript{189} Supra n. 22, at paras. 237-240. Please note that this position, as lastly restated by the ECJ in the IMS case, has been eventually adopted by the Commission in the Discussion Paper on article 82. See DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses, Brussels December 2005.

\textsuperscript{190} Indeed, the peculiar outcome of the Magill case was determined by the circumstance that the Commission considered the comprehensive TV guide (containing the TV listing by all broadcasters) as a new product not comprehended in the market for single TV guide listing.

\textsuperscript{191} Cf. The words used by the ECJ clearly stated that: "in the balancing of the interest in protection of the intellectual property right and the economic freedom of its owner against the interest in protection of free competition, the latter can prevail only where refusal to grant a licence prevents the development of the secondary market to the detriment of consumers." IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG, Case C-418/01, [2004] ECR I-5039, para. 48.
3.3. *The role of consumer welfare*

Commentators often agree on the principle held by the First Circuit that intellectual property and antitrust are complementary policies both aimed at protecting consumer welfare, as pointed out by the First Circuit in Data General. This is a very complex assumption, agreeable and disagreeable at the same time. First of all, it is important to stress that IP laws and competition law have different policy goals which cannot be easily harmonized with one another. The assertion that both laws are intended to protect consumer welfare seems a bit of a stretch in this sense. Indeed, no-one would claim that the goal of competition law and policy would be the promotion of innovation, as well as no-one would dare claim that IP laws are aimed at fostering competition. However, from a broader angle the two sets of laws (IP and antitrust laws) may be called complementary in that they aim at *different but often synergic objectives.* The synergy exists insofar as protection of competition and openness to markets favors and spurs innovation. In this picture, both IP and competition laws are ultimately aimed at protecting society at large, hence consumers. However, for the picture to stay still it is important to acknowledge that the term consumer welfare has different nuances. In particular, while it is correct to assert that IP laws want to spur creativity and technological process to the benefit of society, it would not be appropriate to affirm that IP laws wish to protect consumer welfare in the sense of low prices and increased quantities offered in the market. The latter, indeed, is not a goal cherished by IP laws. Therefore an assessment of a case at the intersection of IP and competition law which only measures consumer welfare in terms of price increase would be poorly examined if it does not evaluate how a likely decision in favor of an IP-owner is going to affect the innovation process in the long run; hence, if consumers will actually benefit later on in terms of increased innovation.

**CONCLUSION**

The relation between antitrust and intellectual property laws has always been a complex one. Because intellectual property law grants exclusive rights which may allow, in the short run, for a restriction of competition, some have deemed IPRs to be in sharp contrast with competition law. Advocates of strong IP protection firmly criticize antitrust intervention into the IP realm, claiming that such intrusion would undermine the incentive rationale which lies at the core of the IP system. A similar conclusion has been reached by some other scholars who assert

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antitrust inaptness to deal and solve the expansionist trend endorsed by IP in recent years.

Eventually, as seen in this contribution, courts in different countries have given different interpretation to such tortuous relations. In the United States courts, with some small exceptions, seem to have accepted in toto the criticism just outlined. They have elegantly explained that antitrust and intellectual property laws are complementary legislations that, in the long run, pursue the very same goal: namely, the protection of consumer welfare. In practice, however, such “complementary” goals have resulted, in the United States, in an IPRs’ ‘immunity’ from antitrust intervention. In fact, the presumption created by the First Circuit in Data General and later reinterpreted by the CAFC in Xerox does not seem to leave any reasonable room for rebuttal.

The European antitrust agencies have shown a more flexible approach which tries to evaluate the overall circumstances of each single case. European antitrust authorities analyze whether specific factors existed that put the dominant IP owner in such a position to overexploit her exclusive right and unduly constrain competition. While the European approach has created growing fears into American companies that do business in Europe, it is worthwhile stressing that such an approach is not as far-reaching as it may initially seem. European antitrust analysis of unilateral practices always requires a finding of dominance in the first place. Moreover, the mere possession of an IPR has never been judged itself as proof of dominance; while the American Supreme Court only in 2006 made this principle clear in the case of Illinois Tool Works Inc. v. Independent Ink Inc. Once dominance has been found, because the mere refusal to license an IP does not amount itself to an abuse, several prongs must be met to find liability under art. 82 EC Treaty.

It should be pointed out that such a divergence of approaches is also a consequence of a more generalized difference in the antitrust assessment of unilateral exclusionary conduct in the United States and Europe. Especially with regard to refusals to deal and essential facility cases, the United States and Europe have shown different attitudes and ideas of what means are necessary to protect and foster competition. As shown by the Trinko case, the United States intends to protect competition by preserving a dominant firm’s incentives to compete and innovate; in order to do so, US antitrust authorities think it is necessary not to force a dominant firm to deal or to license its competitors because they fear this might reduce its incentives to invest and compete to gain a monopolistic position. Conversely, European competition law has somehow mitigated that view with the strong idea that a firm who has achieved a position of dominance in the market must bear a special responsibility towards the market itself, hence towards its competitors. Such a firm will not be allowed certain conduct which is permitted to smaller compet-
itors because its size and overall position of economic and commercial strength would amplify the effects of such conduct and eventually strangle competition. This view reflects the ideology of the German ordo-liberal school of thought that saw competition law as guarantor of an undertakings' freedom of action. This view places lots of significance in the value of openness of markets, as a fundamental condition to favor competition.

From a mere IP perspective, it should be added that intellectual property legislations, both American and European, have been framed with an intrinsic pro-competitive balance. IPRs have self-built safeguard mechanisms aimed at protecting competitors. Patent law— at least in theory— restricts the grant of the patent to severe eligibility requirements and circumscribes the scope of protection— again, at least in theory— to what has been precisely discovered and claimed. Hence, designing room for third parties to invent around the patent. Similarly, copyright covers only expressions, leaving ideas free to be taken by others. This room that IPRs envision for rivals to compete in the same market is vital in that it allows, even in the short run, prices to be driven down. Therefore, the common assumption that IPRs necessarily restrict competition and damage consumers by diminishing quantities and increasing prices is true only to a certain extent. Competition by substitution is promoted by the very same IPRs.

In conclusion, IP paradigms vest inventors and creators with a set of exclusive rights but such rights do not grant absolute control over their intangible works, nor monopoly power in the economic/antitrust sense. Conversely, authors are vested with a modicum of market power severely constrained by the presence of substitute products.

Only in some circumstances, where peculiar economic factors (i.a. network effects) intertwine with IPRs, this market power grows and IP becomes a potential tool to employ in exclusionary strategies. Indeed, it often happens in such circumstances that the input covered by IP rights gains an essential position on the market so that ip-owners, by foreclosing its access, can easily get rid of actual and potential competitors. In such exceptional cases, antitrust intervention should be welcome because competition is not just restricted but the whole innovative process risks being hampered.