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ON THE 'INTERSECTION' IP/COMPETITION

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Abstract: *After highlighting commonly neglected profiles of the intersection (namely, the pro-competitive features 'built-in' in the regime of IPRs, and the 'division of labour' between said regime and the rules on unfair competition, the paper focuses on the influence of antitrust law on the exploitation of IPRs, in particular patents and copyrights. This influence is reconstrued in a historical and systemic perspective, at whose core is the need that exercise (and entitlement) of such rights may not result in foreclosures of competition. In this perspective, the main issue discussed is that of the duty to grant access to protected innovation of paramount importance (essential facilities, even as SEPs) to competitors willing to pay a compensation on 'fair' terms. How 'Fair'?*

Introduction

In a systemic and holistic approach, the reconstruction of the IP/Competition intersection should not solely focus, as commonly happens, on the relationship between IPRs' regime(s) and antitrust law.

This perspective, albeit of paramount importance, is by no means exhaustive, as it neglects two basic profiles of such intersection, namely (A) the pro-competitive features of the IPRs regime(s) and (B) the relationship with the rules on unfair competition.

Let me now briefly hint to said two profiles, before specifically addressing the 'interference' of AT on IPRs' regime(s).

I. COMMONLY NEGLECTED PROFILES OF THE INTERSECTION

1. Pro-competitive 'antibodies' of the IP regime

A watchful eye can detect many pro-competitive features --'antibodies'-- built into IP law. Highliting such antibodies in construing IPRs' regime can often pre-empt the need to 'call in' antitrust as the white knight capable of restoring workably competitive market conditions -- thus also allowing competition authorities to focus on more urgent cases requiring the systemic correction of practices severely distorting competition.[2]

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[2] Also in this context, see H. Ullrich, 'Expansionist Intellectual Property Protection and Reductionist Competition Rules: A TRIPS Perspective', Journal of International Economic Law, 2004, 401.

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May I briefly recall, for each IP basic paradigm, just one example of said pro-competitive 'antibodies'.

Patents

Keeping a tight hold on the helm of a selective, 'exacting' notion of 'non-obviousness' can significantly contribute to preventing the issuance (by Patent Offices) and the validation (by Courts) of poor quality ('questionable') patents, original or derivative, whose proliferation is – and is increasingly criticized (also) as – an element of distortion of competitive innovation dynamics.[3]

Copyright

Adopting a concept of 'derivative work' (whose exploitation is subject to the consent hence the payment of fees, to the holder of the economic rights to the original work) strictly focused on the *continuity of expressive imprint* (a focus systemically coherent with the idea/expression dichotomy) allows to deny said subjection, whenever such continuity is absent, as in parody and 'transformative' artistic works: to be ruled as sheer manifestations of 'freedom of expression' -- *not* 'exceptions', may I emphasize, as such subject to the (in)famous three-step test of art. 5.5 of the InfoSoc Directive 29/2001. Now, since the economic rights are ultimately vested in producers and/or distributors, the competitive relevance of such interpretative approach is all too evident as is, anyway, its consistency with the objective, of constitutional rank, of fostering and disseminating new cultural works.

Trademarks

Limiting the protection of well-known trademarks in sectors 'not similar' to that of registration, to hypotheses in which a 'prudent and circumspect' consumer[4] may reasonably perceive the existence of a *business connection* (see art.16.3 TRIPs) between the firms of the owner and that of the third party who adopts a similar sign, is tantamount to preventing a

[3] See R. Hilty, 'The Role of Patent Quality in Europe', in J. Drexl, R. M. Hilty, L. Boy, C. Godt and B. Remiche (eds), Technology and Competition: Contributions in Honour of Hans Ullrich, Larcier, 2009, 91; G. Colangelo, 'Mercato e cooperazione tecnologica: i contratti di patent pooling', Quaderni di AIDA, No. 18, Giuffrè, 2008, 48. A similar position has been taken in the US, inter alia, by R. P. Merges, 'Uncertainty and the Standard of Patentability', 7 Berkeley Technology Law Journal, 1992, 1; and H. J. Hovenkamp, 'Institutional Advantage in Competition and Innovation Policy' (September 12, 2013), U Iowa Legal Studies Research Paper No. 13–43, available at SSRN: https://ssrn.com/abstract=2307141 or http://dx.doi.org/10.2139/ssrn.2307141. The 'inflation' of poor quality patents as a factor of stifling innovation was pointedly denounced by the previously quoted decision of US Supreme Court in KRS (2007): see Chapter 2, § 17. It is also criticized in some professional circles as reducing the overall effectiveness of patent protection and consequently increasing diseconomies: in the business management of immaterial assets: see, inter alia, C. P. Opperman, 'The Elephant in the Room', IAM – Intellectual Asset Management Magazine, 2009, 53.

[4] The yardstick of consumer awareness and information is to be accommodated to the 'information era', characterized by widespread sources of information. This approach, as embodied in Directive 29/2005 on Unfair Commercial Practices, Recital 18, has been upheld by CJEU, Verlados (C-75/15), which, confirming previous decisions (recalled in at n. 25), defines European consumers as 'reasonably well informed and reasonably observant and circumspect'.

disproportionate (and temporally indefinite) leverage of the trademark owner's exclusionary power in unrelated markets.

2. Interplay with the rules on unfair competition

The rules on unfair competition, the other branch of the overall regulation of competition, are set, at international level, by the old rule of Arts 10-bis and 10-ter Paris Union Convention (PUC), as introduced in the 1925 Hague Revision Conference. Art 10-bis is explicitly recalled by TRIPs, Art. 39.1. No other regulation of international scope has since then been enacted, notwithstanding several proposals therefor (even by WIPO)[5]. As known, Art 10-bis CUP defines 'fairness' as compliance with the 'honest usages' of industry and trade: a vague, general criterion that Blaise Pascal would have labelled one of those 'principes bons à tout faire, d'ou l' on peut tout déduire'. Which indeed happened in jurisprudential and doctrinal elaborations, ranging from over-protectionist (as in France and Italy, where, e.g. 'unfairness' was often used to bypass the expiry of registered models and designs) to robustly pro-competitive approaches (as in UK, where, e.g., the House of Lord in 1986 famously denied 'shape marks' protection to the Coca Cola bottle).

The acts of unfair competition often overlap with antitrust violations, as, for example, in the case of boycotts (Eleanor Fox referred to 'unfair methods of competition' under section 5 of the Federal Trade Commission [FTC] Act as 'incipient Sherman Act violations')[6]. Nonetheless they require distinct consideration. As traditional doctrine goes, antitrust focuses on risks for *competition as such*, protecting an actual (not merely potential, in my opinion) pluralistic market structure, capable of preserving, also in the long term, effective even though limited (in this sense 'workable') choice alternatives to competitors and consumers. The rules on unfair competition focus on the risks for *competitors*, i.e. looking at the actual and (here, yes) also potential threats and damages to their individual positions in conflict with their rivals.

This basic distinction also influences the way each of the disciplines interplays with IPRs. Let us take an example concerning patent ownership. Antitrust will curb discriminatory and/or vexatious exercises of patent power *only* if they affect the relevant market as such. If the effect is more restricted (i.e. solely to the prejudice of individual competitors) only the rules on unfair competition will possibly be enforced (vs. the *same* type of behaviour). In their turn, these rules *add* the protection against confusing imitation ('passing off') of the distinctive 'dress' of the patented products to that against patent infringement, i.e. the imitation of the technological core of the same products. On the other hand, these rules also limit the specific protection against passing off to the *non-functional features* of the patented product: thus avoiding surreptitiously extending the scope of the patentee's exclusive power.

[5] WIPO, *Model Provisions on Protection Against Unfair Protection*, WTO Publication 832 (E) ISBN 92-805-0642-0.

[6] See E. M. Fox, *Chairman Miller*, 'The Federal Trade Commission, Economics and *Rashomon*', *Law and Contemporary Problems*, 1987, 33, at 41.

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II. IP AND ANTITRUST

3. The Fundamental Postulate for Antitrust 'Marching In': IPRs as Factors of Market Dominance

Prior to the reconstruction of the specific basic forms of the AT/IP interplay one should identify the conditions whereby an IPR entitlement can determine or strengthen a position of 'market dominance'/ market power.

This identification must be articulated for each IPR paradigm given the deep reciprocal differences of regimes – *and* the impact on the various interests at stake. Let us proceed to a brief overview thereupon.

Patents

It is practically undisputed, by courts and scholars, that the ownership of a patent cannot *per se* be linked – not even presumptively[7] – to a 'market power' relevant to antitrust law. In the words of Richard Posner,[8] 'if there are closed substitutes for the patented product, the patent "monopoly" is not a monopoly in a sense relevant to antitrust law'.[9]

Thus, the assessment of a position of 'dominance' in connection with the ownership of a patent is limited to hypotheses in which the concerned technical solution is 'indispensable', more precisely 'not workably substitutable' (the key concept for assessing effective competition) to operate in a given market.[10] This, in short, is the starting point of the theory of 'essential facilities' as applied to intellectual property (see § 6, below). The doctrine, hence the 'interference' on the exercise of IPRs, has historically expanded its reach from ('indispensable') shapes of mechanical products, like cars' spare parts,[11] to patents on genic sequences – which, being unreplicable, are 'unique works'[12] – up to the recent emphasis on

[7] See US Supreme Court, *Illinois Tool Works Inc v. Independent Ink Inc.*, 126 S.Ct 1281 (2006). See also US Department of Justice and Federal Trade Commission, Antitrust Guidelines for the Licensing of Intellectual Property, 6 April 1995. In a comparative perspective, see E. Arezzo, 'Intellectual Property Rights at the Crossroad Between Monopolization and Abuse of Dominant Position: American and European Approaches Compared', *The John Marshall Journal of Computer & Information Law*, 2006, 455, at 490–491.

[8] As recalled by Daryl Lim in his monograph on patent misuses (*Patent Misuse and Antitrust Law*, Edward Elgar, 2013, 3, fn 11). Judge Richard Posner claimed that the misuse of patent is relevant only from the viewpoint of antitrust law (see *USM Corp. v. SPS Technology Inc.*, 694, F.2d 505 (7th Circuit, 1982): 'If misuse claims are not tested by conventional antitrust principles, by what principles shall they be tested?'. This position is substantially approved by authoritative academic literature, which, after having noted that 'patent misuse is not only about "monopolistic abuse", but also serves as an internal constraint on efforts to expand the patent system beyond its bounds', it states that 'these are relatively rare cases... Generally speaking, *patent misuse doctrine is largely coextensive with antitrust doctrine*' (emphasis added): H. Hovenkamp, M. Janis, and M. Lemley, *IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law* (vol. 1), Aspen Law & Business Publishers, 2002, para. 3.2b, 3–10.

[9] See United States District Court for the Northern District of Illinois, *Asahi Glass Co. v. Pentech Pharmaceuticals Ltd.*, 289 F. Supp. 2d 986 (2003).

[10] See below, fn 40, for the (fading) distinction between downstream and upstream markets in the application of the EF doctrine.

[11] See ECJ, 5 October 1988, *AB Volvo v. Erik Veng*, case C-238/1987, in ECR 1988, 6211.

[12] R. C. Dreyfuss, 'Unique Works/Unique Challenges at the Intellectual Property/Competition Law Interface', in C. D. Ehlermann and I. Atanasiu (eds), *European Comp.*

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ICT standards (*de jure* or *de facto*)[13] and Standard Essential Patents (SEPs), i.e. patents on essential parts of a standard technology (below, § 6 ff.).

Copyright

Copyright's classical model, where only 'expressions not ideas' are protected, *and* the protection covers inventions of an intellectual/aesthetic fruition ('œuvres littéraires et artistiques'), does not pose significant 'monopolistic' risks relevant to competition law: this, because of the practically unlimited 'substitutability' – in contrast to utilitarian creations – of non-functional 'expressions'.

A quite different scenario arises when copyright, trespassing on the classical 'division of labour' with patents, expands to cover such technological products as computer programs, whose text – fictitiously assimilated to a literary work – represents in truth 'expressed ideas not expressions'[14] and where the 'form' is always driven by functional objectives. Here and only here should one allow for antitrust interference under the same postulate of technological 'dominance' as I have referred to above as concerns patents.

This is even more justified because copyright protection: (a) is unselective on the merits and thus can cover even very 'modest' innovations; (b) does not provide, unlike patent law (art. 31(l) TRIPs and ensuing national laws), any obligation of the copyright holder to grant a licence to the authors of derivative works, even if the latter might be of the highest cultural importance – think of the translation of poems by a Nobel prize winner made by another Nobel laureate; and (c) in its 'special' application to software, even the mere development – the 'creation' itself – of improved programs (as distinguished from the commercial exploitation thereof), is subject to the authorization of the copyright holder on the original program, such creation not being included in the list of the activities freely allowed to the legitimate user (Art. 5 Directive 24/09/CE).

Trademarks

The intersection between antitrust and IP also affects trademark rights: the IPRs which at first sight it seems illogical to associate with the prospect of *sharing* by third parties[15]. In principle, indeed, the efficient performance of the

Law Annual, 2005 – The Interaction between Competition Law and Intellectual Property Law, Hart Publishing, 2007, 119.

13 In technological sectors, where compatibility and interoperability of a product with other components and systems are essential, a ('*de jure*') standard is a set of technological or quality requirements typically developed within a standard setting organization (SSO) and aimed at ensuring such compatibility between products of different manufacturers. For a legislative definition of standard see art. 2, para. 1, n. 1) of Regulation (EU) No. 1025/2012 of European Parliament and of the Council, *on European standardization*, of 25 October 2012, in O.J. 14 November 2012, L-316, p. 12. For an analysis of different types of standards see M. Dolmans, 'Standards for Standards', *Fordham International Law Journal*, 2002, 163. As concerns *de facto* standards, see below, § 6 ff.

14 See *Data Cash System v. JS & A*, District Court, N.D. Illinois E. Division, 26 Sept 1979, in 203 USPQ (1979), 735 *et seq*.

15 Obviously, this profile does not concern (registered) geographical indications (GIs), which do not reflect origin by a particular firm but characteristics that are associated with a certain territory and related traditional knowledge. They can therefore legitimately be used by a number of

distinctive function requires 'uniqueness': thus, the very idea of imposing shared use of a trademark seems to amount to accepting, indeed encouraging, 'confusion'.[16] However, this argument – while neglecting the fact that the European law and 'harmonized' national regimes allow *coexistence agreements* between the holder and third parties – fails to address an antitrust profile that does not necessarily imply 'sharing' as a remedy to an anti-competitive situation. I refer to renowned trademarks' *power of attraction* beyond their distinguishing function): a power potentially entailing strong *lock-in* effects for consumers – both in the sector(s) of registration and in 'not similar' sectors – thus possibly translating into a factor of market dominance.

Now, when this occurs – typically, to reiterate, in case of highly renowned trademarks – the trademark owner's exclusionary power can well be subject to antitrust scrutiny.[17] In a number of cases, decided by the European Commission and national antitrust authorities, an 'antitrust storm', to quote Francesco Denozza, undermined the excluding power of the registered trademark. Thus, for example, mergers consolidating famous trademarks in a single ownership lead to a situation of market power which the competition authorities may decide to reduce by ordering the grant of licences to third parties. Or an abuse of dominant position can be found under article 102(a) TFEU (formerly, article 82(a) of the EC Treaty) in relation with an anti-competitive implementation of a trademark licensing scheme, with the consequent imposition of a duty to license the trademark free of charge[18] or even (not the 'sharing' with licensees, but) the straight transfer of the sign to third parties.[19]

Finally, one should not neglect the *synergies* between the trademark's appeal and the exploitation of other IPRs, patents in particular. Take, for example, the case of a patented product, marketed under a certain trademark, whose commercial success and appeal has been enhanced by its exclusive presence on the market for 20 years. The appeal acquired by such a trademark can *de facto prolong* (save, of course, an intervening 'vulgarization' of the sign) *the 'monopolistic' effect of the patent regime*, hence possibly the owner's dominant position beyond the patent's expiry. Such legal expiry, indeed,

qualified producers – each of these then *adding* its own individual trademark.

[16] The 'reductionist' (hence) pro-competitive approach I privilege as concerns IPRs should be a fortiori applied to the protection of trade secrets. This because they are not (and should never be) protected as 'properties', but just under the rules on unfair competition (see also Recitals 16,6,9 of EU Directive 943/2016).

[17] Of particular interest (even as a possible evocation of the famous FTC's stance in *Kelloggs* case, for which see: 'Oligopoly and the FTC: The Best for You Each Morning', 67 *Northwestern U. L. Rev.,* 1972, 602) is the approach assumed by the Italian Competition Authority (AGCM) in *Pepsico Food and Beverages International v. IBG Sud v. Coca-Cola Italia*, decision no. 7804 A224 (1999). The same rationale would also hold true to authorize an agreement between holders of renowned trademarks, provided that licences in relation thereto were given to third parties.

[18] EU Commission, 20 April 2001, L-166, p. 1, confirmed by the (then) Tribunal of First Instance, 24 May 2007, *Der Gruene Punkt – Duales System Deutschland GmbH v. Commission*, Case T-151/01 R.

[19] See quoted EU Commission, 96/435/EC, case No. IV/M.623, *Kimberly-Clark/Scott*, in OJ 23 July 1996, L-183, p. 1.

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may well allow that consumers, 'fidelized' to the trademark which has accompanied the product for 20 years, remain *locked in* even for a long time thereafter. Just think of the case of 'Aspirin'. This hypothesis, rooted in everyday experience, should be taken into particular consideration in judging the market position and behaviour of holders of soon-to-expire pharmaceutical patents vis-à-vis prospective new entrants, the producers of 'generics'.

4. The Antitrust 'Interference': An Evolution in Three Stages

Since the enactment of the Treaty of Rome, the evolutionary path of the AT/IP intersection has been characterized by the progressive confluence of three basic stages, each reflecting a distinct legal stage.

In synthesis, European competition rules have 'interfered':

(i) on anti-competitive contractual exercises of holders' power of 'disposition' of IPRs;

(ii) on IPRs holders' statutory power to exclude unauthorized third parties;

(iii) on the (modes of the) acquisition of the IPR entitlement itself.

Let us briefly review each of these stages, as outlined by several well-known decisions by the Commission and the European and national Courts.

5. Stage one: checking IPRs' exercise of the holders' power of disposition

It has long been accepted that, upon the occurrence of certain conditions, the *exercise* of the holders' right of disposition (*Verfuegungsrecht*) of his/her IPRs can run counter to the collective interest in the existence of a workably competitive market structure, hence requesting antitrust's 'correction' (in various forms, as known and will be discussed henceforth).[20] Article 36 of the TFEU (ex 30 Treaty) justifies restrictions on the free movement of goods in order to protect national IPRs, as long as they do not constitute a means of arbitrary discrimination or a disguised restriction on intra-Community trade. In systemic terms, this represents an *economic public order limitation* of aforesaid IPRs, and hence cannot be validly passed over by private agreements.

While few cases concerned unilateral 'abusive' conducts (such as the imposition of discriminatory conditions or excessive prices),[21]

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[20] The capability of competition law to interfere with the *exercise* of IPRs has been acknowledged since the *Centrafarm* decision of the European Court of Justice, in which the Court stated that: '… whilst the Treaty does not affect the existence of rights recognized by the legislation of a Member State in matters of industrial and commercial property, yet the exercise of these rights may nevertheless, depending on the circumstances, be affected by the prohibitions of the Treaty'. See ECJ, 31 October 1974, *Centrafarm BV v. Winthrop BV*, case C-16/1974, in ECR 1974, 1183. For an analysis of the dichotomy existence/exercise of IPRs in the light of competition law see J. Kallaugher, 'Existence, Exercise and Exceptional Circumstances: The Limited Scope for a More Economic Approach to IP Issues under Article 102 TFEU', in S. Anderman and A. Ezrachi (eds), *Intellectual Property and Competition Law*, Oxford University Press, 2011, 113, pp. 119 ff.

[21] See ECJ, 29 February 1968, *Parke Davis and Co. v. Probel, Reese, Beintema-Interphaem and Centrafarm,* case C-24/1967, in ECR 1968, 55, in which the Court held that 'a higher sale price for the patented product as compared with that

the attention of the EU Commission and Court of Justice mainly focused on the contractual relationship between IPR holders and third 'partners' in the production and/or distribution chain, such as dealers and licensees or joint-venturers. Such relationships, as an expression of the exercise of freedom of contract (as a profile of freedom of enterprise) specifically concerning the dispositive power of IPRs holders, are chiefly based on licence agreements (in their various forms and combinations, including cross-licenses). Of course, they can be, and normally are, established for quite legitimate purposes, for example, to expand and articulate the rightholder's own industrial and/or commercial and/or R&D capacity, and thus support the firm's trend to decentralize its organization (through a network of exclusive or non-exclusive sub-producers and dealers); or to establish partnerships or other forms of cooperation – even with competitors ('coopetition') aimed at pooling the respective technologies; or to acquire joint ownership over the future results of each party's R&D activities. And so on.

Thus, the European Commission and the Court targeted the dark side of the contractual disposition of IPRs, i.e. possible forms of *market partitioning* hindering the free movement of goods, and hence, ultimately, the harmonization of the several national markets into a single European market.

To this category of anti-competitive acts of disposition of IPRs can be ascribed, on the basis of a common rationale for prohibition and enforcement, the (technologically supported) practices of 'geo-blocking', aimed at limiting access to digital works on the basis of customers' nationality/residence or place of establishment. These practices were recently targeted by the Commission, in its Proposal for a Parliament and Council Regulation, as of 25.5.2016 (COM(2016) 289 final – 2016/0152 (COD)), and the launch of a sector inquiry into e-commerce on 6 May 2015. The Commission published its initial findings in relation to geo-blocking practices on 18 March 2016 (SWD(2016) 70 final), and the final report is scheduled for the first quarter of 2017. (Possibly, in doing this, the Commission was also motivated by the apparent contradiction of geo-blocking practices with the 'multi-territorial' licensing strategy of online musical works pursued by the Directive 2014/26/EU).

This approach, and rationale, embodied in such early seminal decisions as *Grundig Consten*,[22] led, first and foremost, to the endorsement of the principle of 'exhaustion' at the first stage of distribution, of the IPRs' power of control on distribution – a principle that, allowing parallel

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of an unpatented product coming from another member State does not necessarily constitute an abuse'; ECJ, 8 June 1971, *Deutsche Grammophon GmbH v. Metro-SB-Grossmaerkte GmbH and Co.*, case C-78/1970, in ECR 1971, 487.

[22] ECJ, 13 July 1966, *Établissements Consten Sàrl and Grunding-Verkaufs GmbH v. Commission*, joined cases C-56 and 58/1964, in ECR 1966, 299. See also Commission Decision, 10 January 1979, *Vaessen/Moris,* case IV/C-29.290, in OJ 26 January 1979, L-19, p. 32; ECJ, 8 June 1982, *L.C. Nungesser KG and Kurt Eisele v. Commission*, case C-258/1978, in ECR 1978, 2015; CFI, 10 July 1990, *Tetra Pak Rausing SA v. Commission*, case T-51/1989, in ECR 1990, II-309; Commission Decision, 23 March 1990, *Moosehead/Whitbread*, case IV/32.736, in OJ 20 April 1990, L-100, p. 32.

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imports, aimed at preempting the attempts to *isolate* national markets, and encouraging intra-brand (price and non-price) competition.[23]

The result was the development, through case law and regulations, of a rather 'suspicious' system of pro-competitive limits on the bargaining powers of IPR holders. The strictness of said limits came to be criticized as allegedly failing to take account of the need to both remunerate and protect the investments of independent licensees against free riders (thus providing suitable incentives to undertake new production and/or open up new markets). And failing, also, to reckon with the *intrinsically pro-competitive nature* of the transfer/diffusion of important technological know-how to independent partners. Experience confirms that today's licensee can often be tomorrow's competitor.

Moreover, that severe orientation was also criticized for downplaying the frequent – nay: typical – innovation-enhancing effect deriving from the continuous two-way exchange of technological and manufacturing know-how during the contractual relationship between licensor and licensees.[24]

This original severe approach eventually evolved (possibly under the expanded influence of the Chicago School of economic analysis) from a different view of the various contractual practices and their competition-related effects, including the dynamics of innovation. Thus it came to be acknowledged that what at one time appeared to be solely a tool to impose and/or expand market dominion might well represent a useful expression of cooperation that could increase efficiency, act as an incentive and actually propagate innovation.

This more flexible and pragmatic approach, which seemingly privileged the *rule of reason*, was supported and keeps being supported by a regulatory framework, presently mainly based on Technology Transfer Block Exemption Regulation (TTBER) No. 316/2014, concerning the licensing of technologies protected by IPRs or industrial secrets.[25] In particular, this regulation confirms a pronounced support to forms of cooperation between competitors

[23] For an in-depth analysis on the application of the principle of exhaustion within European competition law see G. Westkamp, 'Intellectual Property, Competition Rules and the Emerging Internal Market: Some Thoughts on the European Exhaustion Doctrine', *Marq. Intell. Prop. L. Rev.*, 2007, 291.

[24] It is also open to doubt whether such a strict '*per se*' approach paradoxically translated into a *pro-oligopolistic* line. This, in the sense that greater severity with IPR owners' and licensees' agreements would mainly affect *independent* licensees, and therefore the networks of collaborative transfer of technologies typically affordable by small and medium-sized enterprises (SMEs). The latter would thus be objectively discriminated against in favour of internationally integrated manufacturing and commercial groups (often controlled from across the Atlantic), that is, the *most concentrated* structures, reflecting and at the same time contributing to more restricted intra-brand competition, whose *internal* contractual practices were far more widely sheltered from antitrust interference due to the absence of *true competition* within the unitary group. Possibly, however, this 'contradiction' reflected a conscious line of *industrial policy*, namely the one set out in the famous 1970 Industrial Policy Memorandum, in which the Community asserted the need to promote European industrial structures *large enough* to compete with American and Japanese giants.

[25] Commission Regulation (EU) No. 316/2014 of 21 March 2014 *on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of technology transfer agreements* (OJ 2014, L-93, p. 17), replacing Commission Regulation (EC) No. 772/2004 of 27 April 2004 *on the application of article 81(3) of the Treaty to categories of technology transfer agreements* (OJ 2004, L-123, p. 11).

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('coopetition', again!) aimed at promoting innovative processes through the sharing of technological knowledge possibly covered by IP rights.

Thus, under the aegis of the rule of reason, this *nouvel approche* legitimized the distinction between horizontal agreements (involving inter-brand competitors) and vertical agreements (involving non-competitors or, more precisely, *just* intra-brand competitors), the latter being considered – in the wake of Community legislative developments that significantly attenuate the original approach to protecting competition also at distribution level (intra-brand) – potentially less liable to distort competitive balances.[26] Thus, earlier *en bloc* prohibitions, such as those concerning non-compete obligations, have been limited or revoked (even in the case of horizontal agreements), provided that a certain level of market power is not surpassed.

It is worth emphasizing that the new trend particularly encourages *group innovation*, which promotes licensing as a means of sharing technology and hence of furthering the innovation process. In this respect, the Guidelines that accompany the 2014 TTBER[27] favourably evaluate the efficiencies inherent in *technology pools*, which reduce transaction costs that would hinder technological progress,[28] especially in cases of incremental innovation.[29]

[26] Compare Commission Regulations No. 1217/2010 and No. 1218/2010, on the application of Article 101(3) of the Treaty on the Functioning of European Union to certain categories – respectively – of R&D and specialization agreements, with the different approach of Commission Regulation No. 330/2010, relating to the application of antitrust law to certain categories of vertical agreements.

[27] See Communication from the Commission – *Guidelines on the application of Article 101 of the Treaty on the Functioning of the European Union to technology transfer agreements*, in Official Journal of 28 March 2014, C-89, p. 3, § 245.

[28] In favour of patent pools as a means of constraining transaction costs, see R. P. Merges, 'Institutions for Intellectual Property Transactions: The Case of Patent Pools', in R. Dreyfuss, D. L. Zimmerman, and H. First (eds), *Expanding the Boundaries of Intellectual Property*, Oxford University Press, 2001, p. 123 and R. Santore, M. McKee, and D. Bjornstad, 'Patent Pools as a Solution to Efficient Licensing of Complementary Patents? Some Experimental Evidence', *The Journal of Law and Economics*, 2010, 167.

[29] Economic literature uses the term *incremental* or *cumulative* to address the new nature of innovation in the 20th century, the development of which needs to stand on the shoulders of many giants (to quote S. Scotchmer, 'Standing on the Shoulders of Giants: Cumulative Research and the Patent Law', *Journal of Economic Perspective*, 1991, 29, whose title plays on Newton's famous expression – actually borrowed from medieval philosopher-monk Bertrand de Chartres). The incremental nature of innovation carries within itself the need for innovators to have access to the fruits of third parties' efforts in order to preserve the creative process. But when proprietary rights come into play – especially in countries like the United States, where patentability tends to extend even to 'research tools' (R. S. Eisenberg, 'Bargaining over the Transfer of Proprietary Research Tools: Is this Market Failing or Emerging?', in R. Dreyfuss, D. L. Zimmerman, and H. First (eds), *Expanding the Boundaries of Intellectual Property*, Oxford University Press, 2001) – inventors need to negotiate several licences to get *feu vert* for their innovation: hence, if transaction costs happen to be too high the very same innovative process could come to a halt. I am referring here to the well-known issue of the 'tragedy of the anticommons' explored by M. A. Heller, 'The Tragedy of the Anticommons: Property in the Transition from Marx to Markets', *Harv. L. Rev.*, 1998, 621. See also T. M. Jorde and D. J. Teece, 'Innovation and Cooperation: Implication for Competition and Antitrust', *Journal of Economic Perspective*, 1990, 75.

This rather lenient approach to pools, which also marked the subsequent EU[30] (as well as US)[31] case law, may lead to underestimating the risk – which the Guidelines to the 2014 TTBER recognize[32] – that they represent a means of collusion or might indirectly promote, thanks to the synergy of the partners' technologies, the emergence of a dominant *de facto* standard, strengthened moreover by the patents or copyrights shared (only) by the co-venturers, thereby foreclosing competitors from the markets of reference.[33]

An analogous caveat applies to the benevolent treatment of vertical agreements; to be approved, in principle, but with eyes wide open on the risk of condoning agreements aimed at hindering parallel imports (as in the well-known decision of the Court of First Instance in the *Glaxo* case (T-168/01, 17 September 2006).

As evident, the approach just described as 'stage one' did not question IP rights holders simply and straightforwardly excluding unauthorized third parties from accessing the protected innovation/creation. The earlier interpretation kept off limits the very idea of a possible interference of competition law with the 'institutional' (statutory) terms of grant of IPRs as established by national legislation. In substantial equivalence to a traditional US position whereby the IPRs regime contains, and *exhausts*, within itself, the limits of the exclusive powers, this approach theorized the rejection of AT interference on the statutory faculty of exclusion of unauthorized third parties. The underlying assumption was that such interference would conflict with the '*normal*

[30] Case *MPEG*, COMP/C-38143, in Official Journal C 174/6 of 19 June 2001. See also case *DVD*, Press Release IP/00/1135, 9 October 2000.

[31] US case law conditions the approval of pools on the following conditions: (a) the shared patents must be complementary and 'technically essential' (in the sense of being such as to reduce the 'risk that the patent pool will be used to eliminate rivalry between potential competing technologies'); (b) the licences, granted on a non-discriminatory basis, must always leave the door open for licensees to develop technologies that compete with those of the pool; (c) access to the pool must be granted to third parties in cases where the participating enterprises jointly hold significant market power, that is, such as to hinder or impede downstream competition. See, e.g., the cases: *MPEG-2* (US Department of Justice, Antitrust Division, Business Letter, 26 June 1997, www.usdoj.gov/atr/public/busreview/1179.htm); *DVD-3* (www.usdoj.gov/atr/public/busreview/2121.htm); *DVD-6* (www.usodj.gov/atr/public/busreview /2485.htm). For a recent in-depth analysis of the US treatment of patent pools see G. Colangelo, 'Il mercato dell'innovazione: brevetti, standards e antitrust', *Quaderni di Giurisprudenza Commerciale*, Giuffrè, 2016.

[32] Note, indeed, that paragraph 180 of the same Guidelines acknowledges that 'a technology pool, for instance, can result in an industry standard, leading to a situation in which there is little competition in terms of the technological format. Once the main players in the market adopt a certain format, network effects may make it very difficult for alternative formats to survive. See also paragraph 246 ('in addition to reducing competition between the parties, technology pools may also, in particular when they support an industry standard or establish a de facto industry standard, result in a reduction of innovation by foreclosing alternative technologies. The existence of the standard and a related technology pool may make it more difficult for new and improved technologies to enter the market').

[33] It has been stressed that also – and above all – in group innovation it is essential, for the purposes of guaranteeing a level playing field, that there be 'an early participation in the innovation process and … an early access to enabling information'. H. Ullrich, 'Expansionist Intellectual Property Protection and Reductionist Competition Rules: A Trips Perspective', *Journal of International Economic Law*, 2004, 401.

exercise of IPRs themselves'.[34] And what could be defined as more 'normal', than using IPRs' *statutory* faculty to exclude?![35]

In sum, this earlier perspective of the 'intersection' did not challenge the sanctuary of IPRs owners' (statutory) power to exclude unauthorized third parties seeking access to the use of the protected innovation/creation.

6. Stage Two: Storming the Sanctuary of the Statutory Power to Exclude. The Emergence of the 'Essential Facilities' Doctrine

Now, it is precisely this sanctuary that the guns of the Battle of Valmy of the evolution of European antitrust aimed at, writing a new history of the relationship between IP and competition law.

The distinction between 'existence' and 'permitted exercise' of IPRs, reaffirmed in *Parke Davis v. Probel* (1968) became blurred – as Professor Steven Anderman highlighted[36] – when the former concept was broadened to cover the 'essential function' of IPRs and their 'specific subject matter'.[37]

The focus thus moved onto the question of whether, and to what extent, a right of access (typically in the form of a non-voluntary licence) over innovative creations protected by patents or copyrights can be granted to third parties if the exercise of the excluding powers statutorily associated with IPRs might foreclose such parties from operating as effective competitors on a related downstream market or – more controversially – on the same market as the technology protected by the IPR.[38] This rests upon the economic postulate – necessary albeit not sufficient – that the IPR holder has achieved a 'plus' of foreclosing power greater than that inherent in the ownership of the IPR in a competitive market,[39] i.e. one characterized by

[34] May I emphasize that the limit of the 'normal exercise', is directed to national legislators ('Member States') by article 30 of the TRIPs Agreement; hence this limit cannot be assimilated to the judicial three-step tests of art. 5(5) of the InfoSoc Directive – rather, it evokes art. 9(2) of the Berne Convention. However, art. 30 must be reconciled with art 8(2) TRIPS, so that it can be ruled out that a monopolistic effect may be consistent with a 'normal 'exercise' of the IPR involved.

[35] This, as known, is the traditional US position affirmed and restated since the first Patent Act of 1790: the fundamental right granted to the patentee is that 'to exclude others from making, using, offering for sale, or selling the invention …' (35 U.S.C. §154 (a) (1). A position that 'set the tone' also of European national legislations up to TRIPs (art. 16, 28; see also art. 9 *et seq.*, in connection with the Berne Convention).

[36] S. D. Anderman, *EC Competition Law and Intellectual Property Rights: The Regulation of Innovation*, Oxford University Press 2000, p. 12 *et seq.*

[37] According to ECJ, the exercise of an IPR can be defined as 'normal' when it is part of the so-called *specific subject matter* of the IPR itself. In particular, the European Court of Justice defined the 'specific object' of a patent as 'the exclusive right to manufacture or reproduce and to put into circulation for the first time a specific product of the human intellect or industry' (ECJ, 18 October 1974, *Centrafarm and Adriaan de Peijper v. Sterling Drug*, case C-15/1974); with respect to trademarks, the specific object of the right is to guarantee the origin of the goods so as not to deceive consumers on the provenance of the product (ECJ, 23 May 1978, *Hoffmann-La Roche & Co. v. Centrafarm*, case C-102/1977); finally, the specific object of copyright is to ensure the author has the right to represent and reproduce the protected work (ECJ, 17 May 1988, *Warner Brothers, Metronome Video v. Erik Viuff Christiansen*, case C-158/1986).

[38] See below, fn 40.

[39] Some authors have emphasized how widely the patent law notion of 'monopoly' diverges from that of antitrust

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adequate substitutes of the protected technology.[40] This postulate is based on the condition that the owned technology is 'indispensable', and thus 'essential', in the sense of 'not workably substitutable' for achieving a certain functional objective whose pursuit must be allowed to potential competitors. Hence it was affirmed that, in certain circumstances (ambiguously defined as 'exceptional')[41] revolving around that concept of

law. In particular, R. Feldman stresses that while antitrust law evokes the image of a patent holder occupying a whole competitive market to prevent competitors from entering the market, patent law merely grants the right to exclude others from using or selling the only patented invention: 'all you get is the right to exclude others from standing in the sphere of the invention – as long as they do not have their own rights to be standing in that sphere as well' (see R. Feldman, 'Ending Patent Exceptionalism and Structuring the Rule of Reason: The Supreme Court Opens the Door for Both', 15 *Minn. J.L. Sci & Tech*, 2014, 61, p. 68). In other words, if there are substitutes of the patented product, there cannot be a monopoly relevant to the antitrust law. In this sense see also G. Sena, 'Note paradossali sulla proprietà intellettuale' [Paradoxic Notes on Intellectual Property], in *Studi di diritto industriale in onore di Adriano Vanzetti*, Giuffrè, 2004, II, 1533, pp. 1534–1535; E. Arezzo, 'Intellectual Property Rights at the Crossroad between Monopolization and Abuse of Dominant Position: American and European Approaches Compared', *The John Marshall Journal of Computer & Information Law*, 2006, 455, pp. 490–491. See also the authoritative opinion expressed by Judge Posner in the case *Asahi Glass Co. v. Pentech Pharmaceutical Ltd.*, 289 F. Supp. 2d 986 (2003): 'if there are close substitutes of the patented product, the "monopoly" is not a monopoly in a sense relevant to antitrust law'.

40 Reference is made, in particular, to circumstances in which a patent grants its holder a dominant position on the market because, for example, the protected asset has been established as a standard or as an essential component of a standard (i.e., SEP).

41 As a matter of fact, bearing on the risk of foreclosure of competition, those are *normal* circumstances for legitimizing antitrust to 'march in'. For an accurate analysis of the 'exceptional circumstances' see J. Kallaugher, 'Existence, Exercise, and Exceptional Circumstances: The Limited Scope for a More Economic Approach to IP Issues under Article 102 TFEU', in S. D. Anderman, A. Ezrachi (eds), *Intellectual Property and Competition Law: New Frontiers*, Oxford University Press, 2011, 125 ff. Worthy of discussion, however, is a circumstance/requirement emphasized in several decisions (e.g., *Magill* and *IMS*): the elimination of competition in a downstream market not just in the same horizontal market of the IPR protected technology. In other words, the relevant foreclosure, which 'legitimized' the antitrust interference, is that which concerns the market of a new product/service, different from the one that IPRs directly protect, (but) whose development requires the use of the protected technology. With this condition, that translates into a limit to antitrust marching in, I disagree: why restrict the pro-competitive correction to downstream markets? Antitrust is there to restore workably competitive conditions 'against' all actual or potential market foreclosures – at any level. The EF doctrine's pro-competitive and pro-innovation rationale, due to its constitutional rank, cannot be 'sliced' vis-à-vis particular market segments. Hence, in order to stimulate dynamic competition, when a patented product rises to the status of 'essential' (non-substitutable, non-replicable: typically, 'standards', *de jure* or *de facto* (see here, recently, P. Maume, '*Huawei ./. ZTE*, or How the CJEU Closed the Orange Book', *QMJIP*, 207 at 226), the right holder should be bound to grant a (FRAND) license to any 'willing licensees'. The criticized limitation, as proclaimed by several decisions applying the EF doctrine – sometimes, as in *IMS*, in contradiction with the very facts of the case – neglects to consider that the opening of competition also on the upstream market (i.e., the 'horizontal' market of the essential/standard technology) would stimulate subsequent incremental innovation, on the premise that – to efficiently compete on the market and 'steal' customers from rivals – firms will engage an innovation fight to differentiate the products implementing such technology. Moreover, as experience shows, and as Professors Brian Arthur and Rudolph Peritz have convincingly illustrated, the situation that leads a product (or an information or communication standard) to dominate a market does not always reflect its greater efficiency/quality, but is sometimes due to random circumstances and sometimes to shrewd marketing and advertising operations, or for other reasons which can hardly be associated with the concept of 'innovation competition', i.e. dynamic competition.[41] This factor constitutes a strong additional argument in favour of solutions which, by opening up access to the dominant standards for third parties, would increase the number of

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'indispensability', in order to avoid the occurrence of a significant distortion or even the elimination of competition,[42] the IPR holder's power can shift 'from "property to liability", i.e. be bound to grant access' to third parties on fair reasonable and non-discriminatory terms (FRAND):[43] thus, (fairly) *paying* access. This, in a nutshell, is the 'essential facilities' (EF) doctrine (below, in this §).

The basic rationale of this doctrine[44] as applied to IP is substantially coincident with that of the parallel approach adopted by the Commission (and earlier, by US jurisprudence of the first half of 20th century) for granting access to privately

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firms engaged in improving on the existing technology – on any (level of) the market.

In conclusion, in my personal opinion, the aforementioned limitation of antitrust intervention, more than a sincere albeit not founded (for the very reasons just highlighted) worry that 'too broad' a green light to third parties' access would translate into 'taxing technological improvements' (Advocate General Jacobs, in *Oscar Bronner*, C-7/97), signals a questionable bent towards a traditional Chicagoan approach, which held firm to the basic *intangibility* of the IPR-related power to exclude, hence limiting possible antitrust interference with the exercise of IPRs to cases involving *leveraging* of such power on related markets. However, as hinted, the criticized theoretical approach was in fact disavowed by the very facts underlying several leading cases. Take e.g. *IMS* (C-418/01): there, as hinted, the risk of foreclosure actually occurred – verbal acrobatics aside – on the same horizontal market i.e. that of databases on sales of pharmaceutical products supplied to pharma industries: the market where the 'brick structure' realized by IMS had in fact become the standard for reporting sales data. However, as P. Maume emphasizes, the decisions on SEPs have dropped that 'requirement': as in *Huawei*, in which the ECJ 'did not mention the new product requirement' (op. cit., at 224). *Exit ghost.*

42 In this sense, the European line appears to give priority to market protection rules over those safeguarding intellectual property, unlike the antitrust situation in the US. Note, however, that the most recent American case law has taken tentative steps in a more 'interventionist' direction: cf., for instance, the Supreme Court judgment of 19 Jun. 2013 in the case *Federal Trade Commission v. Actavis Inc.* (570 US), a case of 'reverse payment settlement', i.e., of the agreement under which a company pledges to pay a sum of money or other benefit to its competitors to keep them from entering (or delaying their entrance on) the market. In said judgment we read that '… These cases do not simply ask whether a hypothetically valid patent's holder would be able to charge, e.g., the high prices that the challenged patent-related term allowed. Rather, they seek *to accommodate patent and antitrust policies, finding challenged terms and conditions unlawful unless patent law policy offsets the antitrust law policy strongly favoring competition*' (emphasis added). For analyses of the various European and US policy approaches, see K. Kwok, 'A New Approach to Resolving Refusal to License Intellectual Property Rights Disputes', *World Competition*, 2011, 261, 263. See also E. Arezzo, 'Intellectual Property Rights at the Crossroad between Monopolization and Abuse of Dominant Position: American and European Approaches Compared', op cit., fn 39, p. 455; T. Kaseberg, *Intellectual Property, Antitrust and Cumulative Innovation in the EU and the US*, Hart Publishing, 2012, 219.

43 Or, perhaps better: RAND 'reasonable' logically absorbing 'fair', as Justice Richard Posner notes. However, I will henceforth use the current acronym.

44 According to the *essential facilities doctrine* (EFD), a monopolist who controls a facility deemed essential to compete in a given market is required to provide fair and reasonable access to the facility itself, so that (potential) competitors can join the market. On the EFD see, *ex multis,* R. Pitofsky, D. Patterson, and J. Hooks, 'The Essential Facilities Doctrine Under U.S. Antitrust Law', *Antitrust Law Journal*, 2002, 443; B. Doherty, 'Just What Are Essential Facilities?', *Common Market Law Review*, 2001, 397; S. B. Evrard, 'Essential Facilities in the European Union: Bronner and Beyond', *Columbia Journal of European Law*, 2004, 1; S. W. Waller and B. M. Frischmann, 'Revitalizing Essential Facilities', *Antitrust Law Journal*, 2008, 1; P. Areeda, 'Essential Facilities: An Epithet in Need of Limiting Principles', *ivi*, 1990, 841.

owned *physical infrastructures* like bridges and ports.[45]

In turn, in my personal opinion, this doctrine's basic cultural and jurispolitical roots can be traced back to Roman law on non-voluntary servitudes – the law, in particular, whereby, e.g., the owner of the only piece of land having access to a river in a given territory had to allow neighbours access to water their cattle (*servitus pecus ad aquam adpellendi*), to the ultimate benefit of the agricultural economy of the whole Latium[46], collective benefit, thus.[47]

However, as a matter of fact, the 'pro-access' stance as an expression of a *general policy* towards top level innovation in a framework of dynamic competition was originally fostered by the European Commission, when progressively drafting the guidelines for the industrial policy aimed at liberalizing telecommunications, and more broadly, the ICT sector. Not by chance: this is a sector that lives and feeds on interconnections.

Here the Commission first specifically and systematically expressed strong concern about the risks of 'proprietary closing' of communication and information standards. Thus, in relation to the software used for satellite communications, which have become *de facto* industry standards and are covered by patents, the Directive 92/38/EC, strongly inspired by Commission, acknowledged that the use of common standards represents 'an enabling element for effective free-market competition'.[48]

This conviction was firmly asserted, as an expression, to repeat, of general policy, in the 1992 Commission's Guidelines on Intellectual Property and Standardization (COM 92) 445; the European Telecommunications Standard Institute (ETSI)'s Intellectual Property Rights Policy, 1997; the 1999 Communications Review addressed to the European Parliament (*Towards a new framework for electronic communications infrastructure and associated services*; COM (1999) 539 final, 10 November 1999); and then, with an even more general scope, in the January 6, 2001 *Commission Notice Guidelines on the Applicability of Article 81 of the EC Treaty to Horizontal Cooperation*, in which the Commission stated that where a *de facto* industry standard emerges, 'the main concern will then be to ensure that these

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[45] See, on the European side: Commission Decision, 21 December 1993, *Sea Container v. Stena Sealink,* case COMP IV/34.689; Commission Decision 94/119/EC, 21 December 1993, *concerning a refusal to grant access to the facilities of the port of Rødby [Denmark]*; Commission Decision, 16 May 1995, *Irish Continental Group/CCI Morlaix*, case COMP IV/35.388. For US case law, see: *United States v. Terminal Railroad Association,* 224 U.S. 383 (1912); *Associated Press v. United States,* 326 U.S. 1 (1945); *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973).

[46] The only salient difference between the Roman discipline of non-voluntary servitudes and the modern duty to grant access to an immaterial asset constituting an essential facility, concerns the type and rationale of the compensation due to the 'owner'. The privileged territorial ('riverside') position of the landowner was not essentially the fruit of her specific efforts and investments, unlike the competitive advantage acquired by the developer of a new 'unsubstitutable' technology. Hence the former was entitled to a mere *indemnity* for possible damages suffered from the exercise of the servitude; the latter, to a fair *remuneration* for allowing third parties to share the IPR-protected 'top-notch' innovation she specifically *created.*

[47] See, extensively, J. M. Pardessus, *Traité des servitudes ou services fonciers*, Bruxelles, 1840.

[48] See Recital 7 of Directive 92/38/EC.

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 IPRs protected standards, either *de jure* or *de facto*, must be possible for third parties on fair, reasonable and non-discriminatory terms'[49] – and this, also, in consideration of *network effects*[50] (particularly albeit not exclusively[51] intense in the ICT sector).[52]

If network effects are present, consumers tend to be far more intensely *captured* by the technology initially chosen. The costs initially incurred (of purchasing and learning the technology bought, and buying a range of compatible products) discourage consumers from changing over to a new product, and consequently constitute a veritable entry barrier for (the success of) competing products, even if these are technologically superior. Although this trend has some immediate technical advantages for consumers, the obstacles to competition may be particularly strong; to quote Shapiro and Katz, 'the strong get stronger and the weak get weaker'.[53] This tangle of direct and indirect network effects leads straight to the *de facto* dominance of a single standard, marginalizing standards based on alternative technologies:[54]

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[49] See in particular Sec. 6.4.03, 174 of quoted Guidelines. The more recent *Guidelines on the applicability of Art 101 TFEU to horizontal co-operation agreements* (OJ C 11, Jan 14, 2011) address standardization at Sec. 7 (see in particular paras 277–324).

[50] As known, network effects (otherwise described as 'economies of scale in consumption') occur as the utility obtained by a consumer from a given article grows when, and to the extent that, others use the same product. This phenomenon acts as a powerful catalyst of demand, with the result that once a first demand for a given article has been created, it will be self-perpetuating, continuing to attract more and more consumers to its network (*direct* network effects). And the more the number of purchasers of the product grows, the more products *compatible* with it will be launched on the market, and this will make the basic product even more appealing to consumers (*indirect* network effects).

[51] Think of certain breakthrough pharmaceutical innovations, such as *latanoprost* for the cure of glaucoma.

[52] Network effects are emphasized in the market scenario of digital information technologies, often characterized by a *systemic* form of competition. This term describes a type of market on which two or more firms compete, offering consumers not a single article but a series of articles which are not only standardized in the sense described above (that is, manufactured in such a way that they can communicate with one another), but linked by a functional bond so that consumers only benefit from joint purchase of the whole set of those articles. One example is the close functional link between the hardware of a personal computer and its operating system, and between those two items and programs such as browsers that allow users to surf the Internet.

[53] C. Shapiro and M. L. Katz, 'Antitrust in Software Markets', in J. A. Eisenach and T. M. Lenard (eds), *Competition, Innovation and the Microsoft Monopoly: Antitrust in the Digital Market Place*, Springer, 1999, 30.

[54] When a standard becomes dominant on the market, and there are no competing standards based on alternative technologies, each patent essential to the standard (SEP) may confer to its owner a dominant position (unless it concerns *optional* technical features which, even if not implemented, don't undermine the compatibility of a standardized product with another). In fact, in relation to the specific standard, every SEP could be configured as an essential facility indispensable for manufacturing the standardized product (at least, in theory). M. Carrier pointed out that 'Although they are called standard essential patents, not all declared patents actually are essential': based on recent studies, right holders tend to over-declare the status of SEP, to add value to their patent portfolio. See M. Carrier, 'What You Need to Know About Standard Essential Patents', *CPI Antitrust Chronicle*, 2014, issue 2). In these cases, the SEP holder must give a licence at FRAND conditions to every willing licensee asking for it. On this point see the judgement of the European Court of Justice on the *Huawei* case, in which the Court held that '[...] the patent at issue is essential to a standard established by a standardization body, rendering its use indispensable to all competitors which envisage

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even if the latter may be technically superior, as happened, for example, in the famous case of video recorders, where the success of the VHS technology *de facto* ousted the competitor Betamax from the market.

The anti-competitive effect is even wider in relation to secondary markets. In the IT sectors, competition between products compatible with the standardized *first* product means creating market niches which did not exist, and were not even originally contemplated by the owner of the standard.

All this brings us back to the concern referred to above: in high-tech sectors, in the *absence* of compatibility between the standard product and a competing product which is trying to enter the market (the standard owner, thanks to IPR protection, will be able to deny such compatibility in order to prevent its customers from migrating to a competing product), and *in the presence of network effects*, the probability of a changeover by customers to the second product is minimal if not actually nil, even if it is technically superior to the first. All this – related to aforesaid (direct and indirect) network effects – entails great risks for competition well beyond the degree of restriction *normally* inherent in the proprietary paradigm (that is, exclusion from a market, not only from a technological advancement).

It also entails risks for innovation, whose dynamic process can in practice be blocked, or at any rate slowed down. As observed by Professor Robert Pitofsky, former head of the US Federal Trade Commission, '*the exclusionary rights granted by intellectual property protection, coupled with trends toward standardisation due to network effects, threaten to diminish market competition. Where this results in monopoly or near-monopoly, there can be negative effects not only on price and output, but also on innovation …*'.[55]

The Commission's 'open' approach to TLC standards encouraged, as hinted, the progressive application, by European jurisprudence and the Commission itself, of the EF doctrine to IP-protected advanced technological innovation. This was carried out in well-known decisions by the Commission and the ECJ (national courts

manufacturing products that comply with the standard to which it is linked. *That feature distinguishes SEPs from patents that are non essential to a standard and which normally allow third parties to manufacture competing products without recourse to the patent concerned and without compromising the essential functions of the product in question*'. On the market power conferred by a SEP cf. also the Decision of the Commission of 13 February 2013, *Google/Motorola Mobility,* case COMP M.6381: '[...] each SEP can be considered as a separate market in itself as it is necessary to comply with a standard and thus cannot be designed around, i.e. *there is by definition no alternative or substitute for each such patent*. The relevant market in this case is thus the (at least) EEA-wide market for the licensing of each of the relevant SEPs that Google will acquire from Motorola Mobility following the transaction' (§ 61). This appears quite close to a non-rebuttable presumption of dominance. Now, since a non-rebuttable presumption is in fact a rule of law, there are reasons to agree that the presumption should, vice versa, be declared rebuttable (as suggested by Advocate General Whatalet in his opinion in the *Huawei* case). This, especially, because on the same market can coexist several, alternative, standards: hence the judges should continue assessing, case-by-case, a situation of actual, effective dominance. For a critical analysis of the connection between standard essential patents and market dominance see A. Layne-Farrar and A. J. Padilla, 'Assessing the Link Between Standard Setting and Market Power', available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1567026.

[55] R. Pitofsky, 'Antitrust and Intellectual Property: Unresolved Issues at the Heart of the New Economy', *Berkeley Tech. L. J.*, 2001, 535.

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aside), for example, from *Magill*[56] to *IMS Health*[57] and *Microsoft*[58] up to *Motorola*,[59] *Samsung*[60] and *Huawei*.[61] The evolution, as known, has culminated in the position whereby holders of IPRs on technologies that have been (s)elected by Standard Setting Organizations (SSOs) – or however assessed by Courts or Authorities as standard or essential to a standard (thus, respectively, standards *de jure* or *de facto*) have a duty to grant FRAND licences to willing licensees:[62] even up to making, the holders themselves, the 'first move' in offering such licences (*Huawei*).[63]

7. A seeming paradox

The duty to license SEPs (and, at large, IP protected EFs) at FRAND rates does not sanction any tortious behaviour. The innovator created, and patented, an invention of such level that it deserved to become a standard. And of course patent law grants the statutory right to exclude unauthorized third parties from making use of the patented technology. Now, just when the patented technology has achieved the standard status, *de iure* or *de facto* – antitrust marches in, 'interfering' with said statutory right to exclude. Thus, that highly deserving and legitimate patent holder must give up the exclusive right that traditionally follows from the patent entitlement itself.

At first sight, this outcome may seem a paradox – and one of punitive flavour. The more an invention is acknowledged as top-notch, so as to be designated as standard, thus the higher the merit of the IPR holder, the less likely will she retain the statutory right to exclude unauthorised third parties from using the intangible asset[64].

In truth, there is no paradox at all. The remuneration resulting from a stream of royalties may well meet – or even exceed, depending on the licensees' sales' prowess and success – the forecasted profits of the SEP holder. Consequently, investments in research and innovation may be incentivised. On the

[56] ECJ, 6 Apr. 1995, joined cases C-241 and 242/1991, *RTE and ITP v. Commission* (so-called '*Magill*' case).

[57] ECJ, 29 Apr. 2004, Case C-418/2001, *IMS Health v. NDC Health*.

[58] EU Tribunal, 17 Sep. 2007, Case T-201/2004, *Microsoft v. Commission*.

[59] Commission Decision, 29 April 2014, *Motorola – Enforcement of GPRS standard essential patents*, case AT.39.985.

[60] Commission Decision, 29 April 2014, *Samsung – Enforcement of UMTS standard essential patents*, case AT.39.939.

[61] *ECJ, 16th July 2015, Huawei Technologies Co. Ltd. v. ZTE Deutschland GmbH, case C-170/2013, in O.J. 14th September 2015, C-302, p. 2.*

[62] On the broad perspective of the shift of legal models see F. M. Abbott, 'Rethinking Patents: From "Intellectual Property" to "Private Taxation Scheme"', in P. Drahos, G. Ghidini and H. Ullrich (eds), *Kritika: Essays on Intellectual Property*, vol. I, Edward Elgar, 2015, 1.

[63] *ECJ, 16th July 2015, Huawei Technologies Co. Ltd v. ZTE Deutschland GmbH, case C-170/2013, in O.J. 14 September 2015, C-302, p. 2.* In parallel with the *Huawei* decision see, in the US, *Apple v. Motorola*, 869 F. Supp. 2d 901, 914 (N.D. Ill. 2012), *rev'd*, 2014 WL 1646435. As known, years before, *Ebay Inc. v. MercExchange LLC*, 547 U.S. 388 (2006), although on a different rationale, announced the 'crisis' of exclusionary dogma.

[64] Along these linese, see G. Colangelo in *Il mercato dell'innovazione: brevetti, standards e antitrust (Innovation Market: Patents, Standards, and Antitrust)*, in *Quaderni di Giurisprudenza Commerciale*, 397, 2016, 64 *et seq.*

other side, the implementers' duty to pay the agreed FRAND royalties will usually allow the SEP holder to maintain a significant competitive advantage, as its competitors may be burdened by additional costs, the learning time for using the licensed technology and, more in general, an inferior knowledge of said technology, whose potential may extend further to the subject-matter that is claimed and disclosed in the patent[65]. Besides, the SEP holder may also have access to the technologies developed by third parties at FRAND terms, eventually on a cross-licensing basis[66].

By the way: if inclusion into the standard and the FRAND licensing system were actually perceived as punitive by SEP holders, we would be at a loss to understand why they would put such efforts – over-disclosing their patents as essential when they are not and even trumping cards, as in the notorious *Rambus* case[67] – in pushing their technology to be elected as standard. In fact, SEP holders fight to become *guaranteed earners of potentially unlimited royalty streams.*

8. A regulatory perspective

In conclusion, the SEPs/FRAND legal framework, an expression of the general *essential facilities doctrine* (EFD), that prescribes a duty to license indispensable IPRs (*de jure* or *de facto* – see

[65] These considerations were first suggested and developed by W. J. BAUMOL, in *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism*, Princeton University Press, 2002. As Baumol observes, amassing royalties can be a profitable instrument for recovering investments, so much so that in some cases it is more lucrative than exercising exclusionary rights. Baumol further notes that the licensing of a certain technology to third parties grants the owner a certain exclusive lead time over licensees because they will always need a good amount of time to properly learn how the intellectual assets work. Hence, competitors will need time to exert effective pressure on the market and the IP owner can use such time to build a good reputation (and tie consumers to its product) or improve upon its own technology, which would end up competing against the outdated version sold by the licensees. See, for example, the cited decision of the Supreme Court of US in *eBay* case [*eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006)] especially with reference to the concurring opinion of Justice Kennedy (joined by Justices Stevens, Souter and Breyer). With regard (also) to *eBay* see R. PERITZ, *The Competition Question Unasked in Actavis: What Is the Scope of the Patent Right to Exclude*?, 28 *Antitrust*, 2013, 48. See also R.P. MERGES, J. M. KUHN, *An Estoppel Doctrine for Patented Standards*, 97 *California Law Review*, 2009, 28.

[66] Including beyond the provisions relating to compulsory licenses for high-profile dependent innovations as per Article 31(l) of the TRIPS Agreement and Article 71 of the Italian Industrial Property Code.

[67] The conduct of Rambus, which did not disclose the essentiality of its patents to the JEDEC—the SSO engaged in the development of SDRAM and DDR SDRAM standards—was examined by the antitrust authorities, as well as European and US courts, with contradictory results. The European Commission, with decision of 9 December 2009, *Rambus*, COMP/38636, C(2009) 7610, accepted the commitments proposed by Rambus, whereby the company "*agree*[d] *not to charge* [any royalty] *for the SDRAM and DDR standards that were adopted by JEDEC during the time in which Rambus was a member and engaged in its allegedly intentional deceptive conduct*" and "*commit*[ed] *to a maximum royalty rate of 1.5 % for the later generations of standards adopted by JEDEC after Rambus' resignation*" (section 55). In the US, the FTC decision finding Rambus in violation of the Sherman Act was later annulled by the Court of Appeals (D.C. Circuit), by ruling of 22 April 2008 (522 F.3d 456), in view of the fact that the FTC "*expressly left open the likelihood that JEDEC would have standardized Rambus's technologies even if Rambus had disclosed its intellectual property. Under this hypothesis, JEDEC lost only an opportunity to secure a RAND commitment from Rambus. But loss of such a commitment is not a harm to competition from alternative technologies in the relevant markets*".

Magill, *IMS Health* and *Microsoft*[68]) is to be regarded as *a regulatory mechanism*, designed to prevent the market foreclosure that might arise if indispensable or irreplaceable technologies could be exploited as a monopoly[69]. A regulatory mechanism that encompasses, as said, the right holders' entitlement to a 'fair' compensation.

This regulatory character must be affirmed even when – specifically with respect to patents that are declared essential in relation to a formally established ("*de jure*") – standard said duty formally follows from the patent holder's own contractual commitment towards the Standard Setting Organization (SSO)[70]: a commitment stipulated but under the sword of Damocles of the loss of the status of standard 'threatened' in order to safeguard the collective interest to the competitive ecosystem of the market.

Nor could that regulatory character be downplayed by arguing that the refusal to license is just a simple abuse of dominant position, as such enforced[71].

The argument would ignore an important *caveat*: in the limited tool-kit of antitrust language, the term 'abuse', can be used, in the cases we're

[68] ECJ, 6 April 1995, joined cases C-241 and 242/1991, *RTE and ITP v. Commission* (so-called '*Magill*' case); ECJ, 29 April 2004, Case C-418/2001, *IMS Health v. NDC Health*; CFI, 17 September 2007, Case T-201/2004, *Microsoft v. Commission.*

[69] In its essence, it is the approach of Article 2597 of the Italian Civil Code. It affirms the duty of a legal monopolist to contract with any party requesting it, complying with the equal treatment principle: I also refer to *Relazione del Guardasigilli* (Minister of Justice) regarding said Article, at §1046, according to which "*such principle is introduced for consumers' protection required to mitigate the suppression of competition, taking into account that the legal monopoly regime, for a number of reasons (not all of them contingent), extends beyond particular sectors (as the railways) which were traditionally considered with regard to the said phenomenon*" (my translation). This concept, and rationale, is substantially shared by the *Commission's Guidelines on horizontal co-operation agreements* (see fn. 49, above), where needs primarily of antitrust nature, intensified over time, imposed the mechanism of FRAND commitments.

[70] Scholars like Hanns Ullrich correctly draw attention to the contractual nature of the FRAND licensing commitments undertaken by SEP holders towards the SSO. In light of the *Huawei/ZTE* decision, Ullrich emphasizes the "self-sufficiency" under civil and commercial law principles—rather than competition law ones—of those licensing commitments where the original contractual obligation was assumed by the innovator in order to (and in exchange for) the innovator's technology being designated as standard. See H. ULLRICH, *FRAND Access to open standards and the patent exclusivity: Restating the principles*, Max Planck Institute for Innovation & Competition Research Paper No. 17-04, 2017, available at: https://ssrn.com/abstract=2920660.

[71] The pro-competitive rationale of the duty to license at FRAND terms is consistent with the original recommendations from the European Commission for adopting 'open' telecommunication standards at equitable and non-discriminatory conditions, which proved to be a decisive tool to promote the liberalisation policy in the European telecommunications sector. See *Communication from the Commission – Intellectual Property and Standardisation*, COM (92)445, of 27 October 1992 and *Communication from the Commission – Towards a new framework for Electronic Communications infrastructure and associated services, 1999 examination of the regulatory network for communications, 1999 Communications Review*, COM (1999) 539, of 10 November 1999. See also recital 7 of Council Directive 92/38/EEC of 11 May 1992 on the adoption of standards for satellite broadcasting of television signals and recital 7 of Directive 95/47/EC of the European Parliament and of the Council of 24 October 1995 on the use of standards for the transmission of television signals. And is also obviously consistent with the Commission's Guidelines on the applicability of Article 101 TFUE to horizontal co-operation agreements of 2011, which state that "*to ensure effective access*" to the standard, "*the IPR policy* [of the SSO] *would need to require participants wishing to have their IPR included in the standard to provide an irrevocable commitment in writing to offer to license their essential IPR to all third parties on* [FRAND] *terms*". See *Communication from the Commission — Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements* (2011/C 11/01) of 14 January 2011, par. 285 *et seq.*

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dealing with here, only in a 'secondary' sense, so to say, with respect to the refusal to comply with the duty to license.

Now, this situation is quite distinct from the intrinsically illegitimate exercise of an exclusive right – for instance, to partition markets, to impose unjustifiably high prices or to obtain exclusive rights "*to which* [the patentee] *was not entitled* […] *or to which it was entitled for a shorter period*", such as in *AstraZeneca*[72]. In such latter cases, a true 'primary' abuse occurs, and the consequences are just sanctions. Just sanctions: the very idea of a 'fair compensation' of the abusing IPR holder would be inconceivable—nay, surreal!

9. The heart of the matter: assessing FRAND royalties. A systemic clue

The legal scenario shortly described above, culminating with the substantial application of the EF doctrine to SEPs. constitutes an international *acquis*, shared in its main lines in Europe and in the US, as well as in other major regional legal orders – such as China and India – involved in the development and use of technology standards[73].

Accordingly, the 'heart of the matter' – the main focus of the attention of judges and scholars (as well as practitioners) is today on the principles and criteria for determining the FRAND terms (and the negotiation process therefor:see *Huawei*), and in particular the amount of royalties that willing licensees, 'implementers', have to pay to the 'owner'/ innovator.

For this purpose, a need for coherence with the intrinsic pro-competitive rationale of the duty to license emerges vis-à-vis the principle of non-contradiction ('horizontal' non-contradiction, so to say: between one set of positive law, IP's, and another, antitrust).

Not only.

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72 ECJ decision of 6 December 2012, *AstraZeneca v. Commission*, C-457/10, ECLI:EU:C:2012:770. In this case the companies were charged with false statements made before the patent authorities in order to obtain an illegitimate extension of the patent exclusivity period.

73The US courts and authorities distinguished, firstly, by proposing the so-called "anti-injunction approach", according to which a FRAND licensing commitments would have been incompatible with an application for an injunction against an (alleged) infringer who was willing to enter into a license agreement ("willing licensee"). See e.g. the decision by Judge Posner (afterwards partially overturned on appeal) in *Apple Inc. v. Motorola Inc.*, 869 F.Supp.2d 901, 911 (N.D. Ill. 2012): "*I don't see how, given FRAND, I would be justified in enjoining Apple from infringing* [the patent] *unless Apple refuses to pay a royalty that meets the FRAND requirement. By committing to license its patents on FRAND terms, Motorola committed to license* [the patent] *to anyone willing to pay a FRAND royalty and thus implicitly acknowledged that a royalty is adequate compensation for a license to use that patent. How could it do otherwise? How could it be permitted to enjoin Apple from using an invention that it contends Apple* must *use if it wants to make a cell phone with UMTS telecommunications capability – without which it would not be a cell* phone" (emphasis in the original, 18). Further, US courts were the first to propose the numerical determination of FRAND royalties. See Judge Robart's decision in *Microsoft Corporation v. Motorola, Inc.*, No. C10-1823 JLR, 2013 (W.D. Wa. 25 April 2013). For a survey of the Chinese approach to FRAND licensing commitments, see Y. B. LI, *Antitrust Correction for Qualcomm's SEPs Package, Licensing and Its Flexibility in China*, in *IIC*, 2016, 336; J LEE, *Implementing the Frand Standard in China*, in *Vand. J.Ent & Tech. L.*, 2016, 37; D. Sokol, W. Zheng, *Frand In China*, In *Tex. Intell. Prop. L.J.,* 2013-2014, 71. As To Indian Case Law, See R. Viswanath, *Demystifying the Indian FRAND Regime: The Interplay of Competition and Intellectual Property*, in *JIPR*, Vol. 21(2), 2016, 90.

A parallel need of coherence indeed emerges also in a 'vertical' perspective, i.e. that of the functional 'hierarchy' of rights (*all*) of constitutional rank.[74] [75].

As just reminded, the cases we are discussing here are (among) those where a legitimately acquired exclusive right can be deprived of its excludent power against a fair compensation of the rightsholder. This can happen upon Courts' or Authorities' adjudication based on a law that in compliance with the constitutional order, hence the evoked hierarchy of rights, privileges a 'higher' collective interest vs a private one. A common case is that of the expropriation, vs a 'just' compensation, of a piece of privately owned land in order to install and service a public infrastructure, like an electroduct.

Now, when this happens, the compensation the landowner is entitled to must not be of such entity as to make it impossible or excessively grievous for the public authority to execute the expropriation.

Analogously, in the cases we're discussing here.

The satisfaction of the collective interest to defend and preserve a truly competitive market, enjoying a higher constitutional rank vs the IPR holder's interest/right to a compensation, requires that the concrete assessment and attribution of a 'fair', appropriate remuneration[76] will not de facto contradict/frustrate the achievement of said satisfaction.

In clearer words, the royalties due to the (legitimate and 'deserving', let's remember!) private creator of the top level innovation qualified as EF/SEP should not be so high as to practically obstruct the willing licensees/'implementers' to enter the market and operate thereon. Precisely to avoid this, the assessment of said royalties *should not be remitted just or however primarily to private agreements and/or 'market values'* – commonly defined by statistical 'averages' based on negotiation practices which typically reflect the superior contractual position of the stronger private party.

[74] As known, even universal human rights have a hierarchy. For instance, the right to life, founding the repeal of the death penalty, cannot be subject to normative exceptions, as e.g. the right of property and to do business vice versa can.

[75] Such are also, of course, the right to property and the right to do business (Art 16 CFREU).

[76] Appropriate, *not* maximized: I borrow, as an indication of general scope, the punctualization of the ECJ in *Premiere League* Joined Cases C-403 and 429/08, ECLI:EU:C:2011:631, *Premier League Ltd* v. *QC Leisure* and *Murphy* v. *Media Protection Services Ltd*, 4 October 2011, paras. 108 and 109, where the Court stated that: "*the specific subject-matter of the intellectual property does not guarantee the right holders concerned the opportunity to demand the highest possible remuneration. Consistently with its specific subject-matter, they are ensured – as recital 10 in the preamble to the Copyright Directive and recital 5 in the preamble to the Related Rights Directive envisage – only appropriate remuneration for each use of the protected subject-matter*". Although the decision relates to copyright remuneration in view of the Copyright and Related Rights Directives recitals, we see no reason to state that this is not a general principle for all the intellectual and industrial property rights in general. Further, similar benchmark considerations were made by the very CJEU in cases concerning patents for inventions, cf. Judgment of 14 July, *Merck/Stephar*, C-187/80, ECLI:EU:C:1981:180, par. 9-10 (where: "*the substance of a patent right lies essentially in according the inventor an exclusive right of first placing the product on the market* […which] *enables the inventor, by allowing him a monopoly in exploiting his product, to obtain the reward for his creative effort without, however, guaranteeing that he will obtain such a reward in all circumstances*"); see also Judgment of 5 December 1996, *Merck/Primecrown*, C-267/95 and C-268/95, ECLI:EU:C:1996:468, par. 31.

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This position (on which Hanns Ullrich substantially concurs in a recent essay[77]) is stimulated on the one side, by the hinted need of systemic ('vertical') coherence, and on the other by a more attentive reflection (inspired by Guido Calabresi himself at a recent Harvard Conference in honour of Professor Jerome H. ["Jerry"] Reichman) on the meaning of "from property to liability" as expressed in his, and Douglas Melamed's, seminal " Property Rules, Liability Rules, and Inalienability: One View of the Cathedral"[78].

When a legitimately acquired exclusive right is bound to abandon (except, repeat, against sheer free riders) its typical - statutory! - excludent power in order to avoid otherwise inescapable market foreclosures, this can only happens in the name of a superior collective interest privileged by a legal principle compliant with the constitutional order. In such situation, the ultimate overarching criterion for assessing the 'fair' compensation to the private party is the functional coherence of that assessment *not* just and axiomatically with 'market benchmarks' but with the rationale and purpose of that legal principle. Which, in the matter at stake, fosters the compatibility of the private compensation with the primary goal of preserving an effective competition.

10. For a normative harmonization, at international level, of pro-competitive criteria of assessment of FRAND terms

As known, in today's practice, FRAND terms are determined on a case-by-case basis, further to private agreements, arbitrations or, in default, by Courts' adjudication: in an overall context where. In such context, the goal of ensuring an ultimately pro-competitive balance of the conflicting interests is not clearly pursued following the polar star of the dual coherence just highlighted.

Now, the need of harmonization in the standard-setting context, international by nature and participated by SSOs and stake holders from all over the world, seems all too evident.

This need might be conveniently pursued through the elaboration of specific *basic* guidelines (basic: with wiggle rooms for adaptation to the single national jurisdictions) reflecting that dual functional coherence. Guidelines that should be incorporated in SSO's policies, and preferably also in regulatory provisions – better if at international or at least regional level, and then applied by Courts or Competition Authorities.

Providing a harmonized balanced pro-competitive playing field might contribute to avoid that the pure remittance to private agreements or to market practices might reflect possible inequalities of bargaining power of the parties, and however shape the legal framework as an Harlequin dress in clear conflict with the needs of reliability, transparency, and harmonisation of the standard setting context.

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[77] H.Ullrich, Technology protection and competition policy for the information economy—From property rights for competition to competition without proper rights?, in Max Planck Institute for Innovation and Competition Resarch Paper No 19-12, at p. 16.

[78] In Harvard L. Rev. 1972,1089.

Such harmonization would contribute to pre-empting the risk of conflicting approaches in different jurisdictions, either stemming from 'technical' reasons (given the variety and different characteristics of the SSOs), or fuelled by geopolitical divisions.

This need I have addressed – also in the light of a comparative overview of leading US and UK jurisprudence – in a recent essay co-written with a young talented scholar, Giovanni Trabucco, Ph.D candidate at Bocconi University. There we tentatively specified some ultimately pro-competitive criteria for defining, even at international level, FRAND royalties. May I here refer to that essay for a detailed description of such criteria[79].

11. Stage Three: Antitrust 'Interfering' with the IP Entitlement Itself

Although less frequently (so far), the *acquisition* itself – the *entitlement* of IPR – and, in particular, of patents[80] (or Supplementary Protection Certificates (SPCs),[81] has been deemed capable of constituting an abuse of a dominant position; if that acquisition occurred either in straight violation, or by astute manipulation, of the rules governing the right 'to' the IPR (and, of course, in the presence of market power conferred by, or however linked to, the entitlement). The best known case to date is *AstraZeneca*, in which an SPC had been obtained on the basis (also) of false information provided to the patent offices.[82]

[79]E.g. precise identification of the technology acknowledged as 'essential', ex ante assessment (ante achieving the status of standard') of the value of the patent; setting limits to the so called royalt stacking', etc: for a detailed overview and discussion see Ch.10 of the book "The Interplay Between Competition Law and Intellectual Property – An International Perspective", G. Muscolo and M.Tavassi, eds., Wolters Kluwer, 2019.

[80] Or copyrights and/or neighbouring rights, especially in the area of 'technology copyright'. Consider, for example, illegitimate copyright claims on computer programs actually developed by mere 'language' translation from another holder's original software.

[81] The SPC was introduced into the European patent system by Council Regulation (EEC) 1768/1992, *concerning the creation of supplementary protection certificate for medicinal products*, in O.J. of 2 July 1992, L-182, p. 1. The purpose of this mechanism is, as is well known, to ensure that the twenty-year period of exclusivity is not eroded by the time required to obtain the marketing authorization. The sale of a medicinal product, in fact, is subject to the issue of an administrative authorization by the competent Health Authority (in Italy, the Pharmaceutical Agency – Aifa), which must ensure that it is effective and does not endanger human health and the environment. To give the pharmaceutical patent holder an adequate return on investment, therefore, Complementary Protection Certificates extend the term of protection for the same period of time as that between the date of filing the patent application and the date of the first marketing authorization, with a maximum time limit of five years beyond the natural expiry of the patent. For further analysis see R. Pardolesi and G. Colangelo, 'Estensione temporale della protezione brevettuale e concorrenza: il caso dei certificati complementari', in *Corriere giuridico*, IPSOA, Milan, 2004, 533.

[82] CGUE, 6 Dec. 2012, case C-457/2010, *AstraZeneca Ab and AstraZeneca plc. v. Commission*. In particular, the company *AstraZeneca* had applied for and obtained in several EU countries an SPC on the active ingredient omeprazole; the length of this SPC was calculated based on the date of the initial marketing authorization, as notified by *AstraZeneca*, which, however, did not correspond to the real date. *AstraZeneca*, in fact, cunningly applying an alternative interpretation of the concept of marketing authorization (specifically, *AstraZeneca* 'believed' it was obliged to communicate not the date on which it received authorization to market its product in one of the Member States but that on which it obtained permission to set the price), gave as the MA date as 21 March 1988, when it was actually received on 15 April

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After *AstraZeneca*, another case of abusive 'entitlement' (again, of an SPC) was assessed by the Italian Competition Authority, AGCM) in the *Ratiopharm/Pfizer* case.[83] AGCM's decision was eventually confirmed by the Italian Supreme Administrative Court, Council of State. The case is more complex, and interesting than *AstraZeneca*, in that Pfizer's behaviour – basically lawful in the abstract, according to patent law – was overall assessed as an abuse of dominance. The question focused on the determination of the extent to which the dominant company could exercise the right to a delayed request of a divisional patent on an anti-glaucoma drug, recognized as the *de facto* standard.[84] This delay allowed *Pfizer* to obtain (in turn, belatedly) an SPC in Italy and Spain, where it had not been requested when filing – 13 years earlier – the original patent. By this manoeuvre, Pfizer was able to extend the protection on the active ingredient by nearly two years, correspondingly delaying the entry of competitors into the Spanish and Italian markets.[85] To reiterate, these were all 'legal' steps, each one corresponding to faculties conferred by IP law.[86] But their synergy, and the occurrence of several revealing

1987, almost one year earlier! In this way, the company managed to obtain a longer SPC than it was entitled to. In US jurisprudence see the leading case *Walker Process*, in which the federal courts considered the undue acquisition of a patent subject to antitrust scrutiny (*Walker Process Equipment Co. Inc. v. Food Mach & Chemical Corp*., 382 US 172, 1965).

[83] AGCM, 11 Jan. 2012, case A431, *Ratiopharm/Pfizer*, prov. no. 23194, in Bulletin no. 2, 2012, cancelled by TAR (Regional Administrative Tribunal) of Lazio – sole Appeal Judge against Competition Authority – in its decision of 3 Sep. 2012, no. 7467, *Pfizer Italia s.r.l., Pfizer Health A.B., Pfizer Inc. v. AGCM*, but subsequently reconfirmed by the State Council, sentence of 12 February 2014, no. 693, *AGCM v. Pfizer Italia s.r.l., Pfizer Health Ab and Pfizer Inc.* A case similar to the Italian *Pfizer* case was brought to the attention of the European Commission by the Spanish pharmaceutical company *Almirall*. *Almirall* complained that, in order to exclude potential competitors from the market, German group *Boehringer Ingelheim* had filed a series of allegedly 'unmeritorious' (for lack of inventive step) patent applications to the European Patent Office. The case, which would surely have attracted the attention of many commentators, has been settled. See W. Hull, 'The Application of EU Competition Law in the Pharmaceutical Sector', *Journal of European Competition Law & Practice*, 2012, 473.

[84] The dominant position held by *Pfizer* in the market for drugs similar to prostaglandin, one of which is the active ingredient *latanoprost* (i.e. the protected substance), originated from the fact that this ingredient had established itself as the *de facto* standard of the prostaglandin market, due to its specific characteristics (i.e., the low incidence of side effects) that made it by far the most effective treatment for glaucoma.

[85] As pointed out by AGCM, because of the obstructionist conduct of Pfizer the actual placing on the market of generic drugs occurred with a delay of several months, causing damages not only to the manufacturers of the same, but to the entire national health system, considering the higher cost of 'branded products' compared to 'generic'. In this regard, the AGCM noted that, in most cases, the generic product is available on the market almost the day after the expiry of the patent protection (para. 101 of the decision). The effect, therefore, was the anti-competitive foreclosure that the Commission, acknowledging the objections made by upholders of the economic doctrine of the Chicago school regarding the overly formalistic approach adopted in applying art. 102 TFEU, established as the main element in assessing abusive conduct. Cf. Commission Communication entitled *Guidance on the Commission's priorities in applying Article 82 of the EC Treaty to Abusive Conduct by Dominant Undertakings*, in OJEU 24 Feb. 2009, C-45, p. 7, § 19. For further details, see G. Ghidini and E. Arezzo, 'L'assalto fallito? Riflessioni sulla rivisitazione in chiave "più economica" dell'abuso di dominanza' [The Failed Assault? Reflections on the Reinterpretation of "More Economical" Abuse of Dominance], *Mercato, Concorrenza e Regole*, 2010, 115. Cf. also A. Witt, 'The Commission's Guidance Paper on Abusive Exclusionary Conduct – More Radical Than It Appears?', *European Law Review*, 2010, 214.

[86] Cf. Council of State, *AGCM v. Pfizer*, cit.

circumstances, persuaded the judges that the overall manoeuvre constituted an 'abuse of right' – the right *to* the entitlement.

The attention of the judges was caught, in particular, by the absence of a convincing justification for originally omitting to request the SPC in those two countries; then, by the fact that, despite claiming a new paediatric use in requesting the divisional patent on which the SPC was based, *Pfizer* had not marketed any new product, nor any new version of the same anti-glaucoma drug.[87]

Thus, Pfizer's behaviour was sanctioned for instrumentally using patent procedures for the sole purpose of achieving, and achieving in fact, anti-competitive effects (hindering competition from generic companies) – in this sense abusing[88] its dominant position.[89] A case, thus, of tortious 'strategic patenting'.

12. A Note on 'Strategic Patenting'

The term 'strategic patenting'[90] refers to a yet largely unregulated set of heterogeneous practices (often picturesquely named by economists and industrial managers), essentially aimed at strengthening the patent arsenal, and its competitively 'offensive' thrust, typically, but not exclusively, of large-sized companies.[91]

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87 The latter element in particular seemingly constituted the key evidence of the abusive nature of Pfizer's conduct. The Council held that the evident absence of any specific dedicated investments to the alleged new paediatric use could not but indicate 'the intent to obtain the new patent solely for the purpose of bringing the expiry of the patent in line with that of the remaining European countries'. The circumstance that *Pfizer* had not marketed any new product (not even in relation only to the best dosage, on which the divisional application seemed to focus) openly contradicts the 'recovery of investment' *rationale* of patent protection and suggests that the strategy adopted was intended only to extend the term of protection on the original active ingredient.

88 Pfizer's conduct was expressly ascribed by the judges to the general category of 'abuse of rights'.

89 Needless to say, even in the absence of a dominant position, patent misuses can *per se* be enforced through the IP regime, e.g. by judicial declaration of invalidity or administrative annulment.

90 See E. Arezzo, 'Strategic patenting e diritto della concorrenza: riflessioni a margine della sentenza *Ratiopharm/Pfizer*', *Giurisprudenza commerciale*, 2014, issue 2, 404, p. 420, and A. Muselli, 'La difficile riconciliazione del diritto della proprietà intellettuale e del diritto della concorrenza: note a margine dei casi AstraZeneca e Pfizer', *Concorrenza e Mercato*, 2013, 759, p. 770; H. Ullrich, *Strategic Patenting by the Pharmaceutical Industry: Towards a Concept of Abusive Practices of Protection*, in J. Drexl and N.L. Lee (eds), *Pharmaceutical Innovation, Competition and Patent Law: A Trilateral Perspective*, Edward Elgar, 2013, 241.

91 For example: the creation of a dense network of patents – a so-called *patent thicket* or *patent cluster* – concerning different formulations of a single invention, whose purpose is to create uncertainty about the scope (and, in the case of continuous deposit of secondary applications, the term) of protection; the filing of divisional applications for the same purpose; the reformulation of a pharmaceutical product (i.e. from tablets to pills), so as to prevent potential competitors from obtaining a market authorization for their own equivalent drugs by employing the abbreviated procedure allowing them to use the studies on the efficacy of the active substance carried out by the originator company. For an accurate list of the various forms of 'strategic patenting' see C. Desogus, 'Nuove frontiere tra regolazione, proprietà intellettuale e tutela della concorrenza nel settore farmaceutico: le pratiche di brevettazione strategica', *Rivista della regolazione dei mercati*, 1/2015, 59; N. Tuominen, 'Patenting Strategies of the EU Pharmaceutical Industry – Regular Business Practice or Abuse of Dominance', *World Competition*, 2012, p. 27; S. Priddis and S. Costantine, 'The Pharmaceutical Sector, Intellectual Property Rights, and Competition Law in Europe', in S. Anderman and A. Ezrachi (eds), *Intellectual Property and Competition Law: New Frontiers*, Oxford University Press, 2011; L Kjølbye, Article 82 EC as Remedy to Patent System Imperfections: Fighting Fire with Fire?', *World Competition*, 2009, 163.

From an economic perspective, these practices are essentially the result of the dual trend towards concentration, particularly intense in the pharmaceutical market, ever growing to an oligopolistic framework, and the slowing down of breakthrough innovation.[92] From the legal viewpoint, as these practices often make use of rights guaranteed by the IP legal regime, the fine line of the border between lawful activities and conducts that are tantamount to an 'abuse' must be cautiously sought for in the light of the specific circumstances of the specific case. To emphasize, in terms of specific *objective* circumstances: on the one hand, the subjective intention to exclude competitors is 'physiologically inseparable' from competitive struggles; on the other, such an element is no requisite for enforcing, through cease-and-desist injunctions, unfair acts of competition, i.e. competitive torts of '*lesser*' (merely inter-individual) impact on competition than 'antitrust abuses'.[93]

It is possible, and opportune to avoid any a priori *en bloc* repressive approach to 'strategic patenting',[94] by separating the wheat from the chaff: with a good grain of salt, and an Aristotelian attention to the circumstances of each single case. And thus, for example, I would draw a distinction, with respect to cases of 'patent hoarding', between instances where the 'raked in' patents are actually intended to strengthen the efficiency and productivity of the patent holder's core business, and other cases in which the hoarding concerns patents which the enterprise does not use or plan to use, but whose possession allows it to pull the rug out from under the feet of rivals engaged in the development of substitutive technologies and, to that end block the entry of new entrants. Or, as happens with so-called PAEs (Patent Asserting Entities), to promote sham threats and litigations against small enterprises in order to 'squeeze' undue royalties to avoid financially unbearable litigation costs; or, similarly, as in *Servier*,[95] to amass large numbers of patents (some involving 'zero inventive step'), to achieve blocking effects. Following the same 'rule of reason' line, I would not across-the-board condemn 'product hopping' (e.g., changing the method of administration of a drug as the object of a new patent incorporating the same active principle) before having verified that the new proposed method is a 'cosmetic' bluff rather than an actual and albeit

[92] See P. Errico, 'Farmaci off-patent e diritto della concorrenza', in *Studi in memoria di Paola A.E. Frassi*, Giuffrè, 2010, p. 265; EFPIA, The European Federation of Pharmaceutical Industries and Associations, *The Pharmaceutical Industry in Figures*, Key Data, 2014, available at: https://www.phar-in.eu/wp-content/uploads/2014/05/Figures_2014_Final.pdf, p. 3; *Pharmaceutical Sector Inquiry*, Final Report, cit., § 80.

[93] In other words, on the logic and systemic plane, it would be contradictory to request evidence of 'the hostile will' in order to grant injunctions in antitrust litigations, thus involving threats of 'macro-competitive harm' (on the whole relevant market), while this element is not a requisite for enforcing unfair competition torts, bearing just on 'micro-competitive harm', as defined by merely inter-individual conflicts (torts, hence, whose enforcement does not take into consideration the effects of behaviours on 'the market' as such).

[94] A generalized, across-the-board repressive approach would also translate into excessive litigation costs: in this sense one can well share Locré's warning: in amending an abuse one must also weigh the risks involved in the correction (J.G. Locré, 'Théorie du code civil, Discours préliminaire', in *Commentario e compimento dei codici francesi*, I, Napoli,1840, p. 222 *et seq.*).

[95] European Commission, AT 39612 *Perindopril (Servier)*, 9 July 2014, esp. para. 2793.

'incremental' tool for increasing therapeutic effectiveness. And so on, case by case.

13. Conclusion. Comparing the Three Stages: 'Tortious' vs 'Regulatory' Abuses of IPRs

It seems worth emphasizing that between the types of AT 'interference' evoked, respectively, as 'stage' one and three, and stage two, a profound difference exists, although for all of them the semantic tool box of competition law provides the term of 'abuse of dominant position'. And indeed, in the former (one and three) AT intervenes to enforce a 'primary' *per se* tortious behaviour in exercising or accessing an IPR. Here, in other words, the adjudication of an abuse of dominant position 'punishes' an intrinsically unlawful conduct, consequently zeroing the IPR holder's exclusionary power and imposing sanctions (only monetary, in Europe) – hence further paving the way to actions for compensation by damaged private parties.

On the contrary, in the situations ascribed to stage two (essential facilities, ESPs), AT 'interferes' with lawfully acquired and lawfully exercised (under IP regulation) exclusive/exclusionary rights. Here, at the root of the foreclosing effect, there is no 'primary' wrongful/tortious behaviour. AT intervenes by imposing an objective 'corrective' measure (*sub specie* of a duty to grant FRAND licences) of a situation of foreclosure objectively coming into existence not by 'demerit' or 'tort', but on the premise of a monopolistic power acquired thanks to the top level – non-substitutable, indispensable – innovation realized by the IPR holder. The 'abuse', here, is, so to say, 'secondary', lying in the non-observance of the objective 'corrective' duty.

This highlights a sharply different type of antitrust 'interference' indeed, where the imposition of the 'corrective' duty is accompanied by the assertion of a right to a fair compensation of the IPR holder – a right obviously inconceivable in the situations of 'primary' abuses, as evoked in stages one and three. (In this context, see also the significant Commission's decision, in *Motorola*, *not to impose any sanction* for the original refusal to license.)

Thus, in substance, the 'interference' of stage two is 'regulatory', that of stages one and three is 'adjudicatory'.

Now, of course, terminology is not of the essence, nor even the consciousness of the distinction – an Authority or Court can well make regulation just as Molière's M. Jourdain made prose. The distinction, though, is possibly relevant vis-à-vis the inclusion/'attraction' of the exploitation of legitimately acquired and statutorily exercised IPRs (including in the contractual disposition thereof, hence, also, the freedom to appoint and choose possible licensees) within the perimeter of the constitutionally ranking 'right to do business' (art. 16 CFREU), i.e. freedom of enterprise.[96] Undisputedly indeed, the immaterial assets protected by IPRs are relevant

[96] Let alone their intrinsic status of human rights – in so far as they are held and exercised by *individual* authors and inventors, not by firms (P.K. Yu, 'Challenge to the Development of a Human Rights Framework for Intellectual Property', in P. Tporremans (ed.) 'Intellctual Property and Human Rights:Enhanced Edition of Copyright and Human Rights' Kluwer Law, 2008, at 77.

tools/instruments utilized by entrepreneurs in the organization and functioning of their undertaking.

My concern in emphasizing this distinction rests on the worry that the imposition of objective limits on the exercise of economic rights of constitutional rank be designed, in its basic tenets, through an open democratic law-making process, rather than mainly entrusted to often shifting trends and moods – not rarely driven by contingent political influence – of judiciary Courts and/or administrative authorities. (The US experience well witnesses about this risk.[97] Much less, true, the European one. So far.

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[97] See here the witty enlightening essay by Eleanor Fox, 'Chairman Miller, the Federal Trade Commission, Economics, and *Rashomon*', *Law and Contemporary Problems*, 1987, 33.

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