Intellectual Property and Competition Law

The Innovation Nexus

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Preface

J.H. Reichman

Professor Gustavo Ghidini has undertaken a searching study of the way the European intellectual property system is evolving away from pro-competitive premises that underlie the classic patent and copyright paradigms in response to strong protectionist pressures (and relentless special-interest lobbying) that have accompanied the integration of markets at both the regional and global levels. Alarmed by what he finds, Ghidini reminds us at the outset that intellectual property rights are not ends in themselves. Properly conceived, they are instruments for preserving and enhancing that system of free enterprise and free competition that finally replaced the 'guild' and 'corporate' models of the not too distant past. Viewed from this perspective, Ghidini warns that more intellectual property rights, and especially too much of the wrong kind of intellectual property rights, may cumulatively yield unacceptably high social costs by compromising the competitive ethos whose tenets were embodied in the Treaty of Rome – as well as in Italy's post-war economic constitution.

With these tenets in mind, he proceeds to evaluate the far-reaching reforms of recent years, which have aligned the European Union member countries' intellectual property laws with the harmonizing directives of the European Commission and with the international minimum standards of the World Trade Organization's Agreement on Trade-Related Aspects of Intellectual Property Rights ('TRIPS Agreement'). His project is to determine the extent to which the product of these reforms remains consistent with the fundamental goal of promoting free competition. Have the reformers preserved an appropriate balance of public and private interests that suitably accommodates that goal? Or have they rewritten the rules of the game so as to allow powerful firms to exploit rent-seeking legal monopolies that create barriers to entry and that may actually discourage the kind of innovation on which today's processes of dynamic competition most depend?

To answer these questions, Ghidini focuses attention on the economic justification of intellectual property rights as a means to address the potential market failure associated with the production of public goods. Here he emphasizes that the purpose of using intellectual property rights to cure market failure is to avoid suboptimal investment in innovation by entrepreneurs who might otherwise remain vulnerable to unbridled free-riding on the fruits of

their investment. If, however, the set of legal incentives used to stimulate the first-comer's investments unduly deters second comers from making further investments in follow-on applications, the regime in force will merely have traded one kind of market failure for another. Thus configured, a system of innovation might produce no net long-term gains in competitive output, and it could actually slow the pace, and distort the quality, of research and development over time. In short, a modern intellectual property system devoted to stimulating constant innovation must seek a dynamic equilibrium that avoids both the perils of free-riding duplication and the proliferation of ill-conceived legal monopolies that enable rent-seeking oligopolists to control and stifle follow-on innovation[1].

These premises lead Ghidini to treat the separate intellectual property disciplines, especially patents, copyrights, and trademarks, as part of a single system of innovation and to examine the extent to which the reforms under way in each compartment of that system coherently promote cultural progress and the growth of investment in productive research and development. He will particularly single out ways in which recent legislative developments may have tipped the balance too far in a protectionist direction; and in each case, he proposes interpretations or, where necessary, modifications and amendments that could help to redress the balance in favor of those underlying competitive goals that ought to drive the system as a whole. In effect, he undertakes a quest for present-day functional equivalents of the 'pro-competitive antibodies' that were built into the classical, bipolar system of intellectual property rights inherited from the industrial revolution.

At the same time, Professor Ghidini looks beyond these disciplines to ancillary rules sounding in unfair competition law and to the principles of antitrust law, which have the power to curb and limit the strength of specific intellectual property rights in order to promote the maintenance of orderly and efficient market conditions. He thus views both unfair competition law and antitrust law, as major potential correctives of the vices and abuses that increasingly distort the workings of legal incentives to invest. Here, indeed, he is comforted by new developments in both legislation and case law that seek to promote the interests of researchers, users, consumers, and competitors in ways that balance the protectionist thrust of the intellectual property regimes themselves and that seek to restore the conditions needed for healthy competition. To the same end, he advises courts, legislators and administrators to view these correctives as an integral part of the system of innovation, and he attempts to provide them with the legal tools they will need to accomplish this task without the parochialism that sometimes constrained judicial applications of unfair competition law in the past.

Professor Ghidini's latest work thus provides scholars, judges and practitioners with a comprehensive and penetrating study of intellectual property

law that attempts to integrate its specific incentives to create into a larger system of free competition. His ability to weave these diverse strands into a compelling and coherent vision of the whole is an educational delight in itself, even if one comes away from the exercise in a more pessimistic mood than that which inspired the author to guide us through the ever-expanding thicket of intellectual property regimes in the first place. To my mind, the European Commission has taken the Union down a dangerously protectionist road that threatens to balkanize the upstream flow of knowledge, data, and information in ways that will hamstring rather than promote the work of basic science, which is the real source of wealth in the knowledge economy[2]. While the pro-competitive conditions of an integrating European marketplace are everywhere to be felt in the old economy based on tangible assets, the overly protectionist intellectual property rules that routinely emanate from Brussels cast a shadow over the long-term prospects for dynamic growth in a large part of the developed world. If any single group of policymakers needs to read and meditate on Ghidini's pro-competitive message, it is surely those intellectual property authorities at the European Commission for whom 'protection' has become a mantra and 'competition' something of a dirty word in recent years.

In reality, studies show that the most dynamic conditions of innovation and creativity have lately emerged from areas of relatively weak intellectual property protection, in which ideas and talents flow freely from one firm to another with enormous spillover effects that stimulate the cumulative and sequential contributions of the relevant technical communities as a whole. I refer, of course, to the Silicon Valleys and Research Triangles of California, Massachussets, and North Carolina, and to the innumerable research parks that have sprung up elsewhere in which innovation and competition remain the driving force. The innovative capacity of these communities is threatened, not enhanced, by the proliferating mixture of special-interest intellectual property rights[3] that increasingly impede the flow of scientific and technical information upstream and that slow the pace of follow-on applications of know-how to industry later on.

To my mind, a proliferation of unbalanced intellectual property rights has increasingly become a cancerous growth on the free-market economies of the developed world, which leaves those same economies ever more vulnerable to developing countries that are able to adopt a more pro-competitive approach to implementing international minimum standards of intellectual property protection[4]. At the same time, promising new forms of industrial production are being experimented with, such as the Linux open-source operating system, which may help to counteract some of the anti-competitive effects of recent legislative initiatives[5]. It is surely remarkable that IBM, which once spent millions of dollars championing the 'technology copyrights' and software patents whose social costs Ghidini's book (and my own writings) have called

into question[6], is now spending millions of dollars promoting open-source platforms and the Linux system instead!

Whether Professor Ghidini's proposed reforms of existing patent and copyright regimes would succeed or not is hard for me to gauge. I personally believe that the greatest need is for a new type of intellectual property regime, based on liability rules rather than exclusive property rights, that would stimulate investment in cumulative and sequential innovation without impeding follow-on applications and without impoverishing the public domain. This new type of regime, which I now call a 'compensatory liability regime,' is most fully elaborated in a recent article[7], which I will not anticipate here. Suffice it to say that, in my view, the existence of a liability rule to protect small-scale applications of know-how to industry would relieve the pressures on the patent and copyright subsystems and allow courts and administrators to let those regimes regain some of their former coherence which, as Ghidini so ably documents, they have lost in recent years.

What I can say with confidence is that Ghidini's attempt to re-examine present-day intellectual property law in the light of the pro-competitive premises underlying a free market economy provides a timely and enlightening contribution from which every reader interested in this field stands to benefit. I augur that this book will be widely read and appreciated and that, over time, it may help to prepare a new generation of scholars and practitioners who will retain a healthy scepticism about the protectionist virtues of ill-conceived intellectual property rights and a healthy regard for the competitive ethos.

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NOTES

1. See, e.g., Keith E. Maskus and Jerome H. Reichman, *The Globalization of Private Knowledge Goods and the Privatization of Global Public Goods*, in International Public Goods and Transfer of Technology Under a Globalized Intellectual Property Regime (Keith Maskus and Jerome H. Reichman eds, Cambridge University Press, 2005).
2. See, e.g., Jerome H. Reichman, *La guerra delle banche dati – Riflessioni sulla situazione americana*, 6 AIDA 226–36 (1997); J.H. Reichman and Pamela Samuelson, *Intellectual Property Rights in Data?*, 50 Vanderbilt L. Rev. 51 (1997); J.H. Reichman, Database protection in a Global Economy, 2002 Revue Internationale de Droit Economique, 455–504.
3. See, e.g., J.H. Reichman, *A Contractually Reconstructed Research Commons for Scientific Data in a Highly Protectionist Intellectual Property Environment*, 66 Law and Contemporary Problems, 315–462 (2003).
4. See, e.g., J.H. Reichman, *From Free Riders to Fair Followers: Global Competition Under the TRIPS Agreement*, 29 N.Y.U. J. Int'l L. and Policy 11 (1997); see also Maskus and Reichman,

above, FN 1; J.H. Reichman, *The TRIPS Agreement Comes of Age; Conflict or Cooperation with the Developing Countries?*, 32 Case Western Reserve J. Int'l L. 441–70 (2000).

5. See, e.g., Yochai Benkler, *A Political Economy of the Public Domain: Markets in Information Goods versus the Marketplace of Ideas*, in Expanding the Boundaries of Intellectual Property – Innovation Policy for the Knowledge Society 267–92 (Rochelle Dreyfuss et al. eds, 2001).
6. See, e.g., Pamela Samuelson, Randall Davis, Mitchell D. Kapor and J.H. Reichman, *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 Columbia L. Rev. 2308–2431 (1994).
7. J.H. Reichman, *Of Green Tulips and Legal Kudzu: Repackaging Rights in Subpatentable Innovation*, 53 Vanderbilt L. Rev. 1743–98 (2000), abridged version reprinted in Expanding the Boundaries of Intellectual Property – Innovation Policy for the Knowledge Society 267–92 (Rochelle Dreyfuss et al. eds, 2001). See also J.H. Reichman, *Legal Hybrids Between the Patent and Copyright Paradigms*, 94 Columbia L. Rev. 2432–2578 (1994); J.H. Reichman, *Charting the Collapse of the Patent-Copyright Dichotomy: Premises for a Restructured International Intellectual Property System*, 13 Cardozo Arts and Ent. L.J. 475 (1995).

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1. Introduction and the general framework

THE SUBJECT MATTER

1. Born of the political and economic revolution that marked the end of the Age of Enlightenment, the law of industrial and intellectual property (now simply intellectual property: IP) essentially reflects a legal framework governing the policies of industrial and commercial development and innovation, based on the right of free economic initiative and free market competition. In previous centuries, from the age of the guilds, through to the development of the mercantile system, this policy was basically grounded on privileges, concessions and limited access, typical of a command economy.

An analysis of the various aspects of the regulatory framework shows that the modern perspective is based on a dialectic between 'property' (exclusive individual rights) and 'freedom' (of each individual to access the market and to operate there under conditions of equal treatment under law, and therefore also indirectly promoting the freedom of choice of consumers). IP law embraces a group of regulations focused on entrepreneurial activities engaged in innovation and commercial promotion, typically in an environment of free market competition.

(a) A first series of regulations provides exclusive protection for the *new results of activities* that are capable of industrial and commercial exploitation. This includes, in particular, the (European and/or international and/or national) regulations governing *patents* and similar exclusive rights on inventions and industrial models, plant varieties, biotechnological inventions, layout-designs of integrated circuits, industrial design, etc., as well as *copyright* in 'intellectual creations' with special emphasis on those that can be mass-produced and exploited on an industrial scale, thus actually or potentially subject to competitive dynamics.[1]

The classical system of intellectual property, set up under major international conventions signed in the second half of the 19th Century, entailed an underlying *duality*, protecting functional or utilitarian creations, 'technology', under the general patent paradigm, while assigning to copyright law the exclusive protection of creations essentially

designed (regardless of their possible practical applications) for intellectual enjoyment: 'aesthetics'.

This duality has been gradually eroded in modern times, as a result of two distinct tendencies, both aimed at affording more 'targeted' and also more intense protection for the results obtained in certain sectors of research and development, especially in the fields of biology and the so-called information technologies.

Firstly, there has been a mushrooming of specialized regulations within both the patent law and copyright paradigm, especially intellectual property rights attached to plant varieties and biotechnologies, as well as the new patent-type rights for microchip circuitry and industrial design. Moreover recent statutory provisions have provided specialized and sometimes highly unorthodox applications of copyright protection to creations such as software and databases. Accompanying this has been another more explosive trend eroding the duality of the classical system, especially by the contentious extension of copyright protection to information technology tools, such as computer programs (and even, as some have proposed, to so-called genetic maps).

(b) A second series of rules pertain to the protection of the *distinctive signs* used by firms, especially registered trademarks. As we shall see (Chapter 4), the recent evolution of trademark law has extended the exclusive protection beyond the signs' distinctive function, taking into account their intrinsic advertising value.

(c) These two basic series of regulations are supplemented by further rules aimed at protecting businesses against a series of attacks by competitors that cannot be withstood by the regulations just mentioned. These further rules have to do with *unfair competition* and, according to Article 10-*bis* of the Paris Convention for the Protection of Industrial Property (the 'Paris Convention'), are aimed at discouraging professional misbehaviour (like passing-off or disparagement) that may be harmful to another party's goodwill. Apart from these (and even though they fall beyond the scope of this work), mention must also be made of the criminal law provisions that protect the market, and thus also honest competitors, against business misconduct such as boycotts, industrial espionage, commercial fraud and misleading advertising.

2. This triple-tiered framework of regulations is based on a common denominator: the protection of the interests of (single) firms to exploit their competitive assets whether these are related to innovation, a firm's identity and reputation, or (with reference to unfair competition law) other factors and situations enhancing the firm's efficiency and goodwill. Such protection is sometimes based on the formal attribution of exclusive rights (patents, copyright,

trademarks, etc.), and at other times, as in the case of unfair competition, on the imposition of rules of 'professional conduct' in relationships between competitors.

All three branches of the overall regulatory framework place special emphasis on entrepreneurial-type production and exploitation of such assets. This is self-evident for unfair competition but it applies as well to intellectual property rights (IPRs). The framework of patent, copyright and trademarks law is focused much more on the firm than on the individual creator as can be seen by the following examples:

- the non-patentability of inventions that have no direct industrial applications (articles 52.2 and 57 of the European Patent Convention, EPC);
- the 'working requirement', i.e. the duty to proceed with the industrial implementation of inventions and utility models or be subject to the possibility of non-voluntary licensing, or even the revocation of the patent rights, as imposed under various national legislations pursuant to article 5 of the Paris Convention (and subsequently, articles 30 and 31 of the TRIPS Agreement), i.e. the *Agreement on Trade-Related Aspects of Intellectual Property Rights*, signed in Marrakesch, April 15, 1994, in the framework of GATT's Uruguay Round;
- the exceptions to the ban on the unauthorized reproduction of the patented inventions foreseen for 'non-industrial' uses (article 27 of the EPC).
- the provision that entitles the firm to the economic benefits arising from exploitation of employees' inventions, entrenched in nearly all national legal systems (in Italy, see article 23 *et seq.* of the Italian Patent Act – now article 64 of the Italian 'Code of Industrial Property' (2005) –, in Germany, the Gesetz ueber Arbeitnehmererfindungen (ArbEG), in the UK, section 39 of the Patents Act). The principle is shared even by the traditionally less market-oriented sector of IP, namely copyright law, which attributes the right to economically exploit works deriving from organized teamwork, such as cinematographic works, 'to those who organized the production of the work', i.e. the producer, rather than the co-authors thereof, according to article 14-*bis* of the Berne Convention for the Protection of Artistic and Literary Works (the 'Berne Convention').[2]
- In respect of trademarks, one need only refer to their intrinsic purpose 'of distinguishing the goods and services of an undertaking from those of other undertakings' (article 15 of the TRIPS Agreement).[3] So too for other signs, such as the firm's name (individual or corporate) distinguishing the undertaking's business and for the ensigns distinguishing shops and other outlets.

Lastly, with regard to unfair competition, the reference to business undertakings is implicit in the very subject-matter of the rules and is in any event expressly confirmed in the repeated reference in the Paris Convention to the risk of creating confusion with or discrediting 'the establishment, the goods, or the industrial or commercial activities, of a competitor' (article 10-bis(3)(1) and (2)).

3. Beyond those and other textual indications, the fact that IP law basically focuses on the firm's role and activity in promoting, organizing and exploiting intellectual works and distinctive signs, reflects the economic rationale of the regulatory framework itself.

Individual (personal) efforts aimed to realize technological improvements and/or works of art, literature, scientific essays etc. can adequately be compensated by means other than IPRs, such as fees, prizes and academic chairs etc. One might observe that, in fact, many of the highest achievements of human ingenuity, artistic inspiration and thought, were created when patents and copyrights were not even imagined.

However, when it comes to fostering and organizing mass production and distribution of both utilitarian and aesthetic works, when the firm, then, comes into play, IPRs perform a specific function in recovering the costs and compensating the efforts and investments of the firm itself, often operating in a competitive environment in organizing production and distribution of products embodying new technical or aesthetic results. In fact, apart from the limited and precarious possibility of exploiting technological results in secret (see Chapter 2) or of applying for public subsidies,[4] firms cannot reliably recover their costs and receive remuneration for their investments, save through a *differential profit*, the opportunity for which is provided by the exclusive right to exploit, albeit for a limited time, the results obtained. It is obvious that in an environment of full and direct competition between manufacturers of identical goods, such remuneration would be highly uncertain or even impossible if competitors were free to reproduce the new inventions/creations even *immediately after* the firm has launched it on the market. Having 'saved' on all research costs, the competitors would enjoy a position enabling them to engage in a destructive, unsustainable price war. Thus much research and creative efforts aimed at enjoying the fruits of new intellectual achievements would be frustrated and much incentive for their development annulled, to the detriment of innovation dynamics and the public's interest in benefiting from progress.

Similarly, the firm's exclusive right to its distinctive signs allows it to protect its corporate identity/image and exploit the associated goodwill in a competitive environment. In a monopolistic context, exclusive trademark rights would be insignificant. Lastly, the same rationale underlies the rules on

unfair competition, which protect the goodwill and/or efficient performance of rival enterprises.

4. Antitrust law, which in European countries is of course based, first and foremost, on Community law (articles 81–86 of the Treaty of Rome, the Merger Regulation and sector-specific regulations), is clearly distinct from IP (and unfair competition) law. It is common knowledge that antitrust law is directly targeted at protecting (not competing firms as such) but *the market*: a normative concept that refers to the set of geographical areas, product categories and distribution stages in relation to which the law assesses the impact of firms' and consumers' behaviour (see Chapter 5). More specifically, with respect to such market(s), antitrust law on the whole (*) aims at preserving and/or restoring a workable or effective competitive framework, assumed to afford (at least potentially *all*) entrepreneurs freedom of market access and business initiative, whilst also ensuring consumers their freedom of choice. All the main antitrust regulatory frameworks (first and foremost, the US, Europe and Japan) subordinate the *individual's* freedom of enterprise to this two-faceted general interest. From this perspective, the motto of antitrust law could well be: 'competition first, competitors second'.

5. This traditional distinction (intellectual property and unfair competition: protection of individual companies; antitrust: protection of the market) should not however overshadow a more complex intertwining of relationships and functions between the two regulatory frameworks. Although we will specifically deal with this subject in Chapter 5, a few introductory remarks might be useful.

First of all, if we consider the far reaching effects of exercise of intellectual property rights on the markets, we realize that the protection of IPRs is not in itself contradictory with the enhancement of free market competition. In fact, the very attribution of limited exclusive rights over new creations as well as

* European antitrust law is made up of a set of rules also typically targeted at enterprises ('undertakings': private and public, operating either *iure privatorum* or on the basis of special or exclusive rights)[5], and aimed at ensuring, first and foremost, that where markets feature an effective[6] pluralism in terms of supply, therefore providing consumers with real alternative choices[7], such pluralism be not substantially reduced, or eliminated, by agreements between competing firms[8] or by mergers creating 'excessive' market dominance. Secondly, in market situations where pluralism is highly limited or even absent as a result of the concentration of market power in one or a few dominant enterprises or a legal monopolist, antitrust law aims at ensuring that the behaviour of the dominant enterprise(s) does not subject the other players[9] to significantly worse market conditions (in terms of weaker bargaining power, or the 'foreclosing' of opportunities for competition) than they would have 'naturally' enjoyed in the presence of a higher degree of effective structural competition (principle of 'as if' [*also ob*]).

trademark rights does serve competitive dynamics. Further, neither patents, aimed at providing a differential advantage nor trademarks, aimed at avoiding the unjust deviation of clientele, would make much sense in a perfectly monopolistic market.

There is more. Especially in the case of patent law, the IPR paradigm seems to be the result of a *balanced intertwining* between the individual interests of the rights holders and the general interest, itself of constitutional rank, of encouraging third parties' subsequent innovation and thus, albeit indirectly, competition on the merits. As we shall see in Chapter 2, some of the basic precepts of patent law in fact 'balance' the patentee's exclusive/exclusionary rights so as to promote competition. Think, for instance, of:

- the provision of a certain, fixed time limit to the exclusive right, which influences the future prospects of direct competition with the patent holder,
- the so-called 'exhaustion' of such a right, i.e. the forfeiture of patentee's exclusive faculties after the first sale of the patented good, thereby moderating price levels along the distribution chain,
- the full disclosure of the invention and the publication of its application, that provides the public, i.e. the competitors, with information about the patented technology, thereby facilitating subsequent (competitive) innovation, or
- the restriction of the scope of the patent to a specific technical solution, rather than a type of utility, thereby allowing for the immediate development of competing alternatives (analysed more extensively in Chapter 2).

For its part, antitrust law does not collide with IPRs as such, i.e. vis-à-vis their proper function of preventing free riding of creative achievements and/or firms' identity and reputation, thus acting as an incentive to innovation and a guarantee of correct market information. On the contrary, by hindering entrepreneurs from becoming and consolidating their positions as rent-seekers, antitrust law encourages firms to develop new products and processes so as to acquire future competitive advantages from their inventions. This incentive targets both *the incumbents* who are driven towards innovation in order to maintain and expand their current market share (but in a competitive and socially useful manner) and the *challengers* who focus their R&D efforts on developing innovative solutions that could unseat the incumbents by eroding their market share.

Nor does antitrust really interfere with the contractual 'management' of IPRs, even when based on 'restrictive' deals, provided that agreed restrictions are reasonably necessary to ensure efficiency in innovation. In particular, the European Community has increasingly shown special leniency (see Chapter 5)