



Innovation, Competition
and Consumer Welfare in
Intellectual Property Law



Gustavo Ghidini

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For Adriano Vanzetti

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Preface

Giuliano Amato

Gustavo Ghidini has an excellent grasp of both the principles and the many specific provisions underlying intellectual property law in Italy and Europe. Nevertheless, he is neither a dogmatist nor an exegete immersed within the horizon of the texts he reads. He has a powerful vision of the politics of law, regularly setting it out in his premises and grounding it in his interpretation of current principles, which he justifies. He then projects it in his examination of concepts and individual regulations, which sometimes corroborate it but in other cases refer back to it, and on yet other occasions contradict it – at which point Ghidini observes that the original idea was wrong. This is why Ghidini's books are never dull. Just the opposite: they are always warm, argumentative and intent on proving a hypothesis. As a result, his works are far more enjoyable than conventional law books and the merit is his alone, because he goes beyond the most rigorous standards of scientific soundness and plainly legal analysis.

Experts on industrial property and antitrust law are very familiar with his vision of the politics of law. Nonetheless, Ghidini, who also appreciates – and practises – economic analysis, has never accepted the conclusions reached by the school that, more than any other, established this field: the Chicago School. Thus, he has never replaced efficiency with competition as the ultimate aim on which to base regulations and decisions concerning the market. Consequently, he has never ceased to promote the openness and well-being of the consumer, achieved by not reducing output and by the variety of possible choices, nor has he ever been ashamed of the legal opinion – once American but now purely European – according to which, in some cases, the weakest competitors must be protected in order to protect competition.

In the context of such a vision, the monopoly rights of intellectual property law – patents, copyrights and trademarks – are embraced if and as long as they are consistent with 'the guiding principle of free competition', whereas the laws governing them must preferably be interpreted from a pro-competitive standpoint. As Ghidini rightly points out, however, this does not go against their nature by any means. Indeed, their juxtaposition with competition couldn't be simpler, given the monopoly element that characterises them, but their ultimate purpose is to make the market more competitive.

Ghidini is quite harsh towards industrial countries as well as TRIPs (which have denied emerging countries what industrial countries once granted to themselves). At the same time, however, he goes to great pains to distance himself from the generalised and often ideological 'no global' protest against these same targets, accusing this protest of completely ignoring the reasons for protecting investments earmarked for research. Furthermore, and precisely because he, in turn, does not think along ideological lines, he is also very careful to avoid generalising the claim that monopoly rights have counterproductive effects, since, in reality, these have emerged only in specific sectors. And he cites network industries, starting with communications, biotechnologies, and automotive and household-appliance components, and culminating with the 'rapidly expanding frontier' of areas (chiefly communications for the time being) in which consumers can interact with manufacturers and redevelop, integrate and transform the product or service they are receiving. But when this happens – he wonders – what then is the meaning of traditional absolute protections?

No one, not even those who usually disagree with Ghidini, can deny the meaning and implications of such a question. This kind of necessary acknowledgement is the best reward for his vision and for the steadfastness – never aprioristic nor unwarranted – with which he applies it. It is thanks to this vision that he grasps change and, more rapidly and readily than others, notes its effects on law and previous legal opinions, to which one cannot remain indiscriminately faithful when their impact given a changed reality generates effects that are the opposite of the ones that warranted them in the first place.

A great legal scholar, Carlo Esposito, wrote that not only regulations but even principles themselves do not express absolute truths, but rather incorporate contingently persuasive practical reasons. Consequently, rules must remain in place as long as the principles that they express continue to be valid, but they must be changed when it turns out that they are no longer shared and perhaps other rules are *de facto* taking their place. Perhaps Esposito, who loved to go to extremes in his reasoning, overshot the mark by denying the absolute value of any principle and submitting to actuality. Of course, if regulation of the wheel had been based on the wheel being square and then someone finally invented a round wheel, such regulation could hardly remain the same. Esposito was unquestionably right about this, and it is this very subject that Ghidini discusses in his book. Those who fail to heed him are doing so entirely at their own risk.

Preface to *Intellectual Property and Competition Law*¹

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 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 harmonising 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?

¹ G. GHIDINI, *Intellectual Property and Competition Law: The Innovation Nexus*, Edward Elgar, 2006.

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 emphasises 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 national 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.²

These premises lead Ghidini to treat the separate intellectual property disciplines – especially patents, copyrights, and trademarks – as part of a single national 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 that Italy 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

² 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*, Cambridge, 2005.

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 Italian system of innovation, and he attempts to provide them with the legal tools they will need to accomplish this task, without the parochialism that has 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 balkanise 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.³ 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,

³ 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*, *Revue Internationale de Droit Economique*, 455–504 (2002).

Massachusetts, 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 rights⁴ 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.

As for Italy, no other country in Europe has so much benefited from a Silicon-Valley-like mentality in the post-war period. The design industries of the Veneto region in particular serve as a model that developing countries could profitably emulate. These industries arose in a pro-competitive environment that was unencumbered by overly protectionist design laws like those that governed the French design industries during the same period. Will a new cumulative regime of copyright protection make Italy's design industries more productive than in the past? My guess is that it will hold them back in subtle ways, by generating lost opportunity costs that are hard to document but certain to result whenever strong exclusive property rights are used to regulate small-scale applications of know-how to industry.

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.⁵ 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.⁶ 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

⁴ See, e.g., J.H. REICHMAN, *A Contractually Reconstructed Research Commons for Scientific Data in a Highly Protectionist Intellectual Property Environment*, 66 *Law & Contemporary Problems* 315–462 (2003).

⁵ 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. & Policy* 11 (1997); see also MASKUS and REICHMAN, above, note 2; 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).

⁶ See, e.g., YOCHAI BENKLER, *A Political Economy of the Public Domain: Markets in Information Goods versus the Marketplace of Ideas*, in Rochelle Dreyfuss et al. (eds), *Expanding the Boundaries of Intellectual Property – Innovation Policy for the Knowledge Society* 267–92 (2001).

into question,⁷ 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, which 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,⁸ 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.

J.H. Reichman

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⁷ 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.* 2308–431 (1994).

⁸ 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 ROCHELLE DREYFUSS ET AL. (eds), *Expanding the Boundaries of Intellectual Property – Innovation Policy for the Knowledge Society* 267–92 (2001). See also J.H. REICHMAN, *Legal Hybrids Between the Patent and Copyright Paradigms*, 94 *Columbia L. Rev.* 2432–578 (1994); J.H. REICHMAN, *Charting the Collapse of the Patent-Copyright Dichotomy: Premises for a Restructured International Intellectual Property System*, 13 *Cardozo Arts & Ent. L.J.* 475 (1995).

A nouvelle vague? Author's brief foreword

The need to incorporate the numerous and significant developments in legislation, case law and scholarly opinion at national and international level was an important factor in writing a much expanded edition of this work. However, it was not the primary motivation.

Above all, there was a desire to explore new perspectives on intellectual property and proposals for reform that have come to the fore in the past few years. Interpretative and legislative approaches, even at international level, which Jerome H. Reichman has defined as 'over-protectionist', no longer seem to be as dominant as they traditionally have been. Those earlier approaches, with cultural roots that can be traced back to Joseph Schumpeter, expressed an era and models of industrial development characterised by large capital-intensive investments that seemingly justified the call for strong patents and more generally for intellectual property rights with broad excluding powers. By contrast, today, boosted by the expansion of the knowledge economy, there is a growing worldwide desire to strike a new balance in the paradigms of intellectual property rights in a direction away from the strong and blanket exclusionary models that have traditionally held sway.

This rebalancing is not only advocated for trade with the developing world and especially with the least developed countries but now across the board. It is a way of advancing – through both interpretation and reform of positive law – the interests of individuals and groups other than the protagonists (intellectual property rights (IPR) holders and challengers/competitors) directly involved in the creation of intangible assets. These individuals and groups were previously relegated to the position of having to passively bear the effects of the application of the law. Now these interests are increasingly being recognised as of constitutional rank. They are the new 'stakeholders' whose protection deserves *at least* equal status to that afforded to the holders of intellectual property rights. I am referring to consumers and users of tangible goods, information and culture, as well as researchers and scholars involved in processes of cultural innovation. Furthermore, I am also referring to the interests of the citizens' community as such in the development of innovation and the dissemination of information in a structurally competitive market that does not foster but actually reduces the opportunity for rent-seeking situations.

The heart of this *nouvelle vague*, which is spreading from the academic

world towards important social, economic and even institutional actors, such as the World Intellectual Property Organization (WIPO), is not primarily 'legal', although it aims at reshaping the normative framework. Indeed, the dynamics of economic competition and the innovation of the current industrial revolution (especially in the information technology, biotechnology and nanotechnology sectors) combine – in synergy with the speed of communication processes – to demand and foster new patterns of production and distribution. The progressive erosion of profit margins caused by the intensification of the competitive dialectic, by broader and more stringent business regulation, the ever increasing interdependence between technologies, systems and even research and production patterns, the role that 'soft' assumes in the knowledge economy compared to 'hard', are all factors that prefigure the expansion of horizons characterised by network effects and connections, forms of cooperation among competitors ('co-opetition') and even *open innovation* processes. And it seems reasonable to agree with the diffuse forecast that even the present global economic crisis will push towards more cooperation and interdependence, hence accelerating and strengthening those new dynamics.

These, then, promise to be the new research, production and distribution horizons of the fruits of human ingenuity and creativity, in connection with which processes of development and the circulation of the 'new' are no longer fostered but actually hindered by the traditional *all-exclusionary* effect of intellectual property rights in various industries marked by modern innovation. And the more so the further the technological frontier moves forward. To take just one example: software standards that are required for the direct dissemination and exchange of data via the Internet are – were born: functionally – more open than those designed for the personal computer.

This, therefore, is the greatest novelty, which in order to be grasped by the jurist in a timely way requires *inter alia* that the usual sources of documentation be supplemented by the 'live' expressions of economic and technical information, in line with an approach that from Levin Goldschmidt onwards has been kept alive by many a master of commercial law.

Of course, what I am describing is too recent a development (still clouded by uncertainty and contradictions, as well as the focus of harsh criticism) to predict that it will gain hegemony. History teaches that the emergence of new legal models corresponding to new phases of technological and economic development does not supplant previous models if the conditions that gave rise to those earlier models continue to exist in other areas of economic activity. However, the ongoing expansion of those new horizons is no longer an expression of wishful thinking by isolated academics, and it reinforces the tendency to read the rules through the lens of a more pronounced opening up to values/principles of free competition and the widespread dissemination of culture and information and the promotion of research and creativity. These

principles were those that founded and still underpin – resisting many attempts to chip away at them – the intellectual property system fashioned by the revolutions at the end of the 18th century. This system views exclusive rights as an exception compared to the fundamental freedom to know and do: in short, like *islands in a sea of freedom*.

The foregoing thoughts, together with more in-depth analysis of some issues and welcome comments and criticism) within the framework of a method that gives more weight to systemic consistence than to the (never decisive) ‘will of the legislator’. Altogether arguments enunciated in *Intellectual Property and Competition Law* (and elsewhere), offer suggestions for legislative reform as well as new interpretative proposals, for example regarding the impact of the TRIPs Agreement on North/South trading relations, compulsory and voluntary licences for patents, protection of secrets, shape marks, de facto trademarks, cumulation between patent and copyright protection, technological protection measures for data and works that are disseminated electronically, the scope of freedom to access and share copyrighted works, the relationship between the protection of exclusivity and competition rules (antitrust and unfair competition), and so on.

The suggestions which are offered to the reader aim, in the final analysis, to contrast that widespread interpretive inversion and associated social perception of intellectual property portraying exclusive rights as ends in themselves rather than as a means to promote ‘the progress of science and useful arts’, thereby expanding the size of the above-mentioned islands to the point where the surrounding sea becomes an interstitial channel.

I believe that it is possible as well as right to combat that approach also on the plane of positive law. What is required is that the jurist uses as her/his compass loyalty to the principles that embody the spirit of modern democratic legal systems: which is the spirit of freedom.

G.G.

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1. Introduction: the basic paradigms and constitutional framework of intellectual property law

1. Foreword: the Mosaic and the Fabric

Patent, trademark and copyright: each of the fundamental paradigms of intellectual property law (hence, IP law) is governed by a highly specific legislative framework in terms of subject matter, function, governing principles, etc. This specificity, whose characteristic elements will be examined later, should not however let us lose sight of the ‘underlying’ shared fabric of economic and constitutional-type common denominators, which in turn reflect common historical and institutional roots.

Indeed, born of the *dual*, political and economic, *revolution* that crowned the Age of Enlightenment, modern IP law 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 mercantile system – this policy was basically grounded on corporative and/or individual¹ privileges, concessions and limited access, typical of a command economy.

A careful consideration of that framework, shaped by its revolutionary background, is essential to a systemically rewarding reconstruction of the basic features of intellectual property rights (hence, IPRs), as well as of the ways the latter are intertwined with and ‘alloyed’ by the rules governing competition, namely antitrust and unfair competition law. In particular, such consideration will highlight how all the various IP paradigms, beyond their different normative features, are based on a *dialectic relationship between ‘property’* (exclusive individual rights) and *‘freedom’* (of each individual to

¹ For example, as early as the Venetian patents of the mid-15th century *individual privileges* often conflicted (and indeed were granted for that very purpose) with the sectoral monopolies enjoyed by corporations, thereby also opening up the way to the subsequent equality of law sanctioned by the industrial revolution(s). See further the bibliographical notes to this chapter.

access the market and to operate there under conditions of equal treatment under law – thereby also indirectly promoting the freedom of choice of consumers).²

2. From Paris and Berne to Marrakech: IP's Basic Paradigms

I. The classic dualism between patents and copyright, and its evolution

The diversification of the fundamental paradigms of IP law has its historical roots above all in a series of regulations introduced to specifically protect *the new results of creative activity*. Here, the normative models embraced by the new liberal-inspired legal systems³ highlighted a fundamental *dualism* rooted in the different nature and function of the 'subject matter' protected. On the one hand, practical-utilitarian innovation; on the other, new works of merely intellectual fruition (aesthetics in the broadest sense).

The distinction (which the classic nomenclature reflected by distinguishing *industrial* from *intellectual* property in a strict sense) was consecrated in the great universal Conventions of Paris and Berne⁴ which took place at the end of the 1800s, in the wake of the widespread expansion in production and trade produced by the first and already incipient second industrial revolution⁵ (from steam power to electro-mechanics to early telecommunication systems). These Conventions sought to give a rational and essentially homogeneous structure (in formal accordance with the principle of 'assimilation' between nationals and foreigners)⁶ to transnational business relations involving the exploitation

² On the distinction between *freedom of competition*, as an individual constitutionally protected right (article 41 of the Italian Constitution) and the concept of *effective competition* as a method of market functioning in an objective sense, see M. LIBERTINI, *Tutela della concorrenza nella costituzione italiana*, in *Giur. Cost.*, 2005, p. 1429.

³ Models were still undifferentiated in precursory laws like the Statute of Anne of 1710. See the reconstruction of L. MOSCATI, *Un 'memorandum' di John Locke tra censorship e copyright*, in *Rassegna forense*, 2005, p. 603. For more details see the bibliographical notes.

⁴ Paris Union Convention (PUC) for the protection of industrial property, signed 20 March 1883, last revised: Stockholm, 14 July 1967; Berne Convention (BC) for the protection of artistic and literary works, signed 4 May 1886, last revised: Paris, 24 July 1971.

⁵ For references on the historical connection between those Conventions and the great industrial expositions of the second half of the 19th century, see the bibliographical notes.

⁶ I say 'formal accordance' since the 'foreigners' granted rights had to be citizens of, or at least operating in, contracting Member States: thus, the substantial inspiration of said Conventions lay rather in a 'sentiment de réciprocité', as F. MAINIÉ, *Nouveau Traité des brevets d'invention*, II, 1896, 919, remarked about an earlier Convention (Berne, 1844).

of intangible assets that had become strategic levers of competition and hence a new source of wealth of nations.

Thus, on the one hand, the Paris Convention referred to utilitarian innovations, that is, technology, using the general paradigm of *patent for industrial invention* and *utility model*. On the other hand, the Berne Convention referred to creations designed for mere intellectual enjoyment (the first Berne catalogue was actually limited to 'literary and artistic works'),⁷ using the sharply different paradigm of *droit d'auteur*, that is, substantially *copyright* (see below, Chapter 3).

This dualism (whose most visible sign is the different term of protection of the exclusive rights granted) reflects deep material phenomenal and economic differences between innovation aimed at satisfying material demands and innovation designed to meet purely intellectual and aesthetic needs. This topic will be examined in more depth in Chapter 3, analysing the various differences between the patent and the copyright paradigms.

This classic dualism (also hinted in article I, section 8, clause 8, of the US Constitution, promoting the 'progress of science and useful arts') was formally recomposed in the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPs), signed in Marrakech on 15 April 1994 and that entered into force on 1 January 1995. Compliance with the TRIPs is a condition of membership of the World Trade Organization, which was established by a broader agreement on international trade, supplanting the General Agreement on Tariffs and Trade (GATT), which was signed and took effect on the same date.

The TRIPs represents the new 'universal convention' which, at the end of the second millennium and in the midst of the new industrial revolution marked by information technology, bio- and nano-engineering, has redefined the rules on intellectual property around minimum standards of protection that essentially reflect – as we shall see in more depth in the Appendix – established regulatory models of industrially advanced countries.⁸ As mentioned before, the Agreement formally brings together in one single convention, under a common core of 'fundamental principles' (articles 1–8: see article 7 on the 'Objectives') the classical regulatory dichotomy between *industrial* and

⁷ See below Chapter 3 for the subsequent opening up of copyright to various creations that also or in some cases solely served a practical function. The key example here is computer software.

⁸ It is no secret that the TRIPs was strongly advocated by the most industrialised nations, first and foremost the US, even with direct intense diplomatic support (as confirmed, *ex multis*, in the enlightening essay by M.P. RYAN, *Knowledge Diplomacy: Global Competition and the Politics of Intellectual Property*, Washington, DC, 1998).

intellectual property, aiming to express on a global scale a basically common regulatory framework of international trade relations linked to the exploitation of intangible goods as a source of competitive advantage.⁹

Moreover, even apart from its (formal) bridging, that classic dualism had become increasingly strained in modern times due to a move towards normative overlaps and/or cumulation of different types of protection (for example, laws on trademarks, design, copyright insisting on the shapes of products) and the growth in ‘hybrid’ paradigms that have become a feature of some special regulations regarding certain industrial sectors. For example, the protection of software is afforded by both patent and copyright law. Similarly, industrial design can claim protection under four different regimes (registered model, copyright, shape trademark, passing-off: see Chapters 3 and 4).

In general terms, the most relevant indicator (*and* instrument) of the tendency for overlaps and hybridisation is the ‘expansion’ of copyright to creations such as computer software and databases (typical information technology tools) or utilitarian products of industrial design (see below, Chapter 3).

II. The (expanded) protection of trademarks

A third and markedly different paradigm (of which the duration of exclusive rights – here potentially unlimited – is again the most visible feature) characterises a further series of rules that make up the IPR family. I refer to those that concern the protection of *distinctive signs*: rules on firms’ names, signboards, and above all *trademarks* (of products or services), the latter being the fundamental paradigm of the subject matter. Within this general framework, one can also place the similar but distinct rules on geographic denominations of origin, owing to the underlying competition dynamics (see below, Chapter 4).

The classic mission of trademark regulation is to protect business identity (and *de facto* connected goodwill) from a risk of confusion: a risk inherent in a competitive and hence unlimitedly pluralistic market. By ‘identity’, I mean not only the ‘paternity’ (the firm of origin) of the product (or service) involved, but also the *specificity* of the products offered for sale. The two profiles are reflected in the distinction between ‘general’ and ‘product’ trademarks: the former aimed at distinguishing *Ferrero* from other manufacturers, the latter *Mon Chéri* from other chocolate-coated cherries.

Distinctive signs, and trademarks in particular, protect against the risk of confusion arising when both manufacturers or retailers guarantee to consumers (below, Chapter 4) that each product is associated with its true origin. This ensures that supply meets demand without consumers’ choices

⁹ NUNO PIRES DE CARVALHO, *The TRIPs Regime of Patent Rights*, London, 2002, pp. 24 *et seq.*

being sidetracked or interfered with. As such, one must add, the protection concerns the entire range of goods – products and services – offered on the market. That said, it is all too obvious that trademark protection is especially decisive to the market entry and progress of *new products*, for which clear ‘recognition’ is a more pressing need than for mature products already well known to consumers.

Again, in trademark regulation, as we shall see (Chapter 4), the classic model based on the sole protection of the distinguishing function of the trademark (essentially circumscribed to an area of identical or similar goods, i.e. focused on the risk of confusion) has ‘evolved’.¹⁰ In order to encompass the possible so-called ‘advertising’ value (hence, ‘selling power’) of signs, especially renowned ones, this legal protection has been expanded beyond its classical limits, enforcing the rightholder’s exclusive power even in relation to ‘non-similar’ (thus non-confusable) goods.

Patent, copyright and trademark regulations are supplemented by further rules aimed at protecting businesses against a series of attacks by competitors that cannot be specifically withstood by the rules protecting IPRs. In particular, this is true of two sets of norms concerning competition.

First, most relevant for the actual shaping of IPRs-related powers is *antitrust law*, aimed at protecting the market’s competitive framework as such. Second, is the law against *unfair competition*, based on the principles of article 10-*bis* of the Paris Convention, and aimed at protecting *individual* competitors against professional misbehaviour. (Apart from these, and albeit beyond the scope of this work, mention must also be made of provisions rooted in public law, which, in addition to their primary aim of safeguarding the public interest, protect firms against misconduct such as boycotts, industrial espionage, commercial fraud and misleading advertising, and similar business malpractices; hence often overlapping with the rules against unfair competition.)

The relationship between these sets of norms and the discipline of IPRs will be examined later in this chapter at section 6 and more extensively in Chapter 5.

3. The Firm as the Central Reference of IP Law

The structural common denominator of IPRs (more precisely: of their economic profiles) is their central focus on the role and interests of firms – rather than individuals (authors, inventors) – engaged in producing and placing on the market products or services made of the ‘non-material’ fruits of

¹⁰ I set this in brackets because of the negative effects of that development on the very dynamics of innovation: below Chapter 4.

human ingenuity – inventions, works of art – and marked by same firms’ distinctive signs, etc. This is indeed the ‘pole’ around which the triple-tiered framework of IP regulations described above (as well as the rules on unfair competition) is essentially built. Its direct constitutional reference is the principle of freedom of enterprise with which one must compare, and ‘harmonise’ (below, following section) *other* non-entrepreneurial (at least in an individual sense) social and economic interests, also of constitutional rank.

In the next paragraph I shall give an overview of the ‘other’ interests that enter with ever increasing frequency and momentum (at times, even with prevailing status: think, for example, of the right of a researcher to freely use a patented invention for experimental purposes),¹¹ into the overall contemporary constitutional framework of IP law. I wish now to emphasise the fact that the central focus of the discipline – even of the very ‘structure’ of IPRs – still lies¹² with the role of the individual firms actually or potentially engaged in the production or distribution of (goods or services incorporating, and distinguished by) those same ‘non-material’ assets. This assumption is confirmed by a multiplicity of indications, from both international and national sources of positive law.

For example, in the field of patents:

- the principle of non-patentability of inventions that are not capable of direct industrial applications (articles 52(2) and 57 of the European Patent Convention (EPC));
- the frequent provisions entrenched in many national systems, as for example in Germany and Italy (but with a significant pro-labour differentiation in UK as concerns inventions not made in the execution of one’s contractual or fiduciary duties¹³), that accrue to the firm the right to the economic exploitation of employees’ inventions;

¹¹ The same can be said for the affirmation of the rights of third parties or the community as a whole inspired either by humanitarian reasons and by the need for information: below Chapters 2 and 3.

¹² It is possible that, in the future, the focus of IP law will extend to or even shift as advocated by various projects seeking to radically overhaul the system. See, for example, that of an international research group organised by the University of Stockholm called ‘IP in Transition Research Programme’, at <http://www.atrip.org/upload/files/activities/Parma2006/Kur%20AMENDMENT.pdf>. Further references in Chapter 2, note 81 and in Appendix, note 13.

¹³ See section 39 of the UK Patent Act, as amended in 1977. For an in-depth analysis of the provision, including from a historical perspective, see W. CORNISH, *Intellectual Property: Patents, Copyrights, Trademarks and Allied Rights*, 2003, 264 *et seq.* On the point at issue, UK law seems substantially convergent with the approach adopted by the US Supreme Court in *Dubilier* (289 US 178 (1933)) ‘where the contract of employment does not contemplate invention... the right of patent belongs to the employee’.

- the ‘working requirement’, that is, the duty to proceed with the industrial implementation of inventions and utility models or be subject – to the direct advantage of other, competing, firms – to the imposition of non-voluntary licensing, or even the revocation of patent rights: see article 5 of the Paris Convention and articles 30 and 31 of the TRIPs Agreement.

In respect of trademarks, one need only refer, first of all, to their intrinsic purpose ‘of distinguishing the goods and services of an undertaking from those of other undertakings’ (article 15 of the TRIPs Agreement). So too for other signs, such as the firm’s name (individual or corporate) distinguishing the undertaking’s business, and for signboards distinguishing shops and other outlets. Think too of the rules on trademark licences, forfeiture through non-use (that is, non-use ‘in commerce’), extension of renowned signs’ protection to ‘not similar’ fields of business, etc. (Chapter 4).

As far as copyright is concerned, the focus on the firm (as distinct, first of all, from the physical author) is generally more indirect but no less certain. In fact, in order to enjoy an affordable economic return from her work, the author thereof *must* normally assign her rights to a publisher that has the means and organisation suited to ‘make up’, reproduce and market for mass consumption the work itself, whether on a physical medium (book, CD, DVD etc.) or directly online via an electronic network. The concrete possibility for an author to directly exploit the work on her own exists (currently) basically only for unique works intended for private collections or galleries. And even in relation to the direct online diffusion of audiovisual works, especially when it relates to complex works to be ‘set up’, and distributed on a large scale, the so-called cultural industry is still the normally inescapable assignee, and actual ‘market manager’ of the rights originally vested in the author.¹⁴

In recognition of such a reality, copyright law expressly recognises the role of the firm in organising the preparation and commercial distribution of the work. Think, for example, of cinematographic works, where the right to economically exploit the rights of the film’s co-authors is entrusted ‘to those who organised the production of the work’, that is, the producers (article 14-*bis* of the Berne Convention). Also noteworthy are the so-called *neighbouring rights* of phono-record producers, radio and television broadcasters, etc. (more in Chapter 3).

¹⁴ The direct set-up and ‘peer-to peer’ transmission by authors, including users’ own works (‘used generated content’) is certainly an increasingly interesting phenomenon, yet mostly circumscribed by technical and economic constraints on certain types of ‘simpler’, low-cost work (on this, more in Chapter 3).

Finally, with regard to the related area of unfair competition, the focus on 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)).

4. Rationale of that Centrality

This typical, ‘structural’ focus of IP law on (individual) firms’ activity and interests, reflects a basic economic rationale.

In particular, as regards technological innovation, the protection of results of R&D activities through patents plays a central and specific role in recovering the costs and compensating the efforts and investments of the firm itself, typically operating in a competitive environment.

In fact, apart from the possibility (generally limited to procedural innovations: see Chapter 2) of exploiting technological results in secret¹⁵ or of applying for public subsidies¹⁶ (which are more and more insufficient to cover actual costs and are also often subject to limitations and restrictions such as territorial or occupational limits, as well as to often ambiguous trade-offs with the public administrations), in a capitalistic market legal system, firms cannot reliably recover their costs and receive remuneration for their investments except through patents. Only patents, indeed, guarantee the chance of a *differential profit* by means of the exclusive right – transferable to third parties (firms, typically), either in terms of ownership or exercise¹⁷ – to exploit the results obtained. It is obvious that in an environment of direct competition between manufacturers of identical goods, such remuneration would be highly uncertain or even impossible if (in the absence of an exclusive right) competitors were free to reproduce the new inventions/creations even *immediately after* the firm had launched it on the market. Having ‘saved’ on research costs, the competitors would enjoy a position enabling them to engage in a destructive, unsustainable price war.

¹⁵ On the protection of secrets, traditionally and generally limited to the rules against unfair competition – but recently and im providently reconfigured in pure IPR terms in Italy, see below Chapter 2, section 9.

¹⁶ In this regard, the US Bayh-Dole Act 1980 grants federal agencies that have commissioned research with public money the right to ‘march in’, that is, require the contractor who may be the holder of patents to grant a licence to third parties. See, among others, M.A. LEMLEY, *Are Universities Patent Trolls?*, in *Fordham Intell. Prop., Media & Enter. L.J.*, 18, 2008, p. 611.

¹⁷ The exercise of the exclusive right held solely on the basis of licences to third parties was referred to in the US Supreme Court decision in *eBay Inc. et al. v. Mercexchange LLC* of 15 May 2006 (547 US, 2006).

As regards copyright, a large part of the world's cultural heritage had developed before copyright had even come into existence or had even been thought of (*oratio publicata libera est* wrote Symmahus in the fourth century AD), thanks to the force of creative impulse, fostered by sovereigns and other patrons of the arts. True, of course. But apart from the privileged – and frequently censored – character of that ‘mode of production’ of culture, which often corresponded to an equally privileged scope of enjoyment, only the granting of an exclusive right of protection against free riding enabled the development of publishers dedicated to multiplying and disseminating the fruits of the authors’ labours. Is it a coincidence that this occurred with the advent of printing as an industrial activity?!¹⁸

Similarly, only the firm’s exclusive right to its distinctive signs allows it to protect its corporate identity/image and exploit the associated goodwill in the competitive business environment that stems from freedom of enterprise, and hence allows it to (continue to) effectively receive – for the entire period that the firm operates on the market – the revenues flowing from consumers’ preferential choice for its goods and services.

5. The Dialectic with Social Interests Involved in the Overall Constitutional Framework

It is equally true that the entrepreneurial exploitation of IPRs normally (and often deeply) ‘touches’ into other pockets (and brains), that is, impacts on the interests of social actors/stakeholders other than the firm. First and foremost are the communities of competitors, consumers, researchers, providers and users of information (see here arts. 19 and 27.1, Universal Declaration of Human Rights adopted by the UN General Assembly on December 10, 1948). And to the extent that such other stakeholders’ interests also enjoy constitutional rank, the legal system is addressed with the need to ‘harmonise’/balance these interests with those of individual IPRs holders.

I am referring to such collective interests as for example:

- to the protection of intellectual work, the expression of human – *personal* – creativity in all its manifestations and (hence also) in every lawful field: the object of a ‘human right’ enshrined in article 27(2) of the UN Universal Declaration;¹⁹

¹⁸ It is no coincidence that protection against unauthorised copying of literary works was originally afforded to printers commencing with the Renaissance library privileges. Only at a later stage (although in Venice since 1486) was it extended through the Statute of Anne in 1710 to authors, that is, content providers, one might say, for the publishing business (below Chapter 3 and associated bibliographical notes).

¹⁹ ‘Everyone has the right to the protection of the moral and material interests

- to the preservation of an economic environment of freedom of enterprise and competition as the instrument of and vehicle for the efficient production and distribution of ‘intellectual output’;²⁰
- finally, and *above all* from a systemic standpoint,²¹ to the development and spreading of culture, technical and scientific research, and the freedom of arts, sciences, information.²²

As is well known, the modern history of IP law is deeply marked, at national as well as at international level, by the answers given to the above-mentioned need for ‘harmonisation’/balancing of those different interests and corresponding values. ‘Different’, I wish to clarify, not as to the intrinsic ‘matter’, but rather as to the reference to individual versus collective stakeholders. Indeed, the protection of patentees and copyright holders obviously does act directly as a stimulus to research and creative effort, and the diffusion of the fruits thereof, hence of culture and information, as much as the protection of trademark holders in principle enhances the market’s competitive and transparent functioning. The true difference and the true dialectic between the interests at stake focus on the individual versus the social perspective of their pursuit. Thus, the interests of *competitors* and the interests of *competition* differ *vis-à-vis* not the object, but the perspective in which the ‘object’ is cultivated: so that the *individual* expression of competitive thrust can often lead to

resulting from any scientific, literary or artistic production of which he is the author’ (article 27(2) of the Universal Declaration of Human Rights *cit.*). See also the Charter of Fundamental Rights of the European Union (Nice, 2000), article 17(2) of which includes intellectual property as one of the fundamental freedoms (see F. MASCHIO, *Proprietà intellettuale e fattispecie di conflitto*, Rome, 2006, pp. 9 *et seq.*). On the quite different profile of IPRs’ possible encroachment on citizens’ (different) human rights, such as access to knowledge and information, see Chapter 3, note 109, and Bibliographical Notes.

²⁰ As explained in more detail in Chapter 3, a further and specific foundation of copyright is the principle of liberty of expression in the broadest sense. It warrants recognition and maintenance of the exclusive rights, even if the work is declared unlawful (the opposite happens in the field of patents, where the unlawfulness of the invention precludes validity).

²¹ Individual IPRs are to be considered a ‘means to an end’, as the US Supreme Court has always reiterated in its interpretation of article I, section 8, clause 8, of the US Constitution. See, in particular, *Feist Publications Inc. v. Rural Telephone Service Co. Inc.*, 499 US 340 (1991) where at paragraphs 349–50, the Court states: ‘The primary objective of copyright is ... to promote progress of science and useful arts. To this end copyright assures authors the right to their original expression, but encourages others to build freely upon the ideas and information conveyed by a work. This result ... is the means by which copyright advances the progress of science and art’. See also *Twentieth Century Music Corp. v. Aiken*, 45 Fd 2d 84, at 90–91, 422 US 151 (1975).

²² The constitutional provisions on competition must obviously be read in light of the provisions of the European Treaties (TEU and TFUE).

a monopolistic outcome, hence to a conflict with the *social* interest to preserve a competitive market framework.

In analogous terms, the principle of freedom of competition, as a corollary of the more general principle of freedom of enterprise, must be interpreted and applied within a perspective of harmonisation with the principles, for example, of freedom of research and public information. Such harmonisation implies possible limitations of entrepreneurial individual freedom should the exercise thereof lead to significant injury to said other interests of equal (or even higher) constitutional rank.

As we shall see shortly below (section 9), the modern history of IP law is basically marked by the current tendency of legislators to give succour to vested interests, aimed at hardening the exclusionary powers related to the individual enjoyment of IPRs, thus privileging, often in a strongly unbalanced manner, the private interests of IPRs holders vis-à-vis the collective interests mentioned above. Of course, one cannot deny that some pro-competitive antibodies have been built into the original IPR paradigms and in the features they later evolved; moreover, other balancing factors have been provided externally, that is, (chiefly) through the application of antitrust law to the exercise of IPRs. And indeed, this interference – or intersection, as it is more commonly called – is one of the most powerful factors in the evolution that contemporary IP law is experiencing on the long way to the goal of a satisfactory (re)balancing of individual and social interests.

I will deal extensively with these developments in Chapter 5, analysing the major specific expressions of the IP/antitrust intersection. However it is appropriate at this stage to offer a few introductory remarks, specifically focused on the systemic relation between IP and antitrust law. (It's almost superfluous to recall that after the Treaty of Lisbon, in force since December 2009, the norms on competition of the EC Treaty, 81 ff., have been incorporated in the Treaty on the Functioning of the European Union, TFEU, 101 ff. Numeration apart, text and substance of the EC Treaty's rules are maintained – just as regards, in general, the *acquis communautaire*: art. 2, EU Treaty.)

6. Intellectual Property and Antitrust: Distinct Rules ...

Antitrust law is made up of a set of rules typically targeted at enterprises (private and public, operating either *iure privatorum* or on the basis of special or exclusive rights), and aimed at ensuring, first, that the existence of markets featuring an effective²³ pluralism in terms of supply and therefore providing

²³ 'Effective' in the sense of 'workable', with reference to a situation of pluralism that can vice versa be 'sterilised' by intensely restrictive agreements among competitors (see Chapter 5).

consumers with real and actual (*not merely potential*) alternative choices²⁴ is not substantially threatened either by agreements in restraint of competition or by ‘excessive’ concentrations. Moreover, 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 (smaller competitors as well as consumers, subcontractors and customers of the dominant company, etc.)²⁵ 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 (the principle of ‘as if’ (*als ob*)).²⁶

For the purposes of our topic, the distinction between IP law and antitrust law revolves around two fundamental aspects.

The first concerns the subject matter of protection. The *interests* directly and primarily protected by IP law relate, as has been said, to the fostering of activities aimed at technological and cultural *innovation*, as well as the enhancement of *entrepreneurial identity*. Antitrust law, on the other hand, directly and primarily protects *competition*. This is essentially a tale of two regulations whose goals and basic regulatory principles can’t be held to coincide. For example, it is true that patent law promotes (through the (cross) licence mechanism foreseen by article 31(l) TRIPs and several countries’ national legislation) the freedom to compete of innovators that improve on previous inventions still under patent protection. But this happens only within the limits set by the IP norm, that is, of the set-up of a ‘high profile’ (technically and economically) derivative innovation. These limits are, thus, more

²⁴ The reference to supply and demand must obviously be reversed in the case of a monopsony (‘one-buyer’s market’).

²⁵ Antitrust law does not outlaw a dominant position in itself, even of monopolistic proportions, where it has been achieved through ‘spontaneous growth’ and hence not through mergers and acquisitions or, more generally, intrinsically anticompetitive behaviours. However, some European legislations, such as the Italian, forbid dominant positions in specific ‘sensitive’ sectors such as radio and television (for the (hypostasised) positive effects on pluralism of information, see Law No. 249/1997) and the supply of energy (Decrees No. 79/1999 and No. 164/2000).

²⁶ The normative expressions of the principle of freedom of competition can be partially derogated by legislative provisions (even of competition law itself, see, for example, article 81(3) of the Treaty (now 101.3 TFEU) on agreements, the merger regulation (No. 139/2004), rules on state aids, etc.) applied by judiciary and or *ad hoc* administrative authorities. For an incisive review of the basic principles of competition law, including from a comparative (EU/US) standpoint, an excellent starting point is G. AMATO, *Antitrust and the Bounds of Power: The Dilemma of Liberal Democracy in the History of the Market*, Oxford, 1997. See Chapter 5 for more detail.

restrictive than a general preference for competition would suggest, that is, they offer *carte blanche* for *all* derivative innovation developed by competitors of the holder of the original patent. By contrast, antitrust law gives the thumbs down to agreements between undertakings which, though generating a high degree of innovative efficiency, might excessively restrict competition in the relevant market (see below, Chapters 2 and 5).

The second differential aspect concerns the fact that, unlike IP law, antitrust law is designed to protect not single firms as such but the market and in particular the ‘relevant market(s)’, a legal concept that refers to geographic areas, classes of goods and distribution stages in respect of which the legal system checks and qualifies the impact of firms’ conduct and consumers’ choices. More precisely, with respect to said market(s), antitrust law as a whole aims to preserve and/or restore a ‘working’ (effective though imperfect) competitive market framework: a condition considered of general interest *in specie* of freedom of enterprise and market access for (at least potentially) *all* firms and freedom of choice for *all* consumers. Thus, the economic constitution of market-oriented systems (such as US, Europe, Japan)²⁷ subordinates the individual freedom of competition to the general interest in a competitive market system. More precisely, unlike IP law,²⁸ directly defending the non-material assets of single firms – and indirectly, so to speak by reflection, the general interest in the progress of innovation and culture – antitrust law essentially places an *external limit* upon the firm’s conduct, aimed at directly protecting the general interest in a competitive market – and only subordinately that of individual firms threatened or damaged by anti-competitive manoeuvres. In this sense, the motto of antitrust could be ‘first competition, then the competitors’.

7. ... But Nonetheless Dialectally Intertwined

This systemic distinction, which indicates the limits to an across-the-board reciprocal convergence of the two regulatory frameworks, should not however overshadow a more complex intertwining of relationships and functions between the two.

The protection of IPRs is not in itself contradictory with the enhancement of free market competition. In fact, the very attribution of limited exclusive

²⁷ On the latter see the analysis by E. KAMEOKA, *Efficiency claims in Japanese merger control: a comparative overview*, in *Concorrenza e mercato*, 2005–2006, p. 251.

²⁸ Moreover, as we shall see (Chapter 5), the most modern interpretative approaches, as well as several EC Directives, express a broader, non-corporatist vision of *market protection*.

rights over new creations, as well as trademark rights, serves competitive dynamics.

Patents do serve as an incentive to competition based on innovation. Trademarks assure a distinction among the various (sources of) offers on the market and hence they enhance, together with the individual identity and goodwill of single firms, the ‘transparency’ and hence the efficiency of a competitive market. On the other hand, the exclusivity inherent in patents, aimed at granting a differential advantage (primarily in terms of price: Chapter 2), and that are inherent in distinctive signs, aimed at avoiding the confusion/poaching of customers, would have no meaningful role in a perfectly monopolistic market.

Moreover, the exclusivity of an IPR, which satisfies a monopolistic-type interest, is granted as a means of furthering the collective goal, of constitutional rank (as first stated in the US: see article 1, section 8, clause 8, of the American Constitution), of fostering activities aimed at producing and diffusing inventions and creative works. Also these activities of business enterprises are to be placed within a constitutional framework informed by the general principle of freedom of competition.

The existence of this multifaceted functional nexus is confirmed by the very origins of modern IP law (as founded on *equal rights* rather than *privileges*). I will briefly recall two salient examples. The limit fixed by the Statute of Anne 1710 on the term of the exclusive right granted to printers and authors was twice the term of employees’ non-compete obligations under the rules of ancient corporations. In substance, it was aimed at granting competitors and followers access to a regime of free competition.

The second example is the famous reference to intellectual property as ‘the most sacred’ (*la plus sacrée*), made by Le Chapelier in introducing the first post-revolutionary law (1791) granting the *droit d’auteur*. That expression – on which IP hardliners have often speculated – was in truth drawn (without citing it!) from the Turgot Edict of 1786, from the part devoted to the ‘ownership of one’s own work’ (*propriété du travail*), as precisely the acknowledged right of each citizen-worker to get rid of the restrictions on freedom of trade imposed by *maitrises et jurandes*.²⁹

²⁹ See respectively *Rapport de M. Le Chapelier* on the Law of 13 January 1791, and A.R.J. TURGOT, *Édit du roi portant suppression des jurandes et communautés de commerce, arts et métiers*, 1776. That emphatic wording, often invoked by advocates of protectionist features of IP law, originates on the contrary in a context of the exaltation of freedom of competition. Indeed, Le Chapelier envisaged exclusivity solely for works that had not yet been published and even then as an exceptional situation compared to the public domain (J.C. GINSBURG, *A Tale of Two Copyrights: Literary Property in Revolutionary France and America*, in R.P. MERGES and J.C. GINSBURG (eds), *Foundations of Intellectual Property*, New York, 2004, pp. 288 *et seq.*

More specifically, IP law aims at striking a balance (with perhaps greater equilibrium in patent law: Chapter 2) between the individual interests of the rightholders and those of present or future competing innovators and distributors of patented products. This balance has long-range, ‘diffuse’ effects (including potential effects) on the so-called ‘innovation’ market, which contribute to the competitive character of that market – and this from the standpoint of both horizontal (‘inter-brand’) competition among different technologies and vertical (‘intra-brand’) competition among distributors of the same patented product.

Some examples of the basic precepts of patent law which ‘balance’ the patentee’s exclusive/exclusionary rights so as to promote competition, are: (a) the provision of a certain, fixed time limit on the exclusive right, which ensures and defines with certainty the future prospects of direct competition with the patent holder; (b) the so-called ‘exhaustion’ of patent right, which moderates price levels along the distribution chain; (c) the disclosure of the invention and the publication of its application, which together provide the public – that is, competitors – with adequate information about the new invention, thereby facilitating subsequent competitive innovation – either substitutive or derivative; (d) the restriction of the scope of the patent to a specific technical solution instead of a type of utility,³⁰ thereby allowing for the immediate development of competing alternatives (see further Chapter 2).

On the other hand, antitrust law does not in itself hinder the granting and enjoyment of IPRs, but simply conditions the manner of their exercise so that the monopolistic effect that such exercise implies³¹ does not exceed the level necessary to satisfy their *essential function* of granting a chance of differential remuneration in order to foster innovation and creativity, or protection of trade identity. Here we can see an analogy with the principle of antitrust law (article 86(2) of the EC Treaty, now art. 102 TFEU) governing monopolies for public interest services, that is, the principle whereby the recognition of monopoly rights is limited to the scope necessary for meeting the public service obligations for which such rights were granted.

In short, it can be confirmed that the intellectual property paradigms often contain built-in ‘antibodies’ that reduce the impact of exclusive rights on the interplay of competition. By the same token, antitrust law’s mission is also to contain the exercise of IPRs within limits compatible with the general interest of safeguarding a ‘workable’ competitive fabric of the market(s) concerned.

³⁰ ‘[...] the common function of two industrial patents does not imply per se that one infringes the other but just that the solution adopted is the same’: Supreme Court (Civil Division) judgment no. 17993, in *Foro It.*, 2006, I, 114.

³¹ Below Chapter 5, section 5.

As further confirmation of the absence of any irremediable enmity between the two branches of law, it should be remembered that antitrust law does not hinder (provided the restrictive effects are not ‘excessive’) contractual limitations upon the exercise of IPRs that are reasonably necessary to achieve efficient innovation. Some years ago Professor Robert Pitofsky, former Chairman of the Federal Trade Commission, pointed out that on only *one* occasion throughout the entire history of antitrust law in the US a research and development joint venture was called to account for breaching antitrust provisions. And the European Community has increasingly shown special leniency – accentuated with Regulation (EC) No. 2659/2000 – towards agreements in the field of research and development, even though they may provide for the joint development and exploitation of ‘results which are protected by intellectual property rights’ (article 3(4) of the said Regulation). Further, through Regulation (EC) No. 772/2004 (below, Chapter 5) it has also adopted a more flexible approach regarding the transfer of technology protected by IPRs. Borrowing the formulae of property law, it can be said that the powers to *enjoy* (exclude) as well as the power to *dispose* (license) that a rightholder has and which intrinsically restrict competition in production and distribution can be exercised *if and to the extent* that they do not conflict with the maintenance of ‘workable’ competition in the markets concerned (that is, both the primary (‘horizontal’) market of goods protected by IPRs and the related upstream or downstream ones: see Chapters 2 and 5 for more).

The foregoing observations lead to a teleological reflection regarding the ties between intellectual property and antitrust. As some authoritative economists have been stressing for some time now, the latter discipline fosters innovation, although from the *opposite* angle to intellectual property. By hindering entrepreneurs from becoming and consolidating their positions as rent-seekers, antitrust law encourages firms – *all* firms – to develop new products and processes, so as to acquire future competitive advantages from their inventions. That incentive importantly targets both *the incumbents* who are driven towards further innovation in order to maintain and expand their current market share and *the challengers* who focus their R&D efforts on developing innovative solutions that could unseat the incumbents.

There is a final but no less important aspect of the intersection between IP and antitrust law that is worthy of note. In specific circumstances (see Chapter 5), IPRs can contribute to creating or reinforcing ‘market power’ in an antitrust sense. Thus, the ownership and/or exercise thereof can be used to reinforce the ‘dominant position’ of one or more undertakings for the purposes of investigating abuses and reviewing concentrations. For example, competition authorities, and courts, have in certain cases equated copyrighted software with an *essential facility*, hence affirming the obligation to grant competitors access to the relevant source codes (see below, Chapter 5, in connection with the

European *Microsoft* cases). Or, think of the role that concentration in the same hands of control of important patents and trademarks could play in a merger being deemed ‘incompatible’ with antitrust rules.

In conclusion, albeit pursuing the protection of distinct goals, each branch of the law often ends up indirectly promoting, from many standpoints, the same kind of interests specifically and directly protected by the other in the development of innovation and the protection of competition). Now, it is just this frequent, multifaceted ‘parallel convergence’ that justifies IP law being interpreted in the light of the same overarching principle, of constitutional rank, that guides antitrust law, that is, freedom of enterprise and competition – *as ‘harmonised’ with the other constitutional principles* protecting and enhancing the different social interests also involved in the dynamics of IPRs’ exercise.

8. The Guiding Principles

Consistency with that overarching principle gives rise to two main guidelines in construing and applying IP (and unfair competition) law.

The first is the principle of *numerus clausus*, according to which IPRs are strictly defined by law in number and kind.³² This is because IPRs grant powers in restraint of competition, and are therefore to be deemed *exceptions* to the constitutional principle of economic freedom. Needless to say, acknowledging this principle does not hinder the extension by legislation – solely by legislation and not interpretation – of the nucleus of IPRs beyond those currently protected. Historically, in fact, these rights have been progressively extended: one need only to consider, for example, the ‘new’ exclusive rights introduced on the layout design for integrated circuits.

The correct application of this principle requires another guideline to be followed in interpretation: care must be taken to ensure that no functions of intellectual property protection are surreptitiously attributed to other branches of law which, while pursuing *other* functions, could refer to IPRs-protectable subject matter. In particular, special attention must be paid to avoiding (mis)interpretations, frequent in certain countries, of the rules against unfair competition. I refer to interpretations that unduly invest such rules with a *crypto-patent* function exceeding their own proper sphere of application. Think, for example, of the tendency to extend the prohibition against passing-off

³² Obviously the *numerus clausus* pertains to the ‘list’ of IPRs as such and certainly not to their material ‘subject-matter’, which has sometimes been left undetermined: one need only consider, in particular, the varied family of so-called ‘atypical distinctive markings’, protected under the unitary regulatory reference to the distinguishing function (see Chapter 4).

beyond the limits sufficient to contain the risk of confusion (see Chapter 4), thereby infringing the valuable principle: ‘no misappropriation without misrepresentation’.

The second interpretative guideline to be followed is to constantly *favour* a *pro-competition construction* of IP law, even when the wording might in itself allow a different interpretation. More specifically, while always respecting the IPRs’ inherent function (protecting innovators against free riding, or firms’ and products’ identity and renown against misrepresentation), the rule(s) must be construed, to the extent that the wording allows, *in a manner that defends and promotes rather than erodes* the economic freedom of third parties, as well as the market’s competitive fabric. It is in compliance with this guideline, for instance, that patent law has been construed in Europe so as to avoid extending a patent’s scope to all the possible uses of an invention, but to limit it to the particular technical field and technical solution that the inventor has specifically claimed in the patent application (see Rule 42 and 43, ‘Content of the description’ and ‘Form and content of claims’ of the ‘Implementing Regulations’ of the European Patent Convention³³ and article 5(3) of the European ‘Biotech’ Directive 98/44 EC³⁴).

Following these guidelines not only ensures that IPR law remains consistent with the guiding principle of free competition, but also with the constitutional goal of promoting research and culture. For instance, if the rules on infringement were to be construed so as to extend the scope of exclusive rights beyond the strict *quid inventum*, the development of subsequent innovation would be discouraged. Third parties (competitors of the patent holder) penalised by such an interpretation would in fact have no incentive to invest in ‘too’ risky attempts at improving and/or modifying previously patented techniques. And the patent holder herself, benefiting from such an overprotectionist interpretation, would be tempted to make ‘rent’ out of her acquired competitive advantage, rather than being stimulated to *further* invest in research and innovation.

³³ ‘The description shall: ... c) set out the invention ... in terms that the technical problem can be understood, ... and its solution; f) specify in detail at least one way of implementing the invention ...; g) expressly indicate ... how the latter is apt to be an industrial application’. For more on the content and requisites of the description, see Chapter 2.

³⁴ Said article demands that the industrial application of a sequence or a partial sequence of a gene be disclosed in the patent application. See more in Chapter 2, section 4.

9. Current Protectionist Trends

Risks of this sort become all the more evident in light of ‘overprotectionist’ interpretative tendencies³⁵ that have periodically emerged throughout the history of IP law and that glaringly emerge today as a result of several major developments in the technological and economic domain. I am referring in particular to legislative initiatives and hermeneutic trends often vigorously promoted worldwide from across the Atlantic – a sort of Washington Consensus on intellectual property.³⁶

These trends generally, and in relation to specific principles and industries, are substantially shifting the centre of intellectual property law further towards ‘monopoly’ rather than towards ‘competition’, so much so as to lead to what has been described by Jerome Reichman as ‘a discredited intellectual property system [that] risks collapsing of its own overprotectionist weight’.³⁷ The risk of collapse (the risk of ‘corporative regression’ that departs from the liberalist and pro-competitive spirit of the classical model) arises precisely from the danger that intellectual property rights could be transformed from a tool for the promotion of innovation and competition, into a protectionist barrier in favour of dominant enterprises: that is to say, into a factor that restricts supply and slows down the dynamic processes that generate innovation, while also reducing consumers’ alternatives of choice.

This danger, it must be noted, is much more acute vis-à-vis the contemporary tendency of markets to take on an oligopolistic structure. This tendency threatens *all* market ‘players’: small competitors, both current and potential,

³⁵ In a civil law tradition like the Italian one, corporatist pressures are felt mainly at interpretative level but the ensuing practices can then end up being codified. Let me quote, especially for the younger generations, the famous remark of an eminent Italian scholar of the late 19th and early 20th centuries, Cesare Vivante, a cultural disciple of Levin Goldschmidt, on the formation of the Commercial Code (C. VIVANTE, *Trattato di diritto commerciale*, I, Milan, 1922, Introduction, p. 12): ‘To compile the new Code our legislator called upon industrialists, bankers, insurers, railway companies and chambers of commerce (they too protectors of the interests of trade), in other words men who in their careers and teachings were used to defending business interests, and then said to consumers: here is the Code that applies to you too. Therefore, a class-biased law came about ...’.

³⁶ I again refer to the quoted essay by M.P. RYAN, *Knowledge Diplomacy: Global Competition and the Politics of Intellectual Property*, Washington, DC 1998. Beginning 2009, though, we can (also) reasonably hope for a ‘change’ of that consensus’ direction towards more balanced, and equitable, IP regimes. On this, more in the Appendix.

³⁷ J.H. REICHMAN, *Beyond the Historical Lines of Demarcation: Competition Law, Intellectual Property Rights and International Trade after the GATT’s Uruguay Round*, 20 *Brook. J. of Int’l Law*, 1993, 119.

who are increasingly deprived of opportunities for competition; consumers, whose range of choice is increasingly limited by sparse offerings marketed at exorbitant prices. And even in the long term, the dominant firms themselves, encouraged to go on reaping the fruit of their guaranteed earnings, might well be tempted to slow down the pace of further investments in innovation.

10. Specific Examples

In modern times, the overprotectionist trends (in both making and interpreting rules), whose risks we have just mentioned, have manifested themselves along three main lines.

I. First, the extension (under various teleologically convergent aspects) of the scope of the protection afforded by exclusive rights. Just to recall a few examples, the protection of trademarks has been expanded beyond the limits of its fundamental function of distinguishing firms and products from others, to cover business sectors that are quite different and sometimes even remote from those in which the trademark holder operates. Patent protection, too, has also been expanded in some jurisdictions, even by court law, to cover fields of use that were not contemplated or claimed by the patent holder. Recurring attempts drive towards the upgrading of industrial secrets to IPRs (see the Italian experience, Chapter 2, section 9).

As far as copyright is concerned, take for example the creation of new forms of *digital infringement* related to the protection of ‘anti-access’ software (so-called ‘technological protection measures’, TPM),³⁸ thereby putting at risk, at least in practice, the freedom of access to and use of works, data and information that are not, or cannot be, covered by copyright in the first place. A further example is the extension of the copyright term, which has been progressively lengthened to the current (but probably not yet definitive) term of 70 years from the death of the author (see Directive 2006/116/EC³⁹), amending previous Directive 93/98/EC.⁴⁰

Patents have fortunately not had their term extended (the introduction of complementary protection certificates for pharmaceutical and phytosanitary patents is not, *if* properly applied, a form of extension: see below, Chapter 2). But results that achieve similar effects are frequently produced by deliberate

³⁸ See Chapter 3, section 6 for a critique of Directive 2001/29 EC on the Information Society (the so-called InfoSoc Directive).

³⁹ Directive 2006/116/EC of the European Parliament and of the Council of 12 December 2006 on the term of protection of copyright and certain related rights (codified version), *OJ L* 372, 27.12.2006, pp. 12–18.

⁴⁰ Council Directive 93/98/EEC of 29 October 1993 harmonising the term of protection of copyright and certain related rights, *OJ L* 290, 24.11.1993, pp. 9–13.

laxity on the part of patent offices and the courts: the former often granting and the latter upholding 'derivative' patents (filed by the original inventor) of dubious inventive character, at times merely the result of astute rewording of previous patents, thus surreptitiously made 'evergreen'.⁴¹

II. Second, the replacement, in a wide variety of new technological sectors, especially information technology sectors (ITs), of patent protection, rich in pro-competitive antibodies (see Chapter 2), by the copyright regime, which features a more intense pro-monopolistic bent (see Chapter 3).

III. Third, but not least, the attempt to include within the scope of IPRs protection types of intellectual creation which, whilst linked to innovation-generating processes, have traditionally been considered to fall into the public domain and therefore be open to free competition. Some examples are the proposals aimed at eroding the principle of the non-patentability of the results of basic scientific research and mere business and game plans and methods, as well as calling for a thoroughly 'reductionist' revision of the list of non-patentable subject matter included in article 52 of the European Patent Convention. Again, the ambiguous prospect of having the expression of diverse local cultures (so-called 'traditional knowledge' and folklore) be the subject matter of IPRs: a prospect which if not governed by wise specific regulation could lead to the total privatisation – hence across-the-board appropriation – of elements that should more correctly be considered as *cultural domain*.⁴²

⁴¹ On the *Glivec* case (*Novartis v. Union of India and Others*, Madras High Court, 2007: http://www.lawyerscollective.org/%5Eamtc/current_issues/Judgement.pdf), see S. BASHEER and T. PRASHANT READDY, *The 'Efficacy' of Indian Patent Law: Ironing out the Creases in Section 3(d)*, Script-ed, Vol. 5, Issue 2, August 2008, available at: <http://ssrn.com/abstract=1086254>.

⁴² In rectifying in this sense a previously expressed opinion (G. GHIDINI and E. AREZZO, *From Huts to Labs and Back Again: Stimulating the Production of Biodiversity-based Drugs while Ensuring an Equitable Sharing of the Benefits Flowing Thereby*, in H. ULLRICH and I. GOVAERE (eds), *Intellectual Property, Public Policy, and International Trade*, Brussels, 2007, p. 77), I totally agree with the proposal to introduce a sort of misappropriation ban (fully compatible with the domain principle) to protect indigenous communities against the misappropriation of their biodiversity and associated traditional knowledge. On this topic, see in particular WIPO's documents, such as proposals, the most recent version of which is *The Protection of Traditional Knowledge: Draft Objectives and Principles*, WIPO/GRTKF/IC/10/5, submitted at the tenth meeting of the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, held in Geneva from 30 November to 8 December 2006, available at http://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_10/wipo_grtkf_ic_10_5.doc. See also the 2009 WIPO Draft report of the Intergovernmental Committee on Intellectual Property Resources, Traditional Knowledge and Folklore, WIPO/GRTKF/IC/14/12 Prov.2, available at: http://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_14/wipo_grtkf_ic_14_12_prov_2.doc.

What is the driving force behind such trends? First and foremost, I believe, it is the industrialised world's quest for new sources of competitive advantage on global markets as it gradually loses its pre-eminence in 'mature' sectors. Hence, the increasing attention to innovative technologies and the protection of their exclusive exploitation as a means of maximising (in the *short term*) the return on investments. In its turn, this rationale – *déjà vu* in historical cycles of industrial revolutions – stems from some typical aspects of the current industrial and financial context of technological innovation.

Amongst such (well-known) factors, we can briefly consider:

- the growing extension of competitive conflicts based on technological innovation to ever larger markets, typically on an international scale;
- the increase, exponential in some sectors, of research and development, distribution and advertising costs (more so, often, than production costs in the strict sense);
- the chronic insufficiency, as a result of the widespread implementation of cost-cutting policies, of government subsidies for scientific research, that is, the raw material for applied (industrial) research. The business community is increasingly being called upon to cover costs of scientific research that were traditionally borne by universities and public institutions;⁴³
- the need, arising from the factors illustrated above, to attract ever greater amounts of venture capital. Typically, this need is met in financial markets featuring increasingly intense competition in offerings, making equity investments more attractive. In turn, such financial

Specifically as concerns folklore, I believe it should be denied any possibility by the *pro tempore* representatives of communities at all levels, whether villages or entire countries, to alienate assets that belong to the community itself in a historical-institutional sense, such assets constituting *cultural heritage in the public domain*. What it should be possible to grant are temporary licences to use said cultural assets in a manner and according to terms capable of preserving their integrity and defending their dignity and reputation. On this highly sensitive issue, see amongst others N. MEZGHANI, *La protection du folklore, des créations populaires et du savoir traditionnel*, in G. GHIDINI and L.M. GENOVESI (eds), *Intellectual Property and Market Power – ATRIP Papers 2006–2007*, Buenos Aires, 2008, p. 313; J. GIBSON, *Knowledge and Other Values: Intellectual Property and the Limitations for Traditional Knowledge*, in G. WESTKAMP (ed.), *Emerging Issues in Modern Intellectual Property: Trade, Technology, Market Freedom, Essays in Memory of Herchel Smith*, Cheltenham, UK, 2007, p. 309.

⁴³ In countries where the system encourages the practice (in the US, since 1980, thanks to the Bayh-Dole Act), universities themselves increasingly tend, for obvious economic reasons, to engage in applied research with a view to patenting the results and later licensing the resulting patents for industrial exploitations. Briefly put, they tend to bring their research policies in line with the R&D goals typical of corporations. In so doing, they risk losing sight of their mission to lead basic research.

competition drives corporate policies aimed at maximising shareholder value in the *short* term. Thus, such policies often reflect a financial logic, at times exaggerated, rather than an industrial one aimed at the constant, long-term development of the industrial activity. Now, those short-term financial needs lead to a preference for ‘stronger’ forms of protection of IPRs as ‘value-generating’ instruments, whether on a commercial level (licences, *merchandising* etc.) or a directly financial one (think, for example, of IPR securitisation). This even applies at the accounting level: I refer to the possibility of registering IPRs in the balance sheet at a ‘fair value’ (higher than the traditional ‘historic cost’), following the new International Accounting Standards, in particular IAS 38).

- the ease of immediate and ‘perfect’ (indistinguishable from the original) duplication of the output of new technologies, such as computer programs (due to their ‘bearing the know-how on their surface’, to borrow J.H. Reichman’s words) and bioengineering (due to the typical self-reproducibility of biogenetic material). Such ease annuls the natural ‘lead time’ of innovators and thereby jeopardises the recoupment of first-comers’ investments.

11. Signs of an About-turn ...

History is always on the move, even in the field of intellectual property law. In the last few years and in particular in the brief period of time since the publication of *Intellectual Property and Competition Law* (2006), the hyper-protectionist tendencies are encountering signs of ever increasing opposition. Such signs are an important harbinger of an about-turn since they no longer come only from social activists or restricted academic circles swimming against the stream. Those circles themselves are expanding at a swift pace. This *nouvelle vague* of reform initiatives, organised by leading universities and research institutes, witnesses to a wider than usual academic sensitivity not only to issues linked to IP regulation’s impact on the generation of innovation, and competition, but also to its broad social, and geopolitical, effects.

But the really breaking news is a definite distancing from the protectionist models described above by an increasing number of representatives from the world of industry and finance involved in research and development (primarily, but not only in the IT and communications fields). They advocate different business models that are not always premised on an across-the-board exclusionary view of IPRs. In other words, from within the business world a growing number of authoritative voices bear witness to the fact that, without prejudice to the essential prohibition on free riding, methods of production and

distribution involving forms of *open* or *cooperative* exploitation of IPR-protected innovations are equally, and at times even more, capable of 'creating value' (as the fashionable expression goes).

This phenomenon of sharp and insightful dissociation by industrial interests from highly protectionist models of intellectual property had in truth already shown itself several times in Europe: more recently at the time of the European debate on the proposed Directive on software-related patents, and years before on the so-called *sui generis* right over the information stored in databases,⁴⁴ and earlier on the copyright protection of computer programs.⁴⁵

More precisely, in recent years that growing 'difference' (*vive la différence!*) has manifested itself on two distinct levels of economic relations.

The first concerns innovators and third-party operators (direct competitors as well as rivals in downstream or upstream markets). In particular, the IT industry (a typical *network* industry: see Chapter 5) has envisaged the need to use reciprocally compatible (interoperable) components and products as a prerequisite for greater overall productivity both for horizontal product lines as well as for vertical (upstream or downstream) lines. This has led to pressure to *open up* to third-party operators (paying licensees, not free riders!) access to innovations which, by reason of top-notch quality, public liking or regulatory authority decision, have become standards, and whose protection through patents or copyright would constitute a formal, further barrier to market entry by third parties.

What is involved are not isolated or ephemeral episodes. Testimony to the growing affirmation of this new entrepreneurial approach is the ever more frequent *interlinking* between *closed* and *open* models of exploitation of intellectual property rights, the latter based on 'sharing'. In particular, the open source licence model, initially conceived to favour a somewhat restrictive community of amateur programmers, has given life to a veritable industrial option (more than a pure alternative, as the interlinking mentioned above testifies). Thus giants like Microsoft and IBM embarked at least partially upon new paths using IT more oriented towards sharing, no longer rejecting across-the-board access by third parties to portions of their technology protected by IPRs. (Things have got to the point, once unimaginable, that the patent system has been criticised in that it does not prescribe the disclosure of the source code for software-related inventions.)

⁴⁴ Granted by Directive 96/9 to the 'maker' of the database (collector and organiser of information) as distinguished from the author, in the proper sense, that is, the 'architect' of the database mainframe (structure). See Ch. 3, § 14.

⁴⁵ F.J. HUET and J. GINSBURG, *Computer Programs in Europe: A Comparative Analysis of the 1991 Software Directive*, 30 *Colum. J. Transnat'l L.*, 1992, p. 338.

The philosophy of sharing as a premise for achieving more advanced (efficient) industrial patterns (*new business models* in jargon) is not limited to the information technologies business. A similar change of policy and heart can be detected also in the editorial and entertainment business in two distinct directions: the production of new ‘content’ (stimulus to creativity) and the relationship with the end user/customer of the same.

As regards the first aspect, one must consider the industrial necessity of keeping up with the increased transmission capacity brought about by new technologies (in particular, broadband and wireless), that is, it is necessary to *fill up* new available channels to avoid having ‘more high-speed networks than they know what to do with’.⁴⁶ It is in this context that one witnesses a resurfacing of the once ‘unacceptable’ possibility of giving more liberty to develop ‘derivative works’, that is, transformations and/or additions to previous creations, even including the rapidly expanding frontier of *interactivity* between the producers and consumers of those contents. It is here that the absolutely exclusionary model of copyright first appeared to many to be just *red tape*, or indeed a *strait-jacket*, compared to the new promising production and distribution models. As *The Economist* stated in 2003, a ‘radical rethink’ of copyright in a reductionist sense was called for in order ‘to foster creativity in the digital age’.⁴⁷

As regards the second aspect, a fact that was unthinkable until a short time ago seems worthy of comment. Some high priests from leading IT and communications companies have expressed their growing dislike of, if not actual hostility towards, the maintenance and defence of those ‘technological protection measures’ (TPM) capable of hindering access to and the exchange of digital data, information, text, images, music etc. in communication networks. (As we shall see in Chapter 3, this use can at times become misuse, when the contents involved are not copyrighted or even copyrightable, or however subject, albeit under certain conditions, to free access and use for purposes of research, study, cultural and civil debate, etc.) This, too, is not a case of an ideological conversion. As in the aforementioned cases, it is a *different perception of business interests* which drives a more ‘open’ approach – and makes it quite significant. In short, some discerning and far-sighted minds in the information, culture and entertainment businesses have come to understand:

⁴⁶ ‘A World of Connections: Special Report on Telecoms’, in *The Economist*, 28 April–4 May 2007.

⁴⁷ This also confirms that the tendency to extend the *open licence* models conceived for computer programmers to the wider cultural industry is not just a passing phase: just think of the current growth in *creative commons* licences.

- that a policy of obstacles or even legal persecution of individual users can be a wasted effort not only because of the legal costs,⁴⁸ but above all because of the negative effects on the *social consensus* (that is, on image and hence customers) that firms need to retain, especially in sectors of ‘mass’ consumption, in order to grow and face the competition;
- that firms can adopt (different) business models and distribution policies – that enable access to and exchange of content at a low price (at times even free of charge) and still ‘make money’. These different policies are mainly based on other sources of income such as low cost subscriptions, online advertising and offers of additional services (both ‘linked’ to the content transmitted), sponsorships, ‘live’ performances, including an ‘invisible’ price increase of the *hardware* (for example, mobile phones) used for downloading content (see also below, Ch. 3, § 19).

Thus, the user pays just a little or indeed nothing at all (in return, agreeing to be the recipient – ‘contact’ – of advertising) and the firm earns from sources other than the straight ‘price’, thereby avoiding the costs (monetary and image-wise) of having to pursue users and/or servers through the courts. At this point, TPMs, the electronic copyright padlock, may⁴⁹ come to be as antiquated and cumbersome as chastity belts (and just as ineffective).

This is not all. In sectors other than those strictly linked to communications, and not normally thought of in terms of *network industries*, such as biotechnology, ‘open licence’ systems are gathering ground as the most efficient models of creating innovation. These are at times ‘open’ without any defined limits along the lines of the open source model. More often new technologies are made-and-shared (through patent pools and/or cross-licences) within the context of *collaborative* production systems, that is, ‘open’ within a pre-

⁴⁸ So much so that the majors prefer to strike at the servers, much easier to identify and certainly, unlike users, capable of paying large sums in compensation. Testimony to this practice are the *Napster*, *Kazaa* and *Grokster* cases (below Chapter 3). That said, I believe that this practice is declining in light of the new developments described in the text.

⁴⁹ I say ‘may’ having in mind the possibility that in specific cases, or specific economic circumstances, those other sources of revenue end up being inadequate. In several countries, this seems at present to be the case with online editions of newspapers, owing to the fact that a dramatic drop in ‘paper’ advertising, linked to the current global economic crisis, is not compensated by the revenues from online advertising. Hence the choice of some publishers to request a payment, applying TPM to their once often free online editions. I trust that such policies will be reversed as soon as the crisis eventually comes to an end.

determined group of firms that cooperate with one another in R&D while remaining competitors on the market.

This occurs at present and has also occurred for a considerable time in more traditional industries (for example, components for cars and household goods). Here, there has been a silently growing affirmation of industrial models based on technical standards that are the fruit of *cooperation* while competition is played out in the field of design, brand, marketing policies etc. Important parts of the frame, engines and working mechanisms in automobiles from various car manufacturers are to an increasing extent the product of cooperation, with competition focusing on marketing. As recent international experience shows, such cooperation among competitors (*co-opetition*) often extends to the level of R&D, and envisages not simply the reciprocal free sharing of results, but also the co-patenting or cross-licensing thereof, or even the reciprocal foregoing of patenting. Thus, as hinted, only the *last mile* of the industrial process, that is, refinement, marketing and ready-to-market industrial applications, rests solely upon each competitor's own strategy.

This 'cooperative' trend is worthy of encouragement for its higher innovative potential, notwithstanding the inherent risks (to be properly addressed by a pro-competitive regulation of R&D agreements and/or by antitrust law *tout court*) of 'collateral' covenants aimed at restraining the exploitation on the market of the innovation jointly developed – either with reference to prices or even the 'timing' of the marketing itself of the new products.

The evident reasons for this ever growing trend are twofold. First, there are cost efficiency motives that compel the achievement of cost savings, even in R&D activities, vis-à-vis the erosion of profit margins implied by increased competition.⁵⁰ Such cost efficiency tends to be attained, by the way, more through flexible cooperation agreements than through mergers (so frequently leading to disappointment compared to the expectations that inspired them). Second, international expansion puts pressure on businesses to increase the compatibility of parts and products and hence to intensify processes of standardisation.

All this, therefore, leads to a multiplication of forms of industrial cooperation in which the necessary recourse to the above-cited contractual instruments (cross-licences, patent pools, etc.) encourages forms of intellectual property exploitation that – without facilitating free riding – drive towards a broader sharing of innovation as well as a wider dynamic participation in the creation thereof. I must just add that this trend is swiftly growing beyond the circle of the established industrial world, increasingly encompassing the developmental

⁵⁰ The more so, may I add, in times of deep economic crisis such as the world is currently experiencing: a situation that typically highlights the cost-related benefits of business cooperation, even at R&D level.

dynamics of, and industrial relations with, many developing countries. In turn, as we shall see in the Appendix, this geopolitical profile is assuming increasing relevance as concerns the future re-shaping of the IP international regime – hopefully heading towards more fair – and far-sighted – equilibria.

In conclusion, we are witnessing the emergence of different models of creation and enjoyment of intangible goods, which work to modify the traditional ‘omni-excludent’ intellectual property paradigms. These models do not impair the essential function of IPRs, that is, prevent and enforce free riding (free riders don’t pay, licensees always do!⁵¹), while often proving more efficiency for the advancement of research and development and industry across the board.

12. Keep a Tight Hold on the Helm

Is there a new wind blowing, then, through the world of intellectual property? Or is it just a breeze that moves the curtains in the palace of the Leopard, a metaphor of just an apparent change. Personally, I am cautiously optimistic, in view of all the economic, cultural and geopolitical factors cited above, and the correspondingly evolving attitudes, even in the business world, that are pressing for more ‘open’ intellectual property models. These models objectively reflect an attempt to reconcile the incentives to private efforts and investments in innovation and individual competitiveness with the satisfactory preservation of a ‘workable’ competitive market, enhancement of culture, science and research, freedom of information, etc.

Certainly, one must be realistic about the overall *state of progress* of these new trends. National and European lawmakers and judges have so far given ambiguous signals. Let us consider a few examples (see further below, Chapters 2 and 3). On the one hand, the European Parliament (and the Commission) have refused to allow mere *business methods* to be patented⁵²; and the Biotechnology Directive (98/44/EC) has excluded the patentability of genes and gene sequences per se (more in Chapter 2, section 4). On the other hand, the Directive on Copyright in the ‘Information Society’ (InfoSoc,

⁵¹ Below Chapter 5.

⁵² Let us not forget, however, that the European Patent Office has for more than thirty years now (starting with *Vicom/Computer-Related Invention*, T208/84, 1987 EPOR 74) been granting patents on inventions implemented through computers, even when the patents concern a business method, provided it is computer implemented (see *Sohei/General Purpose Management System*, T769/92, 1996 EPOR 253) and the invention is shown to produce a so-called *technical contribution* (see G. GHIDINI, E. AREZZO, C. DE RASIS and P. ERRICO, *Il software fra brevetto e diritto d'autore: Primi appunti sulla Proposta di Direttiva comunitaria sulle invenzioni attuate per mezzo di elaboratori elettronici*, in *Riv dir. Ind.*, 2005, I, pp. 46 et seq.).

29/2001 EC) has significantly strengthened the exclusionary powers of copy-right-and-neighbouring rights-holders vis-à-vis third parties' faculties of access and use of data and information (even if) relevant for purposes of research and education (see Chapter 3, section 6). Moreover, the European Parliament has adopted a resolution on first reading⁵³ that makes it a criminal offence to engage in the somewhat vague act of 'facilitating' infringement, thus risking the punishment of mere 'supply of access' to networks. And let us not forget the protectionist slip of the Italian Industrial Property Code (IPC, 2005) relating to the protection of industrial and business secrets (below Chapter 2, section 9).

Thus, cautious optimism is called for. While acknowledging several significant dynamic developments in the conceptual approach to IP law interpretation and application, one must nonetheless be vigilant in opposing the hyper-protectionist trends that are still widespread and often have hegemony, driven by corporate interests that often hold legislators hostage – even quite visibly, at times, as in the case, for example, of the EC Directive on the Information Society (below, Chapter 3). To do this, one must follow the simple but not always easy recipe of privileging, in the interpretation and application of IP law, the guiding role of the constitutional principle of freedom of competition in harmony with the other principles protecting those social interests of constitutional rank at stake. And indeed consistency with those principles – that 'bundle' of constitutional principles – appears ever more necessary as new technological and economic challenges, as well as renewed corporatist pressures, call for a rethink of traditional interpretative categories and even tend to modify the regulatory framework by pushing towards *fragmentation* on the one hand and *hybridisation* on the other of the fundamental paradigms – patents, copyright, trademarks.

Accordingly, the analysis of the basic principles of intellectual property law in this book will primarily attempt to analyse the effective capacity of the IP system to evolve in step with the contemporary economic and technological context, so as to ensure a satisfactory balance for the various interests and values involved. These interests and values refer to a dynamic, pro-competitive enhancement of innovation, dissemination, *and* freedom, of science, culture and information, as well as the freedom of choice of consumers.

In the course of this analysis of the basic paradigms of IP law in accordance with the constitutional framework, I will avoid any forced 'harmonisation' of

⁵³ Resolution of the European Parliament of 25 April 2007 on the amended proposal for a Directive of the European Parliament and of the Council on criminal measures aimed at ensuring the enforcement of intellectual property rights (COM (2006) 0168 – C6-0233/2005 – 2005/0127(COD)).

the various specific paradigms of IP law, each with its own peculiar combination/balance of ‘monopoly’ and ‘freedom’. *IPRs cannot be dealt with en bloc*. More precisely, the persistence of often quite large differences between the various positive paradigms and/or leading interpretative trends coexists with the fact that the contemporary ‘global’ intellectual property debate reflects legal (and economic) principles and lines of development argument that show a high degree of ‘language’, that is, cultural homogeneity.

These divergences and convergences ultimately testify to how deeply intellectual property law is formed and moulded in connection with history. As such, it reflects both different patterns and stages of industrial development, legal tradition, culture, etc., as well as an increasing homogeneity in the prospects for technological advancement and eventual closer transnational economic integration.

Bibliographical Notes

A preliminary general overview of the historical evolution of intellectual (formerly: ‘industrial’ and ‘intellectual’) property law from its command-economy origins to a regulatory framework based on equal rights and duties for entrepreneurs (in the classical system, consumers’ interests are *indirectly* protected: see Chapters 4 and 5 below) may be gleaned from a series of works that include: R. A. SPINELLO, M. BOTTIS, *A Defense of Intellectual Property Rights*, Cheltenham, 2009; W. VAN CAENEGEM, *Intellectual Property Law and Innovation*, Cambridge, 2007; C. MAY, S.K. SELL, *Intellectual Property Rights – A Critical History*, Boulder, 2006; P.A. DAVID, *The Evolution of Intellectual Property Institutions*, in A. AGANBEGYAN, O. BOGMOLOV and M. KASER (eds), *System Transformations: Eastern and Western Assessments (Proceedings of the Tenth Congress of the International Economic Association)*, London, 1994; P.O. LONG, *Invention, Authorship, Intellectual Property, and the Origins of Patents: Notes Toward a Conceptual History*, in *Tech. and Culture*, 1991, 846; W. BUGBEE, *The Genesis of American Patent and Copyright Law*, Washington, DC, 1967. See also the classic work by E. POUILLET, *Traité théorique et pratique des brevets d’invention et de la contrefaçon*, Paris, 1909.

As recalled in the chapter, modern IP law was shaped to a large extent (not only at the level of the coordination and/or harmonisation of national legal frameworks, but also in terms of common substantive principles) by the ground-breaking international conventions of the late 1800s: the Paris Convention of 1883 on ‘industrial property’ and the Berne Convention of 1886 on copyright. These conventions marked the first structured response to the ever-increasing integration of the world’s most industrialised economies, which was both symbolised and stimulated by the great ‘Universal Exhibitions’ at the turn of the century (see, among others, L. AIMONE and C. OLMO, *Le esposizioni universali 1851–1900: Il progresso in scena*, Turin, 1990).

For an in-depth overview of these Conventions, see in particular the works by J. GINSBURG and S. RICKETSON, *International Copyright and Neighbouring Rights – The Berne Convention and Beyond*, Oxford, 2005 and the essay by S. RICKETSON, *The Berne Convention: The Continued Relevance of Ancient Text*, in D. VAVER and L. BENTLY (eds), *Intellectual Property in the New Millennium: Essays in Honour of William R. Cornish*, Cambridge, 2004, 217; Y. PLASSERAUD and F. SAVIGNON, *Paris*

1883: *Genèse du droit unioniste des brevets*, Paris, 1981. See also some older but quite well-structured and well-informed works: A. BOGSCH, *The Law of Copyright under Universal Copyright Convention*, Geneva, 1972; B.W. BUGBEE, *The Genesis of American Patent and Copyright Law*, Washington, DC, 1967, chapter II; R. LUZZATTO, *La proprietà industriale nelle convenzioni internazionali*, Milan, 1950; S.P. LADAS, *The International Protection of Industrial Property*, Cambridge, 1930. For a recent overview see G.B. DINWOODIE, *International Intellectual Property: Law and Policy* (with W. Hennessey, S. Perlmutter & G. Austin), New York, 2008.

The progressive contamination and hybridisation among the principles that represented the classical regulatory dualism between 'industrial' (patents, trademarks) and 'intellectual' (copyright and neighbouring rights) property must be analysed through both general and specific works. In the former category, especially noteworthy are the works by W. CORNISH, *Intellectual Property. Patents, Copyright, Trademarks and Allied Rights*, London, 2007; L. BENTLY and B. SHERMAN *Intellectual Property Law*, Oxford, 2009; P. TORREMANS, *Holyoak and Torremans Intellectual Property Law*, Oxford, 2008; H.C. HANSEN, *Intellectual Property Law and Policy*, Oxford, 2008. Among specific essays focused on that dualism and its contemporary crisis, attention should be given to A. KUR, *A New Framework for Intellectual Property Rights – Horizontal Issues*, in *IIC*, 2004, 1; J.H. REICHMAN, *Legal Hybrids between the Patent and Copyright Paradigms*, in *Columbia L. Rev.*, 1994, 2432; Id., *Charting the Collapse of the Patent-Copyright Dichotomy: Premises for a Restructured International Intellectual Property System*, in *Cardozo Arts & Entertainment L.J.*, 1995, 475; R.C. DREYFUSS, *A Wiseguy's Approach to Information Products: Muscling the Copyright and Patent into a Unitary Theory of Intellectual Property*, in *S. Ct. Rev.*, 1992, 195; H.J. COHEN, *Hybrids on the Borderline between Copyright and Industrial Property Law*, in *Rev. int. droit d'auteur*, 1992, 75; J. WILEY, *Copyright at the School of Patent*, in *Univ. Chicago L. Rev.*, 1991, 119 (further works are cited in the bibliographical notes to Chapters 2 and 3).

The evolution of overprotectionist trends in IP law to the point of reaching a veritable 'misappropriation explosion' (W.J. GORDON, *On Owning Information: Intellectual Property and the Restitutory Impulse*, in *Va. L. Rev.*, 1992, 149), has been excellently described by J.H. REICHMAN in the works cited above as well as in *Beyond the Historical Lines of Demarcation: Competition Law, Intellectual Property Rights, and International Trade after the Gatt's Uruguay Round*, in *Brooklin J. of Intern. L.*, 1993, 75. May I also quote my *Prospettive 'protezioniste' nel diritto industriale*, in *Riv. dir. ind.*, 1995, I, 73.

This phenomenon of 'overprotectionism' is the result of the growing importance attached by major firms in the developed world to so-called intellectual asset management (IAM), that is, the exploitation of the monopolistic potential of intellectual property. For a summary, see O. GRANSTRAND, *The Economics and Management of Intellectual Property – Towards Intellectual Capitalism*, Cheltenham, UK, 1999; W. ANSON, *How Intangible Assets Drive Capitalization*, in *Les Nouvelles*, 1999, 133; G. WINTER, *Knowledge and Competence as Strategic Assets*, in D.J. TEECE (ed.), *The Competitive Challenge*, Cambridge, MA, 1987). The drive towards such exploitation is in turn linked to short-term managerial business policies. More fundamentally, those 'overprotectionist' tendencies also reflect a much wider fabric of social processes and economic factors (which are not always rational: B. DEMIL and X. LECOCQ, *Neither Market nor Hierarchy nor Network: The Emergence of Bazaar Governance*, in *Organization Studies*, 2006, 1447). Those factors and processes have driven industrialised countries' economies towards oligopolistic settings, hence also steering the

evolution of contemporary commercial law towards (what are basically) US-type paradigms. For a broad overview of said factors and processes, and their impact on the transnational legal framework, see J.E. STIGLITZ, *Economic Foundations of Intellectual Property Rights*, in 57 *Duke L.J.*, 2008, I, 693; J. DREXL, *Intellectual Property Rights as Constituent Elements of a Competition-based Market Economy*, in *Intellectual Property and Market Power*, ATRIP Papers 2006–2007, Buenos Aires, 2008, 167; J.H. REICHMAN, *Nurturing a Transnational System of Innovation*, in 16 *J. of Transnational L. & Pol.*, 2007, 143; R. DREYFUSS, *Preserving the Public Domain of Science in International Law*, in KEITH E. MASKUS and J.H. REICHMAN (eds) (with Graeme Dinwoodie), *International Public Goods and Transfer of Technology under a Globalized Intellectual Property Regime*, Cambridge, 2005; M. MATSUSHITA, T.J. SCHOENBAUM and P. MAVROIDIS, *The World Trade Organization: Law, Practice and Policy*, Oxford, 2006; M.A. LEMLEY, *Property, Intellectual Property, and Free Riding*, in Stanford Law and Economics, Olin Working Paper No. 291, 2004; S.K. SELL, *Private Power, Public Law: The Globalization of Intellectual Property Rights*, Cambridge, 2003; K.E. MASKUS and J.H. REICHMAN, *The Globalization of Private Knowledge Goods and the Privatization of Global Public Goods*, in *Journal of International Economic Law*, 2004, 279–320; J.R. OSTERGARD, *The Development Dilemma: The Political Economy of Intellectual Property Rights in the International System*, New York, 2002; S.D. ANDERMAN, *EC Competition Law and Intellectual Property Rights in the New Economy*, in 47 *Antitrust Bulletin*, 2002, 285; S. SASSEN, *Losing Control?*, New York, 1996; C.R. FRISCHTAK, *Harmonization versus Differentiation in Intellectual Property Rights Regime*, in M.B. WALLERSTEIN, M.E. MOGEE and R.A. SCHOEN, (eds), *Global Dimension of Intellectual Property Rights in Science and Technology*, Washington, DC, 1993; D.M. TRUBEK, Y.D. DEZALAY, R. BUCHANAN and J.R. DAVIS, *Global Restructuring and the Law: The Internalization of Legal Fields and Creation of International Arenas*, I, Univ. Wisconsin, Madison, 1993.

On the role and impact of developed countries' IP protection models (as reflected by TRIPs) in the relationship of the said countries with those still developing, see the Appendix and the ensuing bibliographical note.

Reaction to overprotectionist tendencies has occurred, as hinted in the text, along two legal and policy dimensions. The first (above, sections 5–7 in this chapter), is an increased awareness of the link between protecting intellectual property and safeguarding competition (and consequently the interests of the consumers: see K.J. CSERES, *Competition Law and Consumer Protection*, The Hague, 2005; see also the bibliographical notes to Chapters 2, 3, 4 and 5). The second is the growing awareness, even among many business circles, that 'all-excludent' IP paradigms may hinder, rather than enhance, the pace of innovation and creativity in the contemporary 'knowledge economy' (above, section 11 in this chapter, and below Chapter 3).

2. Patent protection of innovations: a monopoly with pro-competitive antibodies

1. The Dialectic Physiognomy of Patents

Patents on inventions, the historical incentive for technological innovation,¹ have long been viewed with suspicion by various economists, and have even been subjected to friendly fire from the classical school, starting with Jean-Baptiste Say.² Although obviously aware that patents relate to a specific technical solution and not to a type of utility (and consequently not to a field of activity, as in the case of a real monopoly right), the critics were concerned that a system of patents protecting the results of technological research would have far-reaching adverse effects on price levels (which tend to rise under a system of exclusive sales rights) and on the dynamism of economic competition. In synthesis, it was felt that a ‘monopoly over ideas’ would benefit individual inventors and individual companies at the expense of ‘society and industry’ (J.B. Say 1803).

It is noteworthy that contemporary authorities such as F.M. Scherer,³ S. Scotchmer⁴ and others have expressed not dissimilar concerns about the anti-competitive effects generated by a system of patents:⁵ the more so (as E.H. Chamberlin reminds us⁶) in relation to the oligopolistic markets in which current innovation processes are typically situated, especially in the ‘network industries’ (S. Salop).⁷

¹ See sections 1–5 of Chapter 1.

² See J.B. SAY, *A Treatise on Political Economy: Or the Production, Distribution and Consumption of Wealth*, 1803, book I, chapter XVII.

³ F.M. SHERER, *Innovation and Growth: Schumpeterian Perspectives*, Cambridge, MA, 1984.

⁴ S. SCOTCHMER, *Standing on the Shoulders of Giants: Cumulative Research and the Patent Law*, *J. Econ. Persp.*, 1991, p. 29.

⁵ More precisely, by intellectual property rights in general, which economists have the questionable habit of treating *en bloc*.

⁶ E.H. CHAMBERLIN, *The Theory of Monopolistic Competition*, London, 1937.

⁷ S.C. SALOP and R.C. ROMAINE, *Preserving Monopoly: Economic Analysis, Legal Standards, and Microsoft*, in *Geo. Mason L. Rev.*, 7, p. 617.

These anti-monopolistic concerns have sometimes accompanied evaluations that downplay the role of the patent system in fostering innovation in many industrial sectors – here perhaps neglecting the fact that justification for the system holds even in cases where it works as a non-primary co-factor of stimulus. However, these and other objections have not led to the abolition of the system itself. Periodic proposals of this type⁸ have indeed remained quite isolated. Instead, these concerns have in various ways stimulated a commitment to construing the patent regime so as to preserve its pro-innovation function while avoiding significant harm to competition in the relevant markets.

In effect, in its basic classical configuration – and hence in its fundamental function, which is to prevent lucrative and especially *industrial* free riding (below section 2) by third parties – the patent system does not deserve to be abolished. And not only for the reason advanced in Fritz Machlup's well-known common-sense observation.⁹ Remember that every conceivable or tried and tested alternative form of support (whether it be the public funding of R&D allied to the personal prize of the inventor, as in Soviet-style economies, or the granting of entrepreneurial advantages and relief for the implementation of an invention, as in some North American colonies in the 17th century¹⁰) would have to be borne by the State and hence the community as a whole. Not only this. By bearing the burden of the investment (or the tax relief therefor), the State and the entire community would bear – wholly in the former cases, and partly in the latter case – the risk of the invention failing in

⁸ In liberal economies, there come to mind the cases of Holland and Switzerland, which abolished patents respectively in 1869 and 1850 only to restore them respectively in 1912 and 1907. In modern times, the blanket abolition of patents is advocated above all by critics who point to the adverse effects that exclusive rights may cause, especially regarding humanitarian (mostly health-related) emergencies (see section 19 in this chapter and the Appendix).

In the academic world, proposals tend to advocate substituting *property rights* with *liability* to pay a compulsory licence fee (see J.H. REICHMAN, *Of Green Tulips and Legal Kudzu: Repackaging Rights in Subpatentable Innovation*, in *Vanderbilt Law Review*, 2000, p. 1743, which limits the proposal to low-level innovation), even capitalised (W. KINGSTON, *Compulsory Licensing with Capital Payments as an Alternative to Monopoly Grants for Intellectual Property*, in *Research Policy*, 1994, p. 1275). These proposals will be discussed shortly in this section and further in the bibliographical notes at the end of the Chapter.

⁹ '...since we have had a patent system for a long time, it would be irresponsible, on the basis of our present knowledge, to recommend abolishing it', F. MACHLUP, *An Economic Review of the Patent System*, Study no. 15 of the Subcommittee on Patents, Trademarks and Copyrights, US Senate, 85 H Congress, 1958, p. 25.

¹⁰ See *inter alia*, P.J. FEDERICO, *Colonial Monopolies and Patents*, in *J. Pat. Off. Soc.*, 1929, pp. 358 *et seq.*

the market. By contrast, the patent system enables: (a) the cost of investment in R&D and the risk of the invention's market failure to be allocated in its entirety to inventors and investors (with the State limiting itself to protecting the *mere chance* of a revenue differential by granting exclusive rights), and (b) the social cost of the exclusive rights (primarily, the rebound on prices) to be *paid* solely by the users of the invention in the form of the aforementioned price differential. This differential in any case would be replaced by a competition-driven price level after one generation (20 years). In other words, the *price differential* of the innovation, which sustains its development, is paid for by the first generation of those who benefit from the invention, which thereafter will be enjoyed in a regime of free competition – and a similar situation in terms of price, quality and variety of goods.

As for the distinct proposals which seek to replace exclusive rights with a general regime of compulsory licensing, let me mention the kernel of the argument I will be advancing later on. That approach would in general slow down the dynamics of innovation since it would encourage the spreading of a *general path-dependency* attitude on the part of the innovator's competitors. Rather than experiment with new paths, they would be strongly encouraged to safely follow the tracks already laid down and tested by others.

Moreover, it would be simplistic to address those pro-competition concerns by viewing the patent system as of a 'monopolistic' character *per se*, hence searching for 'checks and balances' solely within antitrust law's possible interference with the contractual or unilateral exercise/exploitation of patent rights. Two points need to be stressed here. On the one hand, a patent protects a specific technical solution and not a business sector. Therefore, the entitlement or the exercise of patent rights against others' free riding *does not per se* grant 'market power', that is, a position that substantially suppresses or excessively limits competition – hence calling for intervention by antitrust law. This assumption is not contradicted by the fact that technologies, and corresponding market shares, invariably end up being supplanted and ejected from the market by newer ones, often in a relatively short space of time. This is true in general, historical terms (and all the more so in science, as Max Weber pointed out¹¹), but each specific case has to be assessed individually. By the way, *new* and/or *innovative* is not exactly a synonym – either in fact or in law – for 'more efficient' in terms of the utilitarian aim pursued, let alone so much more efficacious as to oust previous production from the market. For example, the parallel clinical testing of new drugs and those already in use leads at times to the latter being confirmed as the best therapy.

¹¹ M. WEBER, *Wissenschaft als Beruf*, 1919, from *Gesammelte Aufsätze zur Wissenschaftslehre*, Tübingen, 1922, pp. 524–55.

As we shall see later (Chapter 5), before a patent holder can be said to have significant market power, it is necessary to establish the contemporaneous existence of *further* circumstances, such as, for example, the emergence of the patented technology as the legal industry standard. Thus, it is the *overall* exclusionary situation, not the existence of the patent *per se*, that creates monopolistic risks in proper sense.

On the other hand, it is true that contractual means of patent exploitation, such as licences and poolings, may be and often are used to strengthen and extend exclusive rights to the point of achieving 'market power' (Chapter 5 will give some examples of how patents can be (mis)used as barriers to entry). But again it would be improper and in any case reductive to rely, for any and all rebalancing solutions, on the sole capacity of antitrust law to *interfere* in IP-related arrangements, unduly expanding the patent-inherent exclusionary power, in order, for example, to fix prices and/or other commercial conditions, or impose discriminatory terms of trade, etc.

Indeed, as mentioned above (Chapter 1, section 7), it is first of all the patent system itself that, to a significant extent, addresses competition-related concerns. The patent paradigm features a constant, built-in, dialectic tension between the (direct) protection of already realised innovation (and as such also an incentive to further innovation by the same author in the future), as well as the (indirect) promotion of subsequent (future) innovation by third parties. This second profile, which will more clearly emerge when comparing the patent with the 'technology copyright' paradigms (below Chapter 3), translates into a sharp intrinsically pro-competitive indication (all the more significant for being independent of any assessment of market power (or 'dominance', in European terms), whereby the warrant of (the chance of) a differential return on activities and investments poured into R&D must be made compatible with the safeguarding of third parties' subsequent innovation, thus preserving the competitive fabric of the market(s) concerned.¹²

Now this tension, far from being restricted to the micro-market defined by the individual relationship between the patentee and its present competitors, spreads out to influence, albeit indirectly, the general market's actual and potential competitive dynamics. Hence, as already hinted (above, Chapter 1, section 7; see further Chapter 5), a substantial, albeit not totally elective affinity, and frequent interplays between various profiles of patent and antitrust law in relation to given behaviours and transactions: an affinity that allows the two

¹² The legal concept of 'market' (market is first of all a legislative concept: N. IRTL *L'ordine giuridico del mercato*, Bari, 2004) can be defined, as the whole of the geographic and goods areas, as well as the stages of distribution, in respect of which the legal system checks and regulates the effective relevance of the conduct exhibited by business and the choices made by consumers.

disciplines to be traced back to common guiding principles of the legal system and in particular to that of freedom of competition. Thus, analysis of the pro-competitive antibodies that the patent paradigm is rich in, and the parallel reconstruction of their interplay with competition law's basic goals and principles, might specifically allow us to check the capacity of the patent system to support a perspective of pursuit of innovative efficiency by means of competitive dynamics.

In order to test the sustainability of such a perspective, and thus the vital strength of the patent system in the face of contemporary multifaceted developments in technological and economic processes, I will briefly review some basic aspects of patent law, relating, in particular, to the subject matter and conditions of grant of the patent, and to the scope of, and limitations on, the exclusive rights conferred.

PART I

THE AREA OF PATENTABILITY: THE OFTEN ARDUOUS DISTINCTION BETWEEN BASIC AND APPLIED RESEARCH

2. The *Privatisation* of the Fruits of (Applied) Research

All intellectual works, as all intangible goods, can by definition be enjoyed (or consumed) to an unlimited extent, and shared by all associates. Unlike physical goods, no individual use or consumption reduces the unit value of these goods or their total availability for the enjoyment of others. (Not only this, but intangible goods associated with information technologies based on network connections between users actually *increase* in value the more widely they are used. See also *infra*, Ch. 5, § 7.)

From this standpoint, intangibles could be equated with public property, and in that respect (that is, enjoyment) it would seem both socially unfair and expensive (inefficient) to reserve their right of use and enjoyment to a few associates, precisely because, in view of the indivisible, unlimited nature of their enjoyment, there is no need – unlike for tangible goods – to regulate their enjoyment by assigning exclusive rights to certain parties in order to ensure the efficient *administration* of the goods themselves.

However, account must also be taken of the need to stimulate the *production* of intangible goods, and especially the organisation and financing of research activities, by means of suitable support and incentives. Now, in order to encourage individual efforts and investments to that end, the patent system

'privatises' the power to enjoy and dispose of the fruits of inventive activity. By forbidding free riding, that is, excluding third parties from unauthorised exploitation of those fruits, patents so to speak transform the intangible good into an excludable one (as if it were tangible), thereby protecting the interest in recovering costs and earning profits from innovation-related activities and investments.¹³

At this point, though, before entering into an analysis of patent law's basic features, it should be pointed out that this privatisation of the rights of economic exploitation of inventions (as distinguished from the right to access knowledge thereof: below section 8) does not cover *all* forms and kinds of techno-scientific research.

In shaping the boundaries of patentable subject matter, the traditional criterion used by European and Community legislators has made a distinction between pure *basic* research (which is not fundamentally focused on practical purposes, or at any event results) and *applied* research (which is designed to develop industrial applications), while also including in the former category research activities which are from the outset designed to achieve concrete results, but have not yet reached that exact stage (the US's approach sounds different: according to 35 USC Sec. 101, all is patentable that is (new and 'useful').

In particular, the European Patent Convention (EPC), and the subsequently 'harmonised' national legislations, do not consider as inventions purely theoretical intellectual ideas such as 'discoveries, scientific theories, mathematical methods', etc. (see article 52.2(a) of the EPC).¹⁴ This excludes proprietary rights in respect of the results of basic research, which is traditionally performed by the public sector (universities and research organisations), or

¹³ According to Kenneth Arrow, 'without a property right, the inventor is in a pickle: if in trying to strike a deal she discloses her idea [...] she has nothing left to sell, but if she does not disclose anything the buyer has no idea what is for sale'. A patent, through the filing of any application containing a description and claims of the *quid inventum*, certifies the paternity and ownership of the invention and therefore grants the patentee the right to confidently exploit her invention as she pleases, without fear of free riding. V.K. ARROW, *Economic Welfare and the Allocation of Resources for Invention*, in R.R. NELSON (ed.), *The Rate and Direction of Inventive Activity*, 1962, p. 615.

¹⁴ The formulation of the TRIPs Agreement (article 27.1, Patentable Subject Matter) seems less restrictive, not only because it does not mention these exclusions, but above all because the Note thereto, which is part of the official text of the Agreement, states (with a clear shift towards the more permissive American approach) that the term 'capable of industrial application' (the factor that discriminates between pure and applied research) may be deemed by a Member to be synonymous with the term useful, a definition clearly designed to extend the area of patentability beyond the confines of article 52 of the EPC.

jointly by those bodies and private companies,¹⁵ and even partially financed by public subsidies. These results obtain personal recognition for their inventors (reputation, awards, professorships, financial remuneration etc.), but not proprietary rights, and in particular not invention patents.

Further, as mentioned before, articles 52.1 and 57 of the EPC do not allow the patenting of inventions which lack the requirement of 'industrial application', that is, which are not 'susceptible of industrial application' and whose object cannot 'be made or used in any kind of industry' (that is, mass-produced in a uniform way). Thus, as regards exclusion from patentability, 'scientific theories and discoveries' are equated with the fruits of basic but *targeted* research, very often conducted by or contracted out by a company (and equally often funded by private investors, who often work together in the targeted research phase only to return to becoming competitors once a specific application is developed and brought to the market). This targeted research demonstrates application potential in certain fields, but has not yet been developed (or would not be capable of being developed through the mere use of techniques accessible to a person skilled in the art) into objects – products, processes or substances – susceptible of direct industrial exploitation. A good example is a chemical compound, designed in the course of research into the action mechanisms of infectious diseases, which opens up new therapeutic horizons, but is not yet ready to be converted into medicinal products by the pharmaceutical industry.

Neither of these types of ideas and information are therefore patentable '*as such*' (see article 52.3, discussed below) and are thus destined to free enjoyment by all associates (with the obvious exception of protection afforded by contractual arrangements, civil and criminal protection relating to trade secrets and the law governing databases).¹⁶

The prospect of patentability is therefore restricted to applied research relating to manufacturing innovations (in this respect, I recall the well-known distinction between invention and innovation made by Schumpeter in *The Theory of Economic Development*).¹⁷ This kind of research, whose purpose is

¹⁵ I refer here to contributions and/or participation by private firms in pure scientific research, from which (although the results cannot be patented) private parties can obtain direct benefits in terms of reputational reward and other advantages deriving from scientific achievements which can be exploited in subsequent R&D activities. (Cooperation projects between individual companies and universities to develop particular products or processes which are destined for industrial exploitation, and consequently patentable, are quite a different matter.)

¹⁶ See section 9 below for the new Italian rules on secrets. On the scope of and conditions for the protection of databases, see Chapter 3, section 14.

¹⁷ J. SCHUMPETER, *The Theory of Economic Development*, Cambridge, MA, 1984.

to provide the associates with goods designed to meet specific practical needs, is typically contracted out to firms with the incentive of intellectual property (and specifically patent) rights. In fact, aside from any tax relief or subsidies, the prospect of obtaining *ad hoc* proprietary rights – a shield against free riding – over the specific innovative products and processes, generally encourages the private sector to operate and invest in this area (segment) of research. To paraphrase the colourful words of Abraham Lincoln, the legislation pours the fuel of interest onto the flames of ingenuity, guaranteeing the possibility of differential remuneration on the market, and therefore a higher and more certain return on the activity and investments committed to the development of specific new products and processes¹⁸ (see also section 3 of Chapter 1).

Finally, the division of labour described above (theoretical research basically conducted through public subsidies, without granting exclusive rights over the results, and applied research basically conducted by the private sector, with the remuneration/incentive provided by patent rights) has also historically corresponded to the vital interests of the private enterprise. It is indeed advantageous to the private sector that the costs of pure research (which are typically *sunk costs*, i.e., not recoverable, at least in the short term) are externalised, that is, borne by the community. Thus, in that traditional perspective, firms bear just the cost of *that* research which is expected to lead to direct returns on the market, enhanced and protected against free riders by means of patent rights.

3. Again on the Delimitation of Patentability to Applied Research: Its Rationale: Epistemological Considerations ...

Patents therefore do not protect theories or discoveries, or even ideas which, though demonstrating application potential, have not been (or cannot by ordinary means be) converted into a specific solution-idea directly exploitable on an industrial scale. In other words, a patent only covers *a particular idea for solving a practical problem*. And even if such a solution-idea derives from a major theoretical advance, the patent will relate *only* to the new artefact (product or process) which represents the ‘downstream’ technical application of the concept. This even applies in the frequent situation that the application-idea has much less intellectual value than the theoretical idea that precedes it.

Let us reflect a moment on this last statement, according to which even exceptional intellectual achievements (such as the theory of relativity) do not

¹⁸ ‘[...] the patent system secured to the inventor, for a limited time, the exclusive use of his invention, and thereby added the fuel of interest to the fire of genius, in the discovery and production of new and useful things’: Abraham Lincoln, Jacksonville, Illinois, 11 February 1859.

obtain any exclusive rights for the author, apart from the glory, or perhaps a professorship or a Nobel prize, whereas the legislation guarantees that the inventor of a new tin-opener or vacuum cleaner can obtain exclusive profits, which may be enormous over 20 years of exploitation. This apparently incongruous principle provides an introduction to understanding the objective underlying reasons for the system briefly described above.

The basic distinction between discoveries, scientific theories, etc. (which in themselves are excluded *a priori* from patentability) and applied innovation (which is patentable) is justified, as hinted, by an epistemological consideration. This consideration, may I stress, pertains more to the need to enhance the typical method of *production* of scientific research, rather than to an ontological distinction, so to say, between ‘pure’ and ‘applied’ research. On the one hand, regarding this latter point, modern scientists indeed agree that a rigid distinction between the two is often artificial. They highlight intimate connections and interplays between the two kinds of research, whereby, for example, the search for a solution to practical problems often leads in turn to the discovery of new fundamental science. On the other hand, one could not solely and ultimately rely on a distinction in terms of ‘nature-made’ and ‘man-made’ in order to provide an epistemological justification for discriminating, as concerns patentability, between ‘discovery’ and ‘invention’. How would we know, or be able to exploit in innumerable ways, the law of gravity, and the formula of energy, had it not been for a man named Isaac Newton and a man named Albert Einstein?¹⁹

The distinction is grounded on a different basis, i.e. on the implicit premise that science best develops through comparisons, exchanges, critical sharing of knowledge and peer reviews of the new hypotheses postulated (sometimes with fierce personal rivalry between researchers). Hence, the traditional non-proprietary method of production is also *the most efficient* method for the development of basic research – and probably not just this, judging from the growing tendency of IT companies to resort to open source systems.²⁰ Far from being an ideological axiom, this statement is the result of an in-depth reflection developed, on the basis of experience, by both scientists and economists, as well as by distinguished IP historians, like Paul A. David.

¹⁹ This remark does not contradict, of course, the fact that the legal concept of ‘invention’ certainly encompasses that of ‘man-made’ (the clearest normative example concerns the methods of production of new vegetal varieties and animal breeds: article 53(b), EPC). Put simply, this feature is not sufficient, in the absence of a specific application capable of uniform reproduction, to qualify for patentability.

²⁰ Which do not deny – in fact, actually postulate – the existence of intellectual property rights, in particular (as concerns ITs), copyright on new results of R&D, but ‘open’ up such results to be shared by others in order to secure more rapid and dynamic derivative innovation. See below Chapter 3.

Indeed, if basic scientific research were incorporated into the proprietary system governing R&D, this would reduce its innovative potential (and probably, as Rebecca Eisenberg warns, its *freedom* – a value of high constitutional rank). On the one hand, researchers would proceed more slowly in pursuing further progress, as they could not freely use all prior new theoretical knowledge (or would have to pay a tax to use it). On the other hand, if influenced by the prospect of exclusive rights to the exploitation of scientific discoveries, they would operate in watertight compartments, each keeping their work secret from the others, failing to exploit the valuable (more productively efficient) synergies to be derived from exchanges and the sharing of ideas and experience.

Moreover, a firm that develops applications for the market tends to neglect fields and stages of research which seem unprofitable, although they might be of great scientific and/or social importance, such as research into severe but rare diseases.²¹ Then, firms need to exploit such applications for as long as possible (and patents enable them to do so for 20 years), in order to maximise the return on investments. Finally, firms must adapt these applications to meet the needs (and, in the case of many products, the tastes) of the public/customers: this tends to restrict firms to a culture which is more backward on average than that possessed by the forward-looking avant-garde. All these factors reduce the speed of innovation, which can only be accelerated by fiercer competition.

However, if competition is excessive, it will endanger the firm's capitalisation, and consequently reduce the propensity of investors to invest in the firm's activity – including research. That is why the market alone seems incapable of implementing major projects with sufficient speed and why it is good for basic research to be conducted *mainly* under publicly funded programmes (see below, section 5, on co-financing with the private sector), based on science's *own* logic of sharing, exchange and cooperation, instead of closed ownership. This will definitely accelerate the progress of science and at the same time the make-up of the basic innovation on which firms may be able to draw in order

²¹ It might be objected that the same tendency applies to investments in R&D and consequently to the propensity to develop patents on medicines curing rare illnesses. However, that tendency is evolving: as 'blockbuster' drugs lose patent protection even big companies become increasingly interested in highly specialised drugs, which can sell for extremely high prices (e.g. Cerezyme, for treatment of Gaucher disease, sells for U.S. \$ 200.000 per patient a year; thus, although there are less than 6.000 patients, its sales exceeded 1 billion dollars in 2008). That propensity is further encouraged both by the possibility that research on orphan drugs paves the way for innovation in broader therapeutic directions, and by the expectation of the reputational reward that can be obtained, and consequently by a greater image benefit, which can be exploited in competitive terms.

to carry out subsequent R&D, leading to the development of specific useful applications which are patentable.

4. ... And Economic Considerations

The general principle that excludes the results of basic scientific research as such from patentability is also, separately,²² justified for a pro-competitive reason. This reason also provides the specific basis for the inclusion in the 'pure research' category (for the purpose of non-patentability) of ideas that constitute a stage of *basic but targeted research*, which, though representing the intellectual antecedent of application developments, do not yet give rise to a concrete application that is directly exploitable on an industrial scale (or cannot do so with the mere aid of the knowledge of a person skilled in the art: below section 5).

In fact, an industrial system that operates in a competitive framework requires the entire body of general knowledge brought to light by scientific research *to be considered and remain a common resource*, not covered by exclusive rights; an open cast mine of information and culture, on which firms can draw to transform materials into concrete usefulness, and thus also into industrial products or processes, which are appropriable, like the result of a work of transformation of nature, as taught by Locke,²³ consequently exploitable on the market in a system of competition by substitutes. If this were not the case, a firm that acquired exclusive rights over that kind of idea would hold a monopoly extending to a series of applications almost impossible to establish a priori; in practice, it would cover the entire chain of applications directly associated with or deriving from scientific innovation.²⁴ This

²² I mean that if, as often happens in fields in which there is a close connection between research and application, basic research is also performed by the private sector (take, for example, the involvement of the US company Celera in the reconstruction/discovery of the human genome map), pro-competitive reasons would still constitute an insuperable obstacle to the patentability of the discoveries in order to prevent the formation of production monopolies over an indeterminate range of applications.

²³ Despite the current reference to Locke's well-known theory of labour transforming matter as the justification for property rights (essentially equivalent to the Roman law concept of *specificatio*), Locke was not the first builder of an economic theory of IP. That merit rather belongs to Jeremy Bentham, the father of the British utilitarians (see W. CORNISH, *Jeremy Bentham and the expediency of patents for invention*, in *Technology and Competition – Contributions in Honour of Hanns Ullrich*, Bruxelles, 25; V. FALCE, *Lineamenti giuridici e profili economici della tutela dell'Innovazione industriale*, Milan, 2006, 11 *et seq.*)

²⁴ In this regard, concerns have been expressed in the biotechnological field and in general regarding research on the human genome. For example, in the USA, Myriad Pharmaceuticals holds a number of patents on the BRCA 1 and BRCA 2 genes

monopoly would be not only multisectoral, but potentially unlimited, and would be disastrous to the competitiveness of markets, partly due to the grave uncertainty that it would cause between competitors, as opposed to the rapid identification of free areas in which substitutive, or at any event, independent innovation could be produced.

For example, there would be a great risk of restrictions on the progress of the pharmaceutical industry (and applied research itself) if exclusive rights were granted over the information that describes the human and animal genome, as opposed to specific, *subsequent* applications of this information for given practical purposes (treatment, diagnosis, 'repair' of organs and so on).

This concept, which deserves to be applied as a general principle of patent law, is enshrined in Directive 98/44/EC of the European Parliament and of the Council of 6 July 1998 on the legal protection of biotechnological inventions, which does not allow the sequence or a partial sequence of a gene to be patented unless 'an industrial application is disclosed' (article 5 of Directive 98/44/EC²⁵).

I will merely add in passing (but will return to the subject shortly) that in addition to preventing the creation of monopolies with an indeterminate scope, this approach produces a further desirable effect in that it forces research activities to continue until a concrete application is developed so that a patent can be obtained, guaranteeing the opportunity to recoup the investments in research conducted at earlier stages.

responsible for breast cancer pathologies. As Rochelle Dreyfuss observes, those patents grant the pharmaceutical giant enormous economic power as the genes are 'unique works' for which no substitutable products exist. Dreyfuss goes on to state that Myriad 'can use these patents to prevent others from perfecting the method of screening for this form of breast cancer vulnerability, from creating rival gene-based screens, or from checking the reliability of Myriad's work [...]. Indeed, Myriad can deny researchers interested in finding other sources of breast cancer the right to use its tests to identify tumours that are *not* caused by BRCA 1 and 2 so that they can be separately studied'. See R. DREYFUSS, *Unique Works/Unique Challenges at the Intellectual Property/Competition Law Interface*, in C. D. EHLERMANN and I. ATANASIU (eds), *European Competition Law Annual 2005: The Interaction between Competition Law and Intellectual Property Law*, Oxford, 2007, pp. 122 *et seq.*

²⁵ Italian law, amongst others, is more specific on this point. Whereas the Directive limits itself to explaining that the industrial application must be indicated in concrete terms, Italian law conditions the patentability of an invention regarding an element isolated from the human body or otherwise produced by means of a technical process depend on the fact that 'its function and industrial application are concretely indicated, described and specifically claimed' (article 3.1(d) of Law No. 78/2006) See V. DI CATALDO and E. AREZZO, *Scope of the Patent and Uses of the Product in the European Biotechnology Directive*, in *Italian Intellectual Property*, 2007, p. 11.

5. The (Fragile) Boundary between 'Basic' and 'Applied' Research: So-called Targeted Research

That said, it must be acknowledged that in relevant sectors of science and technology, especially, but not only, the chemical/pharmaceutical, biotechnology and nanotechnology fields,²⁶ the distinction between 'research' and 'application' mentioned above is particularly problematic. In such sectors, in fact, the boundary between the two areas is often very blurred. As hinted briefly above (section 3), the ideas which flow from one to the other are often a continuum, and as basic research drives applications, the opposite often happens, with R&D activities leading 'upwards' to theoretical discoveries. In addition, another economic factor is relevant. Due to frequent, ever increasing financial restrictions on and hardships of the public sector, even basic scientific research is increasingly often directly conducted, or in any event funded, or co-funded, by the private sector, obviously aiming at developing subsequent marketable applications. A good example is the development of new chemical compounds, which can represent an important result not only from the scientific standpoint but also as regards their foreseeable future industrial and commercial usefulness. The question is then: where does the threshold of patentability lie in these cases – provided of course that private investors require adequate opportunities for compensation for the activities and funds overall devoted to research? Should a patent be refused if, for example, the use of those compounds does not produce direct (ultimate) application results: as, for example, in the case of intermediates, if the compounds are only of use to prepare *other* subsequent compounds destined for specific uses? And in view of this continuum, what should be the extent of the exclusive rights over the general formula of a biologically active molecule which is liable to produce direct application results? Should patentability be extended to all derivative compounds, even going beyond the specific indications of variants, one or

²⁶ On nanotech inventions see: M.A. LEMLEY, *Patenting Nanotechnology*, *Stanford Law Review*, 2005, p. 601; D. ALMELING, *Patenting Nanotechnology: Problems with the Utility Requirement*, *Stanford Tech. L. Rev.*, 2004, p. 1. In this sector, innovation is based mainly on devising methods of transforming the size of products and processes that per se may well already be known in their respective technological sectors (see P. ERRICO, *La tutela brevettuale delle nanotecnologie*, in *Riv. dir. ind.*, 2007, I, p. 61). Another relevant example of proximity between 'science' and 'application' relates to Inventions in Outer Space (IOS), which are based on exploiting the discovery of particular chemical-physical reactions only obtainable in the absence of gravity for the purposes of developing substances, alloys, etc. with special, useful characteristics (see G. GHIDINI, *Transfer of technology developed in outer space to third world countries*, in G. LAFFERRANDERIE AND D. CROWTHER, *Outlook on space law over the next 30 years*, The Hague, 1997, 269).

more of which can be selected for concrete application purposes, expressly formulated in the patent application?

Moreover, the close proximity of research and development, which is often (but not always exclusively)²⁷ manifested in those sectors, sometimes means that the innovative nature of the end result, which is susceptible of concrete application (and consequently possesses the requirement of industrial application) is basically and properly identifiable in the research stage as opposed to the stage of development of an application. Should then patentability be denied in order to maintain the general prohibition on patenting discoveries as well as the need to reward innovative applications only? That is the question.

Thus, as we see, in these and similar situations, frequently arising in today's R&D activities, the application of the general principles described above can be more problematic. The juxtaposition between research and application inherent in those principles seems too clear-cut, as well as involving an excessively onerous sacrifice from those involved in research, therefore acting as a deterrent to the efforts and often huge investments required. In particular, and recalling the doubts expressed above (which in Italy were first raised by Giuseppe Sena and his school), these principles seem not to allow suitable remuneration for research leading to new results which, though not industrial as defined by article 57 of the EPC, are nevertheless 'useful', sometimes not only potentially but even immediately (recall the case of the so-called 'intermediates' employed to develop further specific compounds and which have their own specific market). Similarly, research whose applications are typically far wider than those expressly claimed by the inventor and research that leads to new and useful applications by exploiting the innovative nature of earlier scientific discoveries may not obtain suitable remuneration.

If this impression were to be confirmed, it would evidence a serious lack of elasticity and thus a glaring inadequacy of the patent paradigm *vis-à-vis* its social function of encouraging R&D-related activities and investments – including those aimed at results which may not only represent the necessary antecedent to useful successive applications but also produce useful (and *marketable*) results, albeit intermediate as compared with final products. If this were the case, the recurrent attempts to soften the present wording of article 52.2 of the EPC to bring it in line with article 27 of the TRIPs Agreement

²⁷ In several fields of the most advanced contemporary research and development (such as those mentioned in the preceding note and accompanying text) where close proximity exists between scientific theorising (for example, the discovery of the chemico-physical reaction that takes place in the absence of gravity) and concrete application (chemicals of particular purity, new metal alloys, etc.), the innovative nature of the result can often be properly identified in the stage of discovery of those particular reactions.

(and the Note mentioned above, fn. 14) would seem justified, and consequently call for a wider definition of patentability as that provided by U.S. legislation ('any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof...': 35 USC Sec. 101).

6. Interpretative Adjustments

Are these feared inadequacies real? In my opinion they are not.

I believe that a suitably diversified and, in some cases, moderately progressive (workable) application of the general legislative principles illustrated above can provide a reassuring answer to those doubts, by striking an efficient balance between the need to remunerate investments in both basic and applied research and the need to stimulate subsequent innovation, providing an incentive *also* for investments by competitors of the prior innovator and safeguarding the competitive fabric of the market.

Before explaining the reasons for my belief, it is useful to look initially at the scope of patent rights and the relationship of dependence/independence between prior innovation and subsequent innovation.

First of all, I believe that the need for fair protection of expectations of a return on investments is compatible with the need to maintain the pro-competitive principle, according to which innovations whose application potential is still indeterminate, and cannot yet be converted into specific application solutions merely with the aid of ordinary techniques, should not be patented. The utility of these innovations is not in question. Indeed, they could at most be said to be *too* useful! Allowing them to be patented would mean allowing *all* the applications deriving from them to be exclusively reserved.

My views relate only to innovations whose application potential is genuinely indeterminate, and whose conversion into concrete applications would not in fact be within the reach of a person skilled in the art. The assessment of patentability should therefore proceed case by case, according to a rule of reason. Thus, if the step forward required to convert the broad potential of a substance into specific application solutions (as also characterised by their functional destination) is not within the reach of a person skilled in the art, I would see no objection to patentability. In such a case, there would be a clearly defined monopoly right which would not hinder the way to subsequent innovations by third parties, which could well use the same substance according to a radically different and distant conceptual and functional approach: hence also being empowered to claim an 'independent' patent.

Conversely, inventions which improve and/or vary the applications of that substance, but use it wholly or partly in accordance with the same conceptual approach and functional ambit, would typically be classed as derivative, that

is, dependent on the prior patent over the substance, and their implementation would require a licence from the first innovator-patentee – which could also be a ‘non-voluntary’ (cross-) licence in the cases and on the conditions set out in article 31, 1) of the TRIPs Agreement (see section 16 below).

It might be objected that by substantially restricting the prospect of patentability to concrete applications which are identified (or identifiable) by the standards of a person skilled in the art, patent protection would be denied to inventions which potentially have numerous concrete applications, and that such a solution would be unbalanced – excessively restrictive – vis-à-vis the need to ensure the chance of a return on the investments mobilised for (and presumably proportional to) wide-ranging research projects.

I would reply to these concerns by reiterating my introductory comments. In my opinion, the interpretation advocated here is not only more consistent with the guiding criterion of freedom of competition, but also the most efficient in terms of a specific stimulus for research and development activities. In particular, this interpretation would not penalise the efforts and investments mobilised, provided that it envisions *the whole process* that runs from basic research to R&D.

This line of interpretation forces researchers and investors to continue with the research until the stage of development of concrete applications of the basic idea has been concluded (possibly, of course, with the contribution of licensees). Only then, when the patent is eventually obtained (and possibly co-owned by, or licensed to, private co-funding firms) will they obtain a legal guarantee of a return on their investment. This would have the desirable effect of stimulating the whole research chain down to R&D activities. In particular, researchers and investors who engaged uphill in basic research would not really be penalised since experience confirms that directly performing research and experimentation activities from the earliest stages leads to a definite competitive advantage, in terms of both quality of the end results and lead times gained. In this latter respect, the greater proximity between targeted research and application that we observe in fields such as biotechnology ensures that the process required to perfect the application will be shorter and faster for those who also engaged in the former.

A reasonable application of the same line of interpretation would meet the need for a return on investments without sacrificing subsequent competitive innovation, even in the other hypothesis considered (which is more frequently evident in relation to so-called ‘general formulae’), whereby a certain innovation, which is patentable because it is capable of direct application, also has numerous different embodiments, which may not be, and typically are not, expressly indicated in the patent application.

The problem of whether the patent over the formula covers only specifically identified variants or also other possible variants can be solved in a

balanced way by allowing patent protection to be extended to variants which, though not expressly indicated, can be deduced from the general formula by a person skilled in the art (below, section 15). Apart from this hypothesis, third parties which develop *improved* new variants (*not* mere expressions of current application techniques) could patent them independently and implement them later, with the consent (freely given or mandatory, as the case may be: see article 31, 1) of the TRIPs Agreement, and section 16 below) of the holder of the patent over the general formula, in the ambit of a derivative relationship (which is typical in this case) between the formula and the new variant.

This solution rewards the innovation actually achieved, and does not lead to an indeterminate monopoly except in the purely formal sense. Nor does it contradict the principle that limits exclusive rights to the claims made in the application, as protection against infringement would extend to variations of the patented solution lacking an innovative nature, that is, mere 'equivalents' (below section 12).

A further advantage of the approach advocated here is that if exclusive rights were extended to implicit variants deducible by ordinary skill from the prior art, this would avoid the effect, damaging both innovation and competition, of causing researchers to postpone filing their patent applications, thereby delaying full public disclosure of the principal results of their research activities until completion of the often time-consuming mapping and full description of all or nearly all the possible variants – even those not intrinsically inventive.

Finally, where the innovative nature of the invention is properly identified as the discovery level rather than the application stage, a moderately evolutionary application of the above-mentioned criteria would again reconcile the need to protect investments with that of avoiding an excessive extension of the patent so that the discovery itself would be patented in practice. Bearing in mind that patentability always requires the development and consequent workable indication of an industrial application ('concrete indication': article 5.2 of the Biotech Directive), the inventive nature of the innovation (that is, the *overall* innovative *end result*) could be recognised in this case too, provided that such recognition, which paves the way for patentability, is accompanied by limitation of the scope of the exclusive rights to *that* (and only that) application of the discovery, and to *that* (and only that) method of industrial implementation of the discovery (such as a certain method of isolating biological material) taught by the inventor. I would add that parallel solutions should also be valid, even more so, for those inventions comprising technological elements of various types, as typically in the field of 'nanotechnologies' (above note 26 and accompanying text) in which the innovative aspect is precisely attributable to *one* of the said elements/components.

An additional, different hypothesis, increasingly typical of contemporary

research, especially in biochemistry and ITs, is that even at scientific level the innovation reflects not so much intellectual leaps as gradual and methodical progress by small steps conducted by complex teams, and consequently, in the final analysis, investments in professional and technological resources rather than intellectual brilliance. As we shall see below, this characteristic of modern research, especially in the biochemical sector, affects the conceptual redefinition of the *inventive step* (formerly known as *originality*) as a requirement for patentability. We shall discuss this subject in Part II, with specific reference to the degree of ‘non-obviousness’ (in times gone ‘*originality*’: the change in terminology is no coincidence: below, section 10) that gives access to exclusive patent rights.

PART II

STRIKING A BALANCE BETWEEN EXCLUSIVE PROTECTION AND COMPETITIVE DYNAMICS OF INNOVATION

7. General Outline (Conditions and Limits of Exclusivity), Commencing from the Time Limits to Protection

After defining the boundary between unpatentable results of basic research (including targeted basic research still immature in terms of concrete applications) and patentable output of applied research, IP law regulates the *patentable subject matter*, setting the conditions for granting a patent, and defining its scope (and consequently the ambit of its protection), as well as the requirements for its application, the grounds for its ‘exhaustion’, its enforcement, etc.

As mentioned, such regulation can be basically viewed as the result of a balance between reward for achieved innovation on the one hand and incentive for future innovation on the other. This balance seems to be based not simply on the concept of exclusivity (‘monopoly’) as an exception to the general principle of freedom of competition but also on a dialectical synergy between these two poles aimed at granting exclusive rights to the patentee in a way that, by promoting further innovation, also enhances competitive dynamics.

In a nutshell, the interpretation hypothesis to be verified, which will be used to measure the dynamic efficiency of the patent system, does not merely involve the function of reward – hence incentive – to inventors, thus also stimulating third parties to pursue inventive results in turn, but more specifically

that of rewarding the innovation already developed in such a way as to stimulate both the first inventor to continue, and third parties to develop subsequent competitive innovation. This also spurs on the former in a virtuous pro-innovation and pro-competition dynamic process.

This pattern, which highlights the plural stimulus to innovation exerted by patents, is mainly based on a normative guideline that limits the grant of exclusive rights *within the limits/scope necessary* to guarantee via protection against free riding a return on the activities and investments dedicated to the innovation – *as embodied* in specific innovative results disclosed by the inventor are directly usable for industrial purposes. Here, obviously, one must first of all consider the 20-year period of the exclusivity. It is a peremptory term – (the extension stemming from ‘supplementary protection certificates’ that can be issued in favour of health-related inventions is only an apparent one,²⁸ being aimed at recovering the time ‘lost’ vis-à-vis regulatory compliance, thus not used for commercial exploitation of the patent). That term is also the same for all fields of activity: the numerous criticisms, especially from economists, of the ‘one-size-fits-all’ period have not so far been acted on. And this is probably reasonable as well if one considers, *inter alia*, the otherwise intense lobbying by all industrial sectors, each requesting an ‘optimal’ – obviously longer! – patent length. Therefore, the peremptory and uniform length of the patent period, corresponding to one human generation (see section 1 above) is the foremost and simplest factor that stimulates – it is obvious – third-party competition, allowing these parties to program with certainty (unlike the term applicable to copyrighted works of living authors: see Chapter 3) and then engage in *imitation* after the expiry of the patent.

Here, it is worth stressing the principle that the third-party competitor who imitates another’s invention after the expiry of the patent is *perfectly entitled to do so* – of course in the absence of confusion about the identity of the firms involved. In essence, the competitor imitator of an expired invention is in the same legitimate position as the imitator of a non-patented invention whom the legal system authorises to imitate. An obvious statement, indeed, but which nonetheless needs to be reiterated²⁹ in the face of ever repeated attempts to use

²⁸ For the rules governing complementary protection certificates (in the pharmaceutical and health industries), see Regulation (EC) No. 469/2009 of the European Parliament and of the Council of 6 May 2009 concerning the supplementary protection certificate for medicinal products (Codified version), which has repealed Regulation No. 1768/1992.

²⁹ See C. Le Stanc’s and A. Ohly’s papers presented at the ATRIP Conference in Munich, 21–3 July 2008 (Panel on ‘Free Access, Including Freedom to Imitate – A Forgotten Concept?’), available at: <http://ip.mpg.de/go/atrip>.

the law on unfair competition to *de facto* prolong the expired exclusive rights even in the absence of any *passing off* – usually by crying ‘parasitism’ (more below, Chapter 5).

Beyond its legitimacy, imitation of ‘off patent’ inventions is a factor of broad dynamic processes of subsequent innovation. This statement seems at first glance contradictory: one instinctively wonders how the concept of imitation might possibly be connected with that of innovation. The fact is that an industrially competitive imitation is not normally a mere ‘reproduction’ coupled with a price reduction. Imitation is also ‘learning by doing’, carving out better productive techniques – in short, setting out to improve what others first invented. The imitator is typically well aware that even after the patent’s expiry the inventor will normally nonetheless enjoy a market advantage thanks to the goodwill built up over the 20 years’ ‘monopoly’. An advantage that a simple price reduction (sometimes not even possible, as when the costs saved in research are offset by high marketing and advertising costs incurred just to sustain the product’s ‘entry’ in the market) might not be sufficient to annul in the absence of positive differentiation in terms of ‘productive quality’.

Support for this view comes, *inter alia*, from the famous US Supreme Court decisions in *Sears* (1964), *Compco* (1964), *Graham v. John Deere* (1996) and *Bonito Boats* (1989), confirming that ‘imitation and refinement through imitation are both necessary to invention itself, and the very lifeblood of a competitive economy’. Quite recently, too, the Italian Supreme Court in the *Lego* case (29 February 2008, no. 5437), while reaffirming the freedom to reproduce models and inventions no longer enjoying exclusive rights, noted that otherwise one ‘would end up clogging the market’.

There is more, even beyond the stimulus to innovation. In the same systemic perspective as the EU doctrine of ‘indispensable restrictions’,³⁰ patent law can be reconstrued so as to reduce the risk that the protection of patentees might lead to rent-seeking positions, possibly generated by an ‘unjustified’ scope of the exclusive rights – unjustified precisely as exceeding the need to combat free riding, while prejudicing competitors and, indirectly, consumers.

All this is accomplished by means of a series of instrumental correlative principles, chiefly related to the production, *stricto sensu*, of innovative

³⁰ As is well known, this doctrine was first adopted by the Court of Justice in the famous *Deutsche Grammophon* case, where the Court explained that article 30 of the EC Treaty ‘only admits derogations from that freedom [free movement of goods] to the extent to which they are justified for the purpose of safeguarding rights which constitute the specific subject matter of such property’. See *Deutsche Grammophon Gesellschaft v. Metro-SB-Großmärkte GmbH* [1971] ECR 487, [1971] CMLR 631, section 11.

results, and one – that of ‘exhaustion’ of patent rights – to the distribution (circulation) of patented products. In this perspective, the grant of exclusive rights kills two birds with one stone: it rewards the patented innovation in such a way as to stimulate the development of subsequent competitive innovation, be it *substitutive* (independent) or *derivative* (‘improving on’ prior patents). (See sections 15 and 16 below.)

Let us now effectively assess the feasibility of this perspective, with reference to salient features of patent law, taking account of conceptual and normative developments that have historically characterised patent regulation – and keep so doing today, even in view of the need to adapt to new forms and sectors of technological advancement – as well as new economic contexts of production and transfer of technologies.

8. The ‘Exclusivity for Knowledge’ Trade-off and its Effects

Even before analysing the specific principles concerning the conditions of access to patents and the scope of the exclusive rights granted thereby, we should deal with a procedural profile of deep substantive value that also highlights the perspective outlined above. The patent system not only requires that the exclusive rights granted be circumscribed to what was effectively invented (*inventum*, that is, found) by the applicant (on the various expressions of the principle, see below, section 13), but also that the invention be publicly ‘taught’ by the inventor herself. This requirement influences, as hinted, not simply the formal conditions set for the issue of the patent, but also the definition of the scope of the protection.

Two distinct, synergically associated requirements come into play: the ‘sufficient’ description of the invention that must accompany the application and the subsequent publication, in *ad hoc* public registry, of the application, including said description.

As for the first requirement, the applicant not only must disclose the technical field the invention relates to, as well as the technical problem it aims to solve (Rule 42, c), Implementing Regulations, EPC), thus also, necessarily, the intended use of the invention. She must also ‘describe’ the solution devised (possibly also by means of drawings) in a manner ‘sufficient’ – that is, *vis-à-vis* clarity and detail – for it to be put into practice by a person skilled in the art (article 83 EPC), to this purpose being further requested to ‘describe in detail at least one way of carrying out the invention’ and ‘the way in which the invention is industrially applicable’ (Rule 42(e) and (f)).³¹

³¹ Unlike US patent law (35 USC ‘Specification’), the EPC and the Implementing Regulation do not require the inventor to disclose the ‘best mode’ of

In other words, the exact extent of what constitutes a sufficient description is thus commensurate with allowing the practical implementation of the invention.³² The description must also include one or more claims which specifically define the matter for which protection is sought (article 84 EPC). Aside from its pro-competitive effects, as the description is followed by publication (below, in a while), this disclosure duty is evidently functional to an in-depth evaluation of the invention's requisites both by Courts and – first and foremost (below, section 9) – the Patent Offices.

As for the second profile, the principle that the grant of exclusive rights must be accompanied by public knowledge of the (sufficiently described) invention – a principle often said to derive from *litterae patentes*, that is, 'open' grants of sovereign privileges – comes into play. As early as the mid-18th century, the English courts applied the rule that it is not the person who kept the invention under lock and key but he who disclosed it for the public benefit who should enjoy the advantages associated with the patent over the said invention.

Thus, as hinted, the grant of a patent involves publication of the application, normally 18 months after it is filed (article 93.1(a) EPC), and from such date the effects themselves of the patent, that is, the practical exercise of the exclusive rights, start.³³

Thus the system guarantees that, albeit inhibited from unauthorised use, third parties (first of all, in practical terms, competitors) at the latest after 18 months from application will have knowledge – *workable* knowledge – of the invention.

This regime of disclosure *cum* publication has different substantive effects, all of which are associated³⁴ with the need to make the conditions for granting

carrying out the invention. In my opinion, this requirement is fully justified for inventions developed thanks to public funds, whereas it sounds somehow 'excessive' to ask self- (privately) funded inventors to disclose a know-how they have further developed and that, as such, is not protected (and thus 'remunerated') by the patent.

³² Accordingly, the 'duty to describe' does not necessarily extend to the merely theoretical bases of the invention, even though they may have been essential to the inventor's thinking – provided that their non-disclosure nevertheless allows the practical implementation of the invention. This specification may (also) help resolve the question of whether and when the source code must be disclosed for *software-related* inventions: see Chapter 3.

³³ This, unless the patentee herself anticipates the term, as article 93.1(b) allows, and as she must do in order to bring suit against an alleged infringer, to whom the patent has to be notified. In this last case, the secrecy might at times be 'lost' even in absolute terms – that is, even *vis-à-vis* third parties – due to possibly diffuse knowledge of the litigation.

³⁴ Except one, which I mention for the sake of completeness, but which, in the Internet age, does not play a primary functional role. Statutory disclosure can also be

the exclusive rights and the scope thereof a function of the aim to provide effective remuneration/incentive for research *without* prejudicing the competitive framework of the market concerned, but if anything using competition to foster *further* invention.

First of all, as the patent only covers the specific solution idea precisely described and claimed by the inventor³⁵ and this idea is ‘sufficiently’ disclosed to third parties (that is, competitors), these are enabled to ‘safely’ achieve the *same function (that is, utility) with a different technical solution* (provided that it is not merely ‘equivalent’: see sections 15 *et seq.*). In short, to maintain a substitutive competition which is beneficial to the variety of supply and price levels on the market, identified by the type of needs to be met.

Moreover, the trade-off (‘exclusivity for disclosure’) between inventors and State, on the basis of which exclusive rights are granted, activates further specific competitive dynamics. First, the need to foster the freedom of competition requires exclusive rights to be granted over truly (deserving) innovations; hence the advisability of subjecting the patent to the most extensive, and therefore most efficient scrutiny of its innovative character by Patent Offices, Courts, and *the market*, i.e., typically, competitors, enabled to judicially challenge unworthy patents, thereby restoring direct competition. (This is especially helpful in the absence of serious prior exams of novelty and non-obviousness, as occurs in some countries.) And it seems all too obvious that this function of stimulating competitive criticism will be increasingly strengthened by modern information and communication technologies, which will allow more and more rapid checks on prior art even on an international scale, and also by parties other than competitors.³⁶

Moreover, publication of the invention stimulates further significant pro-competitive effects.

First, by learning the logical process and functional problems tackled by the inventor and the way in which they were solved, third parties can much more easily follow alternative approaches to achieve the *same* type of utility, which must always remain free and open. Thus the *restriction* on direct competition caused by the grant of exclusive rights to ‘that’ invention is compensated by a *widening* of (potential) competition by substitutes.

beneficial to the interests of the holder, in that she has at her disposal (at a fraction of the costs associated with commercial advertising) a *shop window*, so to speak, that can be seen the world over to attract purchase offers or applications to buy or license the invention.

³⁵ And this is true even in the case of the *first* solution of a technical problem which had never previously been tackled, or at any rate solved.

³⁶ Similar initiatives that use the Internet already exist in the United States. See *A Patent Improvement*, in *The Economist*, 8 September 2007, p. 23.

Second, third parties are given the opportunity, indeed the *right*, to obtain a licence to use a prior inventor's patent in order to achieve a more advanced and thus highly competitive 'derivative' innovation as per article 31(I) of the TRIPs Agreement: (more on this 'compulsory licence' in section 16).

Third, publication of the application leads to the concrete possibility of negotiating with the owner to obtain a *licence* of the patent (I mean here a fully 'voluntary' one: that the patentee has the right to refuse). The granting of the licence, even to a single operator, will expand both price competition and potential product competition. In fact, the grant of licences often 'trains' the licensee as a potential future competitor – and one, indeed, with a highly specific competitiveness – both in the supply of the same technology after the expiry of the patent, and also, normally, in the preparation and development of differentiated innovative solutions, new weapons that the licensee will use upon becoming an effective competitor.³⁷

In conclusion, patents *privatise economic exploitation* by guaranteeing the chance of an exclusive profit (and hence a higher one than that which could be earned if free competition were allowed) and *publicise knowledge by guaranteeing effective general accessibility* to it through disclosure thereof within a short time in publicly (and nowadays easily) accessible registries. It is worth stressing that, owing to this specific requirement, the patent regime can often achieve a superior result than the general principle granting the status of 'commons', that is, allowing free access to the fruits of 'pure' research. Freely accessible by law but often *de facto* effectively circulating for even long periods only with the happy few top international research centres.

9. The Systemic Corollary: No Upgrading of Secrets to IP Protection: A Warning from an Italian 'Reform'

The logical, and systemic, consequence of the trade-off between the grant of private exclusive rights and the public disclosure of the invention is, and must be, the refusal to grant exclusive protection to inventions maintained and possibly exploited in secret. This refusal manifests itself in the classical model – substantially confirmed by the TRIPs Agreement – whereby protection of secrets is granted within the boundaries of the enforcement of unfair competition (article 39). Therefore, in the absence of 'unfair business conduct', the learning and use by third parties of previously secret data is lawful, and the

³⁷ Commission Regulation (EC) No. 772/2004 of 27 April 2004 on the application of Article 81(3) of the EC Treaty (now 101.3 TFEU) to categories of technology transfer agreements pays particular attention to the pro-competitive effects of the grant of licences, even exclusive ones, as these effects, though potential, form the basis of block exemptions. See Ch. 5.

inventor who only relied on secrecy cannot put the cat back into the bag. Save for exceptional cases of non-prejudicial disclosure (see article 55 of the EPC), the objective destruction of secrecy which causes pre-disclosure of the invention will therefore prevent the invention from being patented because it would lack novelty (article 54 EPC).

Now, precisely because of such intrinsic limits, the classical model tends to exert pressure on the inventor or its assignee, to patent the invention – and therefore publicise it. Only if she does, will the inventor or assignee be guaranteed exclusive rights, while competition in the market will benefit from the effects referred to above.³⁸

As mentioned before, this model of protection, based on the rules against unfair competition, is increasingly being challenged by business groups who see secrecy rules as an alternative business opportunity to patents.³⁹ Thus, article 12 of the Community Patent Convention (not yet come into force, but already adopted by some national legislations, as in Italy) grants a right of ‘prior use’ in favour of those who have secretly exploited an invention in their firm during the 12 months prior to the filing by the patentee. And the TRIPs itself, while outlawing the acquisition of secret information by methods contrary to fair business practice, has questionably emphasised, in the definition of protected secrets, the relevance of the holder’s *subjective* destination to secrecy, the simple ‘non-notoriety’ or ‘not easily accessibility’ of the information as well as its ‘economic value in that it is secret’ (article 39 TRIPs). Moreover, one should not lose sight of the 18-month period of secrecy that the patentee can objectively dispose of after the filing of the patent. Of course, 18 months are little as compared to the whole duration of the patent, but they are nevertheless a quite substantial term for allowing patentees to ‘refine’, out of competitors’ sight, the practical features of their invention, so as to build up an additional competitive advantage in making ready the product for its launch on the market. (Not to speak of the social costs of removing for a year and a half, in such crucial sectors as healthcare, the scientific community’s actual chance to check in depth and assess the actual progress claimed by a new drug.)

So far, though, the creeping ‘sympathy’ for secrecy protection has not gone beyond these bearable limits, and even the academic community, with a few exceptions (some surprising), has not on the whole endorsed corporatist

³⁸ Above section 8.

³⁹ A very understandable propensity: as long as the secret is kept, the possession of know-how can represent a very important competitive advantage in terms of gaining a lead time – without the predefined time limit of a patent and the conditions to be satisfied for obtaining one – over other competitors that would seek to use the same production process. As such, the value of know-how can be even higher than that of a patent, knowledge of which is necessarily public.

pressures to upgrade the protection of secrets to IPR level. This has been done, however, by a recent Italian 'reform'. The case is worth a closer look, since it offers the chance to highlight how and at what cost a radical turnaround of the traditional perspective can be realised.

The Italian 'Industrial Property Code' (IPC), enacted in 2005, has sharply altered, well beyond what the TRIPs calls for, the pre-existing traditional model bringing confidential information under the wing of intellectual property rights, that is, making it the subject matter of absolute exclusive rights. As not only the general classification of IPRs laid down in article 1, but the precise provision in article 99, clarify, secrets are protected against *any* appropriation or use not authorised by the holder/owner.⁴⁰ This is set out *in absolute terms*, that is, irrespective of there having to be any form of unfair competition in the acquisition and use of the information involved (as would be the case, for example, for a competitor bribing others' employees to obtain confidential information).

This 'reform' of the law on secrets evokes many legitimate criticisms particularly as concerns its likely negative effects on the dynamics of innovation and competition. The reform tends to cancel the difference between the scope of protection of secrets and patents and if anything encourages and favours secrecy over patenting to the extent that patenting becomes less advantageous economically. In fact, the owner of a secret is given a form of propriety protection, (a) without predefined time limits, (b) without costs and (c) without any duty to reveal the innovation to third parties (competitors). In addition, (d) the protection of secrets as the object of an IPR allows the working requirement of the invention to be eluded, thus facilitating strategies of 'programmed obsolescence' (delaying entry on the market of improved products as long as the earlier versions keep selling): a practice that self-evidently runs counter to the general interests of consumers and innovation alike.

Thus, that 'reform' is an obstacle to many of the well-known and numerous beneficial effects for competition and innovation linked to a trade-off between the granting of exclusive rights for a certain limited period and publication of complete ('workable') information on the innovation achieved.

Moreover, the reform grants protection *erga omnes* to information that is simply classed as secret by the owner and is of economic importance (thereby giving absolute effect to the obligations contained in a secrecy agreement, in clear contrast with the general principle of 'relativity' of contracts). Thus, it allows the *privatisation* of data that the legal system would not otherwise allow exclusive rights in respect of (thereby also surreptitiously stretching the general principle of *numerus clausus*). I am referring in particular to:

⁴⁰ However, and of course, third parties can use identical information that they themselves have produced.

- the results of research that patent law, in harmony with the EPC, specifically excludes from exclusivity;
- information that might well not meet patent requirements or merely business information that cannot intrinsically be patented.

What interests does this ‘reform’ seek to protect? Those, first of all, of a vast range of businesses, for the most part small and medium-sized (SMEs), which normally manage to produce limited technological innovation as they prefer to compete either on a business level, through marketing, advertising and pricing etc., or on a design level. There is a diffuse sentiment among them – not always that far-fetched, I admit – that relying on patents can be somewhat useless in cost/benefit terms. Hence we are talking about the interests of an industry that just can’t manage to innovate to any serious degree and seeks legal protection of its inferiority (which is then bound to perpetuate itself).

It could well be that businesses with a greater capacity for innovation could also benefit – again with negative effects on competition – from the protection offered by the reform. This would be not so much in terms of the patent-related costs they would save, but rather in terms of the competitive advantage they could gain from the fact that non-disclosure of the innovation to competitors would slow down the latter’s chances to develop *their own* subsequent (derivative and/or substitutive) innovation. In short, the dominant position enjoyed by the owner of the secret would be strengthened.

I trust that the foregoing considerations may be of interest, even outside the Italian scenario, for scholars and legislators interested in preserving the path to innovation within the framework of the ‘exclusivity of knowledge’ trade-off typical of the classic patent paradigm. In the US and in Europe, corporatist pressures have tried and keep trying to upgrade trade secrets as IPRs. Thus, as hinted above, the Italian case might be a good alarm signal. *‘It might happen to you!’*

10. Qualifying Access to Patents: From ‘Indulgence’ ...

Let us now focus on the substantive rules that highlight the perspective of ‘dynamic innovation’ (enhancing innovation through competition) hinted at above in section 7. First of all, it is necessary to reconstruct the fundamental indication that the system expresses in connection with the conditions for access to exclusivity, that is, those that define which innovation is worthy of patent protection.

Here, one must first of all state that innovations protected and encouraged by patents are not only the *high-level* ones which express significant technical progress. Legislation, starting with the European Patent Convention and followed by the TRIPs Agreement, no longer uses the parameter of a ‘flash of

genius' to define the qualitative level of an innovation deserving of a patent. On the contrary, there is a clear tendency towards broad, lenient criteria of patentability, so as to include incremental innovations, thereby adapting to the fact mentioned above that nowadays research and development is more a continuous process made up of small but costly steps ('by trial and error') that are undertaken by complex teams of specialist researchers.

This statement is backed up by the basically *low selectivity* of the conditions of access to the invention patented. As is well known, such a paradigm involved two distinct substantial requirements for a valid patent, which specifically expressed the innovative nature of the invention: *novelty* in the historical sense (a.k.a. extrinsic novelty), namely objective differentiation from known technical solutions, and *originality* (a.k.a. intrinsic novelty), namely the objective inventive step ahead of the body of existing knowledge (that is, the prior art).

The interpretative development which led to the 1974 European Patent Convention and the national legislation implementing it recognises that a given solution is original ('involves an inventive step') simply 'if, having regard to the state of the art, it is not obvious to a person skilled in the art' (article 56 of the EPC). The Note to article 27.1 of the TRIPs Agreement, which is an integral part of the text thereof, follows the same line in that 'inventive step' is defined as being synonymous with 'non-obvious'.

Thus, exclusive protection is also granted to innovations of modest conceptual importance, provided that the claimed solution cannot be simply deduced from the prior art by a person ('ordinarily') skilled in the art.⁴¹ It is fairly evident that this minimalist view meets the need to adapt patent protection to the typical feature of modern research activities, which, as already observed, tend to advance by small steps more frequently than intellectual leaps, as a result of continuous successive experiments and applications handled by complex teams and advanced technological resources (powerful computers, etc.). In other words, research progresses as a result of the size of investments rather than the genius of individual researchers. Hence the consolidation of the trend towards a significant reduction in the standard of originality.

⁴¹ On this point, see the Italian Supreme Court's opinion (judgment no. 13863 of 11 December 1999, in *Giur. Dir. Ind.*, 1999, p. 115), recently confirmed by the same Court (judgment no. 17993 of 9 September 2005, in *Foro It.*, 2006, I, 11), according to which 'article 16 of the Patent Law is to be understood in the sense that it does not consider the degree of progress that the invention achieves, *provided that the invention is an expression of creativity, modest though it may be*: even a little technical progress is an invention provided that it cannot be accomplished by one skilled in the art relying on ordinary abilities and knowledge' (emphasis added).

An obvious corollary of the reduced selectivity of access to patents is that it is easier for competitors to ‘elude’ the exclusionary rights of the patent holder, as the modest degree of originality deemed sufficient to obtain a patent would more easily allow other solutions not just to be classed as ‘equivalents’ (mere variations implementing the same idea solution) but to obtain an independent (‘free’) status – *and* their own patentability, when meeting the other conditions thereto. Thus, the ‘minimalist’ approach under discussion reverses at the lower level the rule (of Anglo-Saxon origin) that ‘what infringes if later, anticipates if earlier’. In other words, a low-key assessment of inventiveness will logically correspond to a generous evaluation of ‘non-equivalence’ of the subsequent innovation. The author of the latter will more freely enter the market with her own solution, a result which would obviously be hampered if the prior patent were given broader protection based on a more severe, that is, expansive assessment of ‘equivalence’.

Is this, as one might at first sight infer, a positive result in terms of enhancement of competition? Let’s not hurry. Some further analysis is called for in the light of a growing rethink in the juridical (*and* business) world as to the level of inventiveness that should be required for granting a patent.

11. ... To a Hoped-for Increased Strictness – Beginning from Patent Offices

Indeed, for some time now, in both Europe and the United States, a rising chorus of concern has been focusing on the above-mentioned tendency to facilitate access to patents and hence to go along with – in the words of John Ruskin from 1865 – ‘*the eagerness of even wise and able men to establish their priority in an unimportant discovery*’⁴² – a trend which, if accentuated, could lead to the requisite of inventive step being more substantially absorbed by that of objective novelty.⁴³

Now, the need to adapt the patent system to the predominantly incremental nature of contemporary innovation is not being called into doubt. Rather, it is a question of *degree*. Incremental, as the very word itself (and economists) suggests, means to work *on the* results obtained by those who went before. It does not and must not mean ‘insignificant’.⁴⁴ Now, a legitimate doubt is spreading that the tendency has gone too far in concrete terms and poses a

⁴² J. RUSKIN, *Sesame and Lilies: The Ethics of the Dust*, Preface to the Second Edition, reprinted Oxford, 1951, 15.

⁴³ Even today the traditional distinction between the two requirements is rather blurred in practice precisely because of the modest degree of ‘originality’ requested.

⁴⁴ S. SCOTCHMER, *Standing on the Shoulders of Giants: Cumulative Research and the Patent Law* in *J. Econ. Persp.*, 1991, p. 29.

grave risk to the interplay of competition and innovation, especially if viewed from the standpoint of the system as a whole.

The first and most immediate risk is that of scattering the path of subsequent innovators with others' undeserving patents, which act as arbitrary legal barriers that are difficult and costly⁴⁵ to remove, with the effect of slowing down and discouraging technological progress. The risk is even higher when a *patent thicket* is strategically used, precisely in order to hinder current or emerging competitors⁴⁶; and it becomes extreme when the patent thickets are held by oligopolists, as increasingly happens in many high-tech sectors.

A second risk, which in reality is linked to the first one, is more subtle but no less serious. I am referring to the possibility that thanks to a very slight change, at times a question of semantics consisting of a mere '*clever turn of the phrase*',⁴⁷ the holder of a patent successfully resorts to the ploy of obtaining patents for subsequent *alleged* improvements in order to surreptitiously extend the length of the original exclusive rights beyond the statutory period. The risk is a very real one, as confirmed by the widespread practices of so-called 'evergreening', that is, the filing of patents that protect mere equivalents of the main patent nearing expiry.⁴⁸ This practice is quite common as mentioned in the pharmaceutical industry, especially to hinder/slow down the market entry of generics, preparations that use the same formulae as the expired patents of the research-oriented producers.⁴⁹

⁴⁵ On this type of risk see, among the most recent, A.B. JAFFE and J. LERNER, *Innovation and its Discontents: How Our Broken Patent System is Endangering Innovation and Progress, and What to Do About It*, Princeton, 2006.

⁴⁶ T. ASCARELLI, *Teoria della concorrenza e dei beni immateriali*, 3rd edition, Milan, 1960, p. 262, lamented the 'degeneration that occurs with actions for unfair competition [the same obviously holds for patent infringements] filed as an offensive tool solely to benefit from the expected publicity rather than as a truly defensive measure'. The remedy? Impose heavy sanctions (along the lines of treble damages in the US) in favour of victims of sham litigation and above all expressly provide that bringing such litigation may in itself constitute an act of unfair competition and even an antitrust violation in some cases.

⁴⁷ C. BOWE, *Merck Finds Tonic in Clever Turn of Phrase*, in *Financial Times*, 29 March 2007.

⁴⁸ An example is the recent case involving Novartis and the Indian Patent Office before the High Court of Chennai (Madras). The Court refused to afford protection to a drug against leukaemia, which was nothing more than a mere equivalent of *Gleevec*, already patented by Novartis and whose term was nearing expiry. For an initial report of the judgment handed down by the Court on 6 August 2007, see A. GENTLEMAN, *India Ruling Clears Path for Generic Drug Firms*, in *International Herald Tribune*, 7 August 2007. For more details see S. BASHEER and T. PRASHANT READDY, *The 'Efficacy' of Indian Patent Law: Ironing out the Creases in Section 3(d)*, cited in note 42 of Chapter 1.

⁴⁹ The days of the practice may well be numbered given the increasing integration and cross-fertilisation between two sectors that were traditionally enemies. By way

In any case, from the standpoint of a reward commensurate with what is effectively invented, it would seem correct that the overall protection afforded by the inventor to be linked to the latter's capacity to devise, describe and claim with appropriate precision (in terms of both implementation and intended use) 'protective' substitutive solutions such that subsequent solutions proposed by third parties will be clearly identified as equivalent.⁵⁰

Therefore, the first impression above that easy access to a patent is an (increased) incentive to both original and subsequent innovation is false. Certainly, that ease can fulfil the needs of single firms but is likely to damage the system by significantly hampering the dynamics of innovation in the long term through arduous and unwarranted barriers. It is not a case of a political and economic preference for long-term over short-term models of competition that makes me say this, but the view that any model of competition must be established not on the basis of the subjective preferences of the interpreter but in a manner consistent with the overall features of the system, features that without any doubt favour solutions designed to achieve *permanent* competition to the benefit of innovation.

There are signs of repentance on both sides of the Atlantic. As regards Europe, there are the amendments to the European Patent Convention ('EPC 2000', entered into force on 13 December 2007⁵¹), which, by reforming the procedure before the EPO, have significantly extended the room for disputing applications and for making appeals against decisions in such matters.⁵² Even more interesting is the signal that comes from the US Supreme Court in *KRS*

of example take the acquisition by Daiichi Sankyo, a Japanese pharmaceutical firm, of Ranbaxy, one of the most important manufacturers of generic drugs in India, which in the past had made a name for itself as a company that brought legal actions aimed at invalidating patents held by multinationals. (See the *Financial Times* of 12 June 2008.)

⁵⁰ One could object that this would risk inducing an inventor to postpone patenting to when she has devised a sufficient number of variations to describe and claim to *protect* herself from imitations. In that case, the effect of disclosure connected to patenting would be likewise postponed, with eventual anti-competitive effects. One can reply that such a risk is plausible solely in first-to-invent patent systems that allow one to *retroactively* recover prior time but not in first-to-file systems like those in Europe which encourage inventors to race to file patent applications.

⁵¹ The amendments to the European Patent Convention were ratified in Italy by Law No. 224 of 29 November 2007.

⁵² Among the most significant changes is the amendment (articles 105(a), 105(b) and 105(c)) envisaging a new centralised procedure whereby at the request of the proprietor, the European patent may be revoked or be limited by an amendment of the claims with effect in all Member States. Also worthy of note is the first paragraph of article 105, whereby any third party who is a party to infringement proceedings may intervene in opposition proceedings at any time. For an analysis of the main changes in the EPC 2000, see P.A. FRASSI and S. GIUDICI, *EPC 2000: Una prima lettura*, in *Riv. dir. ind.*, 2007, I, 205.

International Co. v. Teleflex Inc. et al. (550 US 2007), warning the US Patents and Trademarks Office (USPTO) to raise the bar of ‘non obviousness’ above ‘ordinary innovation’,⁵³ arguing that otherwise there was a risk that innovation might be stifled.⁵⁴

It remains to be added that such hoped for increased selectivity should permeate the whole chain of legal ‘controls’ on the patent’s validity. In particular, it should robustly address the first checkpoint: that of Patent Offices, which *ex ante* and *permanently* examine *all* patent claims. Indeed, judicial control only occurs *ex post*, of course – thus allowing the previous exclusive exploitation of undeserving patents – and also takes place at random, as it concerns only those patents that have been the object of litigation (litigation, by the way, whose costs so often discourage minor competitors from challenging bigger firms’ intellectual assets). Thus one should reverse the current approach of the professional circles involved, who downplay the role of the administrative filter, juxtaposing the ‘in-depth’ control of the judiciary versus the frequent ‘superficiality’ of national Patent Offices. Accordingly, it seems highly to be recommended that the EU engage in a strongly ‘harmonised’ effort aimed at engaging Member States to provide appropriate professional means and structures, in order to increase the capacity of their Patent Offices (including their cooperation with the EPO) to effectively discriminate ‘ordinary innovation’ (*KRS*, 2007, above), thus denying patentability thereto. Only the success of such an effort will satisfy the general interest that a competitive market be, from the start and permanently, ‘cleansed’ of undeserving exclusive rights, resulting in the slowdown of the pace of ‘dynamic competition’ (that is, competition through innovation).

12. A Corollary on ‘Inventiveness’ in Utility Models: No to a Double Standard

In the light of criticism of the trend to excessively shift downwards, to the

⁵³ ‘[...] the results of ordinary innovation are not the subject of exclusive rights under the patent laws. Were it otherwise patents might stifle rather than promote, the progress of useful arts’. Again, ‘[...] granting patent protection to advances that would occur in the ordinary course without real innovation retards progress [...]’: *KSR Int’l Co. v. Teleflex Inc. et Al.*, 550 US 2007. The US Congress is apparently moving in the same direction: see G. HITT, *Patent Overhaul Picks up Steam, Clearing House*, in *The Wall Street Journal*, 10 September 2007, p. 10.

⁵⁴ The ‘inventive character’ can well be expressed by a specific component of the overall new invention. This in particular with regard to nanotechnological inventions, where, as has been pointed out (P. ERRICO, *La tutela brevettuale delle nanotecnologie*, in *Riv. dir. ind.*, 2007, I, p. 61), the invention often encompasses a mix of different technical and scientific disciplines such as chemistry, physics, ITs, etc.

level of incremental innovation, the threshold of inventiveness that allows patentability, I consider that the further 'discount' on the inventive step recommended by numerous scholars and judges⁵⁵ in relation to patents for *utility models* is wholly inappropriate, although provision for this may exist in various European countries. This approach seems to be shared by the proposed EU Directive 'approximating the legal arrangements for the protection of inventions by utility model' (presented on 17 December 1997 and amended on 12 July 1999, but happily not yet approved: in fact, 'forgotten').⁵⁶ The proposed Directive relates to the auxiliary innovation represented by (new) industrial models which gives the product or process accessed (or its user) 'a practical or technical advantage' and, 'having regard to the state of the art, is not very obvious to a person skilled in the art' (article 6.1 of the Proposal). As will be seen, the wording has changed from 'not obvious' to 'not very obvious'(!), indicating that a utility model patented requires an *even smaller* inventive step than an invention. This is expressly confirmed in Recital 11: 'Whereas these requirements are for the most part the same as for patent protection; *whereas the level of inventiveness required must nevertheless be different*' (emphasis added).

In my opinion, this approach is wholly unsatisfactory for theoretical as well as practical reasons. As regards the theory, in view of the current legislative parameter of the inventive step, it is impossible to establish a lower inventive level than that required for an invention patent. Either a solution is obvious from the prior art, or it is not; there is no middle ground: it seems somewhat ridiculous to distinguish between not obvious and not very obvious.

There are at least two other grounds for dissatisfaction. First, as the utility model has substantially the same protective scope as the invention, the smaller inventive step required would obviously mean easier access to patent rights by the back door. The duration is shorter, but in view of the speed of present-day industrial and commercial dynamics, a duration of up to ten years – specifically six years, renewable for two further two-year periods (see article 19 of the Proposal) – seems enough to obtain an adequate return on the investment.

Thus a second-class innovation would more easily obtain a patent which, as mentioned, would have very similar protection to a first-class innovation. Now, in view of the already modest level required for the first-class innovation, this seems discouraging, and actually conflicts with the claimed purpose of the patent system, that is, to promote (genuine) innovation. Indeed, this

⁵⁵ I refer to the advocates of the so-called 'quantitative' theory on the differences between patents and models.

⁵⁶ If the Proposal is approved, the protection document will still be called a patent in Belgium, Ireland, Italy and Portugal: see article 1 of the Proposal of 25 June 1999, COM (1999) 309 final.

contradiction is objectively embodied in the *dual* protection provision of article 23.1 of the (amended) Proposal,⁵⁷ which would easily allow an invalid patent for invention to be ‘rescued’ by invoking the protection of the utility model. In other words, a patent for invention which is at risk because of its insufficient level of inventiveness would still be granted exclusive protection up to the normally quite satisfactory ten-year limit.

All these drawbacks and contradictions, which inevitably increase the uncertainty of the application criteria, and consequently inflate the costs of litigation – themselves a significant proportion of the overall *administrative* costs of the patent system – suggest, in the immediate, to maintain the same standard of ‘non-obviousness’ for both utility model and patents. Then, to reform the system by *abolishing the utility model* and retaining *a single type of patent* covering both products and processes.

13. Strict Proportion of the Scope of Exclusivity to What has been Effectively ‘Found’ (*Inventum*): Principle and Corollary

Further rules enshrine the principle of strict proportion of the scope of the exclusive/excludent rights conferred by the patent to what has been effectively invented. Such a principle concerns, first of all, the patentee’s position *vis-à-vis production* of innovation – be it product or process innovation (as regards *distribution* of patented products, see section 17 below relating to the ‘exhaustion’ of patent rights).

A first rule, already mentioned, defines the scope of the exclusive rights in relation to the intended function/purpose: in the last analysis, the field of use, of the invention. This function/purpose must emerge from the patent application in connection with the claims, that is, with the analytical specification of the characteristic features of the technical solution for which the patent rights are requested. See Rule 5.1 of the Regulations under the Patent Cooperation Treaty (PCT),⁵⁸ and in particular, the requirement laid down in paragraph (vi) ‘to indicate explicitly ... the way in which the invention is capable of exploitation in industry and the way it can be made or used’. The underlying principle is also confirmed by the recognition of patentability of known substances ‘for a new use’ (article 54.5 of the EPC).

Now, the substantial and systemic significance of the rule (stated as far back as the middle of the 19th century by the General Court of

⁵⁷ ‘The same invention may form the subject-matter, simultaneously or successively, of a patent application and a utility model application.’

⁵⁸ (Consolidated text). The Regulation was issued on 19 June 1970 (last revision 28 September 2008).

Massachusetts⁵⁹) lies in the fact that it prevents the patent monopoly, even when it relates to a product, from extending indefinitely, or in any event to uses or industrial applications which were *not* envisaged, and consequently not described or claimed with precision, by the inventor. This avoids subsequent innovation to be unjustifiably penalised by the prior grant of exclusive rights, since third parties (typically, competitors) are enabled to develop and implement new uses of the patented product and possibly patent them independently.⁶⁰

Another rule governs the relationship between *product* and *process* innovation, more precisely between a process patent and a new product directly obtained by means of the process (article 64.2 EPC). Briefly, the exclusive right extends to the exploitation of that product, and any other identical product, manufactured by third parties, presumably using the patented process, without the patent holder's consent. Thus third parties (competitors) can freely manufacture and sell the identical product, thereby engaging in direct, not merely substitutive competition, if they can prove that they used a different process.

As regards positive law, there is some doubt that the scope of the principle can be extended to the case of interference with another party's *product* patent. The contrary, traditional argument would be that the most pro-competitive solution, namely for a third party to be allowed to make the same product with a different process, would infringe the other party's product patent (article 28.1(a) TRIPs). This argument might in turn be objected to by interpreting the concept of 'patented product' as 'product- by-process'. This interpretation seems indeed more consistent with the principle of strict proportion (in particular, as expressed by article 64.2 EPC), as well as the overarching principle of freedom of competition (as a guideline for the interpreter). However, even accepting the traditional (and presently dominant) solution, its reach would be limited to the case of a *subsequent* process of an *ordinary* innovative level that does not achieve an 'important technical progress of considerable economic relevance' (article 31, 1) of the TRIPs Agreement). In the latter case, the rules already referred to – and which we shall discuss in further detail below in

⁵⁹ In 1641, that Court granted exclusive rights to one Samuel Winslow to produce salt according to a method that he had invented and prohibited third parties 'from making this article except in a manner different from his'. For this and other precedents predating the founding of the United States, see P.J. FEDERICO, *Colonial Monopolies and Patents*, in *Journal of the Patent Office Society*, 1929, p. 358.

⁶⁰ P. J. FEDERICO, in *Origin and Early History of Patents*, in *Journal of the Patent Office Society*, 1929, on p. 294 recalls Galileo's 'greed': in 1594, when asking the Doge of Venice to grant him rights over an irrigation machine, he also sought and obtained a right to prevent third parties from using it for different purposes even with changes they themselves made.

section 16 – on derivative inventions of an important technical or economic nature would apply, which would grant the right to obtain a compulsory licence (eventually a cross-licence) on the product that is the subject matter of another party's prior patent.⁶¹ The inventor of the new process would thus be entitled to a licence over the prior product patent, the holder of which would in turn be entitled to a licence over the second innovator's process patent.

However, as mentioned, the dominant interpretation affirms the 'absolute' protection of the patented product: that is, the product as such, not as the result of a certain process. The paradoxical result is discrimination against inventors who take an *entirely new* approach to obtaining a product developed by others, while privileging, thanks to the rule of article 31, 1) TRIPs, those who, albeit considerably, improve on an *existing* patented process.

Nevertheless, a more pro-competitive approach seems to be gaining ground in new areas of patent law. One example is the case of a biological material made by recombinant DNA techniques. As Vincenzo Di Cataldo has convincingly argued,⁶² the patent (allowed by article 3(1) of the Biotechnology Directive) should not extend to material, even of the same type, made by totally different techniques, and especially by extraction from more complex materials. I also believe that article 3(2) of the Directive enables the scope of the exclusive rights to be limited to the process of 'isolation' of the sequence or gene. Of course, the integrity of the rule requires this solution to be maintained even if the particular process used does *not* contribute to defining the intrinsic characteristics of the material, this being a separate case which fits better with the *product-by-process* concept.

In any event, I would strongly recommend the proposed legislative amendment, which would encourage the exploration of new procedural solutions able to make end products, possibly already devised by others, but with techniques less useful to society, such as processes that prevent pollutant effects, removing the absolute foreclosure imposed by existing product patents, even if based on entirely different intellectual approaches. Indeed, not only is such a foreclosure *not* imposed by the need for rewards strictly commensurate with the actual inventive contribution; it also hinders *direct* product competition, which would tend to have an even more favourable effect on price levels and manufacturing quality by making the different products offered more immediately comparable.

⁶¹ The scope of article 31 of TRIPs is not limited to a specific type of patent (product or process).

⁶² V. DI CATALDO, *Fra tutela assoluta del prodotto brevettato e limitazione ai procedimenti descritti ed agli usi rivendicati*, in *Riv. dir. ind.*, 2004, I, p. 145.

14. Patents and Innovation Dynamics: Foreword on Subsequent Innovation

These principles open up significant areas for competitive innovation by third parties and play an essential, though not exclusive, part in defining more completely and precisely the legal framework of the relationship between protection of the patented innovation and incentives for subsequent innovation. As mentioned, this is a crucial aspect of modern R&D, characterised by progress in small steps from a preceding innovation. Modern researchers increasingly advance by a characteristically cumulative process rather than by quantum leaps, as dwarves standing on the shoulders of other dwarves and exceptionally, on the shoulders of giants, that is, the inventors of pioneering inventions, to whom Isaac Newton referred when he formulated his famous metaphor (himself actually on the shoulders of the 12th-century philosopher-monk Bernard de Chartres ...).

In this process of subsequent innovation, the prior innovation can therefore be lawfully used in two different ways:

- a. to obtain ideas, teachings, information in order to develop, more quickly, different, non-infringing solutions, that may possibly be more competitive on the market, and lead to the same type of useful result without interfering with the prior patent;
- b. to incorporate the previously patented innovation into a more progressive, useful solution.

The first case can be described as *substitutive* subsequent innovation, and the second as *derivative* subsequent innovation (see section 16 below).

In both cases, as we shall see, the patent system – interpreted in accordance with the general principles enunciated in Chapter 1 – expresses a pro-competitive propensity, in the sense of protecting the innovation in such a way as to stimulate widespread subsequent innovation. This statement must be articulated separately for each of the two cases, although they have various common features.

15. Subsequent/*Substitutive* Innovation: Qualification Criteria

Let's commence with the first type, a subsequent *substitutive* innovation. In order to define it in legal terms, it is necessary to refer back to the principles mentioned above (expression of the guiding criteria that the exclusivity be strictly commensurate with what the inventor has effectively invented and taught) that circumscribe the exclusivity having regard to the intended use and possibly the particular procedure employed to make the product or substance.

It is clear that what is involved are rules that enable a *typological* difference to be introduced and hence the ruling out of infringement between patented invention and subsequent invention that achieves the same objective functional result. Infringement by 'equivalents' will therefore exist (and the qualification of *substitutive* denied) only if the innovation has a common functional aim and the means used to achieve the result are substantially the same as those of the patented invention.

Moreover, when those discriminating elements are not that clear, the qualification of *substitutive* and hence the freedom to implement and independently patent the subsequent innovation will in concrete terms and in the final analysis depend on the greater or lesser indulgence shown in the criteria adopted for the purposes of establishing an infringement, especially when called upon to judge *equivalence*. Such criteria, as noted before, will symmetrically reflect those applied to establish or deny the non-obviousness of an invention. Accordingly, I can only confirm what was stated above, that is, that the prevailing practice – consistent with the lax approach which is adopted when assessing inventiveness – tends to deny *equivalence* and hence infringement solely on the basis that substantial homogeneity of the conceived solution is not simply evident to the usual person skilled in the art.⁶³

In other words, by allowing differentiations to be more easily classed as 'not obvious' in circumstances where a more rigorous assessment would lead to a finding of 'equivalence', the lax approach leaves more room for manoeuvre for autonomously patenting subsequent *non-dependent* innovation. But this is just a pseudo-benefit since it essentially 'dopes' the reward function by selectively providing an incentive to subsequent innovation of little value, thereby in the final analysis hindering the dynamics of true innovation precisely because the path of authentic subsequent innovators is littered with undeserving barriers. In substance, the problem of subsequent substitutive innovation is not that different from original innovation. As it is substitutive (and not derivative), it is by definition 'original' in itself. Accordingly, the same rules described above here too militate in favour of adherence to the resurgent view that champions greater rigour in assessing what is 'not obvious'.⁶⁴

⁶³ Worthy of note in this regard is the amendment made to the European Patent Convention clarifying article 69 in relation to the interpretation of claims. In particular, article 2 of the Protocol on the Interpretation of Article 69 of the EPC provides that for the purpose of determining the extent of protection conferred by a European patent, due account shall be taken of any element which is equivalent to an element specified in the claims.

⁶⁴ See R. EISENBERG, *Obvious to Whom? Evaluating Inventions from the Perspective of the PHOSITA*, in *Berkeley Tech. L. J.*, 2004, p. 885.

16. Derivative/Dependent Innovation: A Virtuous Regime of 'Non Voluntary' Cross-licences

How should one construe the regime applicable to 'derivative' innovation, that is, inventions realised through total or partial use of solutions already devised and patented by others?

The principles recalled above, which define the scope of patent rights, also define the relationship of dependence. A relationship of dependence will exist if the second innovation wholly or partly employs the same solution (including process) to obtain the same type of useful result, that is, the same intended use. Thus, for example, an invention that improves (increases, makes cheaper, etc.) the way in which *the same kind* of usefulness is achieved, by means of a solution idea that uses – through *perfecting* – the patented innovation, is dependent on the first patent since, to quote article 31, 1) of the TRIPs Agreement, it 'cannot be exploited without infringing another patent'.⁶⁵ Conversely, an invention which uses elements of a prior patent but combines them in an original way, giving rise to a *new, useful result* that could not be obtained on the basis of the prior art by the individual elements considered separately and as the mere sum of their parts, must be considered *non-dependent* on the prior patent. Thus an invention that, as a result of an autonomous research path, applies the prior idea to a different and distant (non-equivalent) field of use, thereby obtaining a *new* useful result, must be deemed to be non-dependent on the first patent (article 54, 5 EPC).⁶⁶

Therefore, if the subsequent innovator proposes new solutions that were achieved thanks to the utilisation in whole or in part of the prior teachings of others, there arises the problem of striking a balance between protection of the original patent against total or partial infringement and freedom (and incentives) to come up with a subsequent innovation that improves the original. The interests to be balanced are many. Obviously there are those of both the first and second inventors: the first not to have the value of their patent destroyed owing to being leapfrogged by a more advanced technological solution and the second to obtain a reward for their efforts and investments directed towards improving existing technology. Though the interests might be individual ones, they equally pertain to the collective need to protect and stimulate innovation. Moreover, there is also the public interest of consumers to enjoy as soon as possible more advanced technology (just think of a drug that has been rid of its harmful side effects).

⁶⁵ The category embraces the case of the necessary utilisation of a patented invention to achieve a technologically more complex aim (about which more will be said shortly).

⁶⁶ See R. EISENBERG, *The Problem of New Uses*, in *Yale Health Policy*, 2005, p. 717.

Before examining the rules and the balance that they strike, some clarification is called for. The question of the conflict between the owner of the original patent and dependent inventor, essentially an issue of consent by the former to market entry by the latter, relates exclusively to the phase of implementation of the invention, that is, production and placement on the market. Consequently, the dependent inventor is perfectly *free to patent* without requesting any consent. As is evident, the freedom to patent – though not in conjunction with that to implement – will in any event allow the inventor to defend her invention against third-party infringers, including the holder of the previous patent. Moreover, even in the (temporary or otherwise) absence of implementation, through publication of the application, patenting will enable the virtuous effects stemming from disclosure of the invention to be realised.

Clearly, the freedom to patent also implies the freedom to design improved solutions, even ‘working’, that is, studying and experimenting, on the previous technology. Patents bar unauthorised third parties from industrially realising and/or commercially exploiting the invention, not from ‘researching’ on it. Mere research activity (a faculty of constitutional rank), even if carried on within competing enterprises, and even if aimed at improving and hence superseding the previous patented technology, never constitutes ‘infringement’. I will return to this point in Chapter 3, section 6.

Let us now concentrate on one particular issue of dependent innovation, that of the power to *implement* it. This is a relevant problem, indeed, concerning the development of all that vast sector of innovation which advances on the shoulders of earlier inventors (as Dreyfuss Cooper and Rosenthal Kwall observe,⁶⁷ Newton would never have seen so far ahead if he had been prevented from standing on the shoulders of giants). Also at stake is the price level of goods incorporating the improved technologies, obviously influenced by the terms and conditions of the chances of derivative innovators to access and exploit prior innovation.

Whenever an invention is found not to be ‘dependent’, the subsequent innovator can implement the original one without the need to request the consent of the first inventor and pay the latter any fees and/or royalties (that weigh on production costs and hence feed through to the price). And vice versa obviously.

However, if an invention is ruled to be dependent, in general the subsequent innovator cannot implement or exploit its idea without the consent of the first inventor. The prohibition can be removed after the grant of a licence, typically on payment of fees and/or royalties. But if the patent holder says ‘no’, it’s no,

⁶⁷ R. COOPER DREYFUSS and R. ROSENTHAL KWALL, *Intellectual Property – Trademark, Copyright and Patent Law*, Westbury, NY, 1996, p. 437.

full stop (the subsequent inventor has the scant consolation that she will not be charged with having failed to implement the 'working requirement').

Ay, there's the rub. There is a very high risk, indeed, that the patent holder will refuse her consent in order to prevent the development of a competitor who is dangerous precisely because she has gone further than the patent holder, whose invention would thus act as a springboard for said subsequent competitor. Thus, understandably, the patent holder may easily deny any licence, therefore preventing the implementation of the subsequent innovation, to the prejudice also of competition and consumers (for example, a drug that improves on a previous drug still under patent by removing the latter's grave side effects: the ill would have to wait for the expiry of the first patent, perhaps after years, if the patent holder refused to give the green light to the implementation of the dependent patent).

Certainly, if the original patent holder refuses to grant a licence, she will in turn be deprived of the royalties she could have otherwise earned. More than this: she will also be deprived of the chance to immediately improve and market her own product by crossing licences with the derivative inventor. However, as said, the first patentee is in principle free (unless the refusal violates antitrust law: below Ch. 5) to deny the licence, thus blocking the emerging competitor. In short, the above solution entails a significant risk of slowing down – until the expiry of the original patent, possibly many years in the future – of the appearance of the dependent innovation on the market.

However, this is not the end of the story. As mentioned above, with regard to that risk (for subsequent innovators and consumers), a distinction must be drawn according to whether the new patent expresses an innovation of ordinary inventive scope (in the sense that it is merely 'not obvious')⁶⁸ or whether it constitutes 'an important technical advance of considerable economic significance' (article 31(1) of the TRIPs Agreement; NB: 'economic significance' need not relate only to the licensee's expectation of profits, but may also, or even alternatively, relate to the benefit for society).

In this second case, the holder of the first patent *cannot* at her discretion prevent the entry of the second patentee into the market. The latter is granted

⁶⁸ It should further be noted that the assessment of inventive step in derivative inventions assumes even greater importance as it is a category of innovation that by definition adds something to an already existing technical solution and hence should always be capable of fulfilling the requirement of novelty. This check, for example, is essential in nanotechnology inventions which typically draw on and combine solution ideas from several technological sectors (above, note 54). In this case, since the novelty often lies exclusively in miniaturising the inventive concept, it is absolutely necessary that proof be given of the inventive step in order to avert the uncontrolled proliferation of patents on low profile inventions.

the right to obtain a licence on 'reasonable terms', which can be determined by the courts in the event of disagreement between the parties (article 31, 1) of the TRIPs Agreement). Thus a weakening of the exclusive rights of the owner of the prior technology is allowed in order to promote the development of high-tech innovations, *and* their – competitive – market implementation. Does this solution excessively penalise the prior patent holder who, as a result of the compulsory grant of the licence, may be leapfrogged by a subsequent innovator offering a more advanced product on the market by exploiting the first party's idea, thus reducing the value (and the price) of the products that incorporate the earlier technology (i.e. 'devaluing' the original patent)?

The answer is no. The competitive interests of the first inventor are safeguarded by a legal solution that encourages and stimulates her capacity to catch up. This is because, in the overall framework, the first inventor is granted the right to a licence over the new, derivative technology on a *reciprocal* basis (last part of subparagraph b, of the article in question). The first inventor may therefore in her turn become a full-fledged direct competitor of the second inventor, sharing the adoption of the overall more advanced solution, while at the same time competing against one another. In this way, by instituting a spiral of mandatory cross-licences, the law tends to ensure that access to the high profile dependent technology will not be delayed by the obstructionist will of the original innovator. The law allows *both* innovators to compete at the more advanced level, ($B+A=A+B$) thereby contemporaneously satisfying the interests of consumers also in terms of price – those of a duopoly being typically lower than those of a monopoly.

The discrimination inherent in the legislative model described above between ordinary dependent innovation and important technical advances of considerable economic significance might be criticised in terms of both opportunity and legal logic. As regards the former, why, one might ask, deny certainty of market access (and hence rapid satisfaction of consumers) to one who has nonetheless achieved progress?⁶⁹ This might also discourage investments in subsequent incremental innovation. As to legal logic, one might see a contradiction in the fact that the competitive entry of the first type of dependent innovation can be blocked by the refusal of the first inventor to grant a licence in circumstances where the latter had been granted a patent even though her invention was of a modest inventive level. Why impose, for granting market access to derivative inventions more selective merit conditions than those (the standard 'non-obviousness') upon which the previous patent was obtained?

⁶⁹ Probably for this reason this discrimination was rejected by some of the earliest European legislation on patents such as the UK Patent Act 1883: below, note 74.

I understand such doubts, but nonetheless approve the legislative solution that we are discussing. The rationale of favouring high-tech dependent innovation aims at striking a reasonable balance between the necessity to spur improvements in technology and the need to discourage a general path-dependency approach by investors in R&D. If *all* derivative innovation could benefit from non-voluntary licences from earlier patentees, investors and researchers would be strongly encouraged to safely follow the tracks already trodden and tested by others (possibly making just cosmetic changes through styling, branding, advertising, etc.) and refraining from trying new paths: to the detriment of the general interest in more *original* research and more competition by substitutes (and even, one might add, of high-profile derivative innovation, itself typically costlier).

Moreover, it should be noted that the objective 'discrimination' is *de facto* softened by the autonomy enjoyed by subsequent inventors in patenting their innovation. As hinted above, such patenting prevents the previous patentee – here equivalent to an unauthorised third party – from free riding on the progress achieved by the follow-on inventor. Thus, in order to legitimately profit from such progress she too must negotiate (and is reasonably better encouraged to do so by being the owner of the base technology already established in the market and, as such, the competitor that might commercially benefit from the introduction of a better version of the product more than is the new, as yet unknown, entrant). These are the reasons why, even in the absence of the Damocles sword of compulsory licensing (and, of course, of a 'monopolistic' motivation overcoming strict economic rationality), collaboration does often occur, even in the form of the constitution of pools of patents based precisely on cross-licensing among partners.

The legal model laid down in article 31(1) of the TRIPs Agreement (widely adopted in Europe unlike in the US) performs an important role as regards the development and marketing of innovations of significant technical and economic value improving on earlier patents. This model is particularly valuable in cutting-edge sectors of contemporary innovation, in order to stimulate competitive processes based on innovative efficiency, as happens in two major fields, each of which presents a distinct legal profile.

The first is the field of *chemical-pharmaceutical research*, in which new uses for substances and compounds already patented may be identified. In this case, that model can prevent relevant subsequent innovation from being inhibited from accessing the market should independent status (and thus full freedom from earlier patents) be denied by the courts to the new use invented.

The role of that model can be equally valuable in relation to *information technologies* designed to connect communication systems and apparatuses, especially if these technologies have come (either *de facto* or *de jure*) to represent the industry standard. Technical connection solutions (such as interfaces)

typically require the use of other connection and mutual communication technologies (possibly owned by third parties) for their implementation. As is well known (more in Ch. 3, § 5), the connection function, a.k.a. interoperability, especially if performed with standard technologies (which allow the highest volume of connections), has acquired a crucial technical and financial role in the performance of all the activities, starting with e-commerce, of the network economy: a sector which is governed by a law of value (the reverse of the one governing material goods), according to which value increases in direct proportion to the number of users. Thus, thanks to the paradigm set forth in article 31(1) of the TRIPs, the need to develop increasingly advanced connection systems, which is vital for network industries, can be met without denying fair protection to earlier innovators.

Finally, it is worth noting the indirect but substantial convergence between the normative paradigm in question and the one deriving from application of antitrust legislation to situations of ownership and control of IP-protected technologies which have become industry standards and, as such, are equated with essential facilities.⁷⁰

Let me at this point try to rebut some current, often heated criticisms that many business, academic, and judiciary circles address to the very idea of 'compulsory licensing', often viewed as no less than a blow to the sanctity of 'property' (intellectual) and 'freedom' (of market and contract), and even smacking of state planning, illiberalism, 'socialism' (*mamma mia!*) and so on and so forth.

First of all, it is worth stressing that the most significant function of compulsory licences (whose actual implementation presupposes an unsuccessful attempt to negotiating on fair terms) is, as hinted, that of a Damocles sword⁷¹ facilitating voluntary balanced agreements.⁷² On the merits, I have just evidenced (§ 8) positive pro-innovation and pro-competition role that such licences (typically cross-licences) play as concerns high profile derivative inventions. Nor should we forget their function in antitrust disputes, as tools for maintaining or restoring competition otherwise threatened: for example, competition Authorities have at times condi-

⁷⁰ The application of the rules on competition enforcing abuses of dominant position, will thus prevent the IPR holder from unreasonably refusing access to the standard technology, thereby opening up competition (at least in related markets. Below, Ch. 5).

⁷¹ The prospect of conflict may easily raise in the holder's mind the risk of disputes over the validity of the patent, inspection of the company's accounts and tax affairs etc., as well as being depicted as the 'bad guy' who bars the path to subsequent innovation.

⁷² This maieutical function counters the frequent belittlement of the instrument that points at the rarity of cases in which a licence was granted compulsorily after litigation. In other words, the value and significance of the compulsory licence lies in its role as 'Damocles' sword'; hence not in the number of licences compulsorily granted, but in the number of voluntary agreements 'encouraged'.

tioned their approval of a merger to the issuance, by the merged entity of a licence to third competing vis-à-vis an excessive concentration in one hand of relevant IPRs.⁷³ [This will be discussed in greater details in Chapter 5.]

Finally, a brief lesson from history. Even leaving aside early Venetian patents *Zwanglizenzen* (compulsory licences) were envisaged by the Austrian Empire (Law of 11 January 1897 'on the protection of inventions') to allow the working of an (important) invention and to satisfy important public interests. The British Empire was no less – see article 22 (compulsory licences) of the Patent Act 1883.⁷⁴ So you see from which subversive breed the principle enshrined in article 31 1) TRIPS descends...

17. Patents in the Distribution Chain: The Principle of Exhaustion

I will now turn to the distinct principle of exhaustion of the patent developed by the European Community, as from the 1974 *Centrafarm* case, as a direct result of Community policy implementing the Treaty principles of free movement of goods or more precisely, competition policy (especially as regards pricing and other conditions of sale, that is, 'intra-brand' competition) as applied to the movement of goods between the markets of the Member States.

The principle, since then adopted in national legislation, basically addresses concerns voiced at an early stage by classical economists about the price levels that can result from the existence of patent rights. It relates to the conflict/balance between remunerating the innovator and safeguarding *price competition*, as well as competition based on other business practices, such as

⁷³ By way of example see the *DSM/Roche Vitamins* case of 23 July 2003 (COMP/M.2972) in which the European Commission authorised the transaction subject to the observance of certain commitments, including the transfer and licensing of all the technology and intellectual property rights (patents, trademarks and know-how) relating to the food enzymes market, that is, the market most compressed by the merger. Regarding the subject of commitments, see also the draft Notice of the Commission of 27 April 2007, according to which transfers and licensing of exclusive rights are the commitments to be preferred when the adverse effects to competition depend on market power stemming from intellectual property rights (see paragraph 38).

⁷⁴ In particular, section 21 of the Austrian law of 11 January 1897 contemplated the possibility of obtaining a compulsory licence when the invention could not be implemented without using a previous patent. The law required that the derivative invention be one of 'relevant industrial importance'.

There was no such requirement in the UK Patent Act 1883, a law which amended and consolidated the rules on patents for inventions, designs and trademarks. A request for a compulsory licence was conditional on showing that the second inventor could not exploit her invention in the best way following a refusal by the first inventor to give a voluntary licence. Compulsory licences were not predicated on the economic or industrial importance of the dependent invention but simply on improving/perfecting the original invention.

after-sales service between distributors of patented products. In this sense, it can be viewed as applying, at the level of distribution, the rationale of limiting exclusive rights to what is commensurate and strictly necessary to reward the patentee's efforts and investments by impeding free riding.

The principle specifically states that the right to commercially profit from exclusive rights on the patented invention is forfeited (thus 'exhausted') after the product embodying the invention has been placed on the market by or with the consent of the patent holder (typically, a licensee) in the territory of an EU or EEA Member State. In short, after first sale, the patent holder has no right to influence the terms and conditions of the further circulation of the product. These are left to the free play of competition. For example, by virtue of her patent rights alone, the patentee cannot limit the quantity and other terms of subsequent marketing of the product, and in particular set its prices. Accordingly, the only parties against which the patent holder can enforce her exclusive rights after first sale by virtue of the patent are free riders, that is, plain infringers – be they manufacturers or distributors of infringing products.

The principle of exhaustion therefore softens, so to speak, the patent's monopolistic impact, limiting the owner's power to control the circulation of patented products on the domestic market where the patent is registered. By extending the principle to the first marketing of a product in any EU or EEA Member State, the law adopts as its own the principle of exhaustion, whereby the patentee is denied the right to oppose so-called parallel imports of the patented product and thus to compartmentalise individual domestic markets if the product has previously been marketed lawfully, with its consent, in *other* Member States. This is true even if the product is not patented, *or even not patentable*, in such States (on the latter case, see the (debatable) decision of the Court of Justice of the European Communities, 14 July 1981; *Merck* case⁷⁵).

Thus, as mentioned, the principle of Community exhaustion also indirectly reduces the extent of the exclusive *national* rights, because if the product forming the subject of a national patent, say an Italian patent, was exported and sold on another EEA market, say the UK, the holder of the Italian patent could not object to the import of the product into Italy by any third parties,

⁷⁵ The *Merck* doctrine was criticised by the Advocate General Fennelly, who, in his opinion before the Court delivered its judgement in *Merck II*, warned that the principle of Community exhaustion so construed would have effects contrary to the very rationale of the principle itself, since the patentee would be *discouraged from supplying* her products to the markets of those Member States where her rights were not recognised: which would lead to the partition rather than the integration of the Common Market. See opinion of the Advocate General Fennelly of 6 June 1996, joined cases C-267/95 and C-268/95, ECR 1996, I-06285, paragraph 108.

even though she might not yet have marketed the product in Italy (but in my opinion – and contrary to the *Merck* doctrine – on the supposition that in that other first market the patent holder was protected by patent).

Patent holders try at times to hamper, or just plainly circumvent, the efficacy of the principle by means of agreements with their national distributors establishing, for example, higher prices for goods not specifically destined for the national market (so as to cut any price differential incentive to export such goods), or reducing the quantities sold to said national distributor to what is strictly needed to satisfy the domestic demand. Due to their anti-competitive effects (hindering parallel trade, hence intra-brand competition – primarily in price), the European Commission is enforcing such contractual practices, under either articles 81 or 82 (now 101 and 102 TFEU). The European Courts, though, seem to have recently shifted, in particular in the *Glaxo* cases to a more lenient approach, envisaging the possibility to exempt on ‘efficiency’ grounds, even agreements with restrictive impact on parallel imports.⁷⁶

Finally, unlike trademarks (see Chapter 4, section 3), the merely Community-wide – as distinguished from fully international – scope of exhaustion of patents has not yet been called into question, although it may, and should, be in future. In fact, strict application of the principle that the scope of exclusive rights must be commensurate with their essential anti-free-riding function suggests that whether the first marketing takes place in the EU or outside is quite irrelevant if the exercise of exclusive power to control the movement of products (prices, quantities, procedures) is to be objectively restricted to the first stage of distribution. Thus, that territorial restriction of the scope of the principle reveals its truly ‘europrotectionist’ rationale. However, realism leads one to say that such a development postulates an effectively integrated global market no longer characterised by sharp regional imbalances, that typically give rise, *inter alia*, to highly differentiated pricing policies whose defence implies the use of a patent to prevent the re-import to affluent markets of products sold at reduced prices in poorer countries. (An aspect, as we shall see below, in the Appendix, that touches also on the dramatic subject of the supply of essential patented drugs to developing countries.)

⁷⁶ See Court of First Instance, 27 September 2006, Case T-168/01, *GlaxoSmithKline Services Unlimited v. Commission of the European Communities*; Court of Justice, 16 September 2008, joined Cases C-468/06 to C-478/06, *Sot. Lelos kai Sia EE, et al.* Further references in Chapter 4, fn. 46.

PART III

CONCLUSIONS, AND SOME PROPOSALS

18. Preserving the Competitive Dynamics of Innovation

Exploitation of the numerous pro-competitive features of the patent system described above should represent a given for both interpreters and legislators who, in their respective roles, aim to mould patent law to allow for developments in the technological and economic/financial contexts of applied research and its industrial exploitation, while preserving and promoting a context of dynamic competition in which innovation stimulates competition, and competition is supported by innovation.

In particular, new interpretations and proposed reforms should focus on the need to exploit the ability of the patent paradigm to strike a satisfactory dynamic balance between the need to protect an existing innovation and the need to stimulate subsequent innovation (by competitors of the first innovator as well as by the first innovator herself). This balance would help to *develop innovation not as sheltered from, but on the contrary as stimulated by, competition*, thereby maximising the social welfare effects in many respects associated with the competitive development of innovation.

It is neither superfluous nor rhetorical to insist on such a balance, whose preservation would be threatened by the adoption of a different *overprotectionist* approach (see: Jerome H. Reichman⁷⁷), as it gives proprietary claims priority over basic research, and involves a protection of patent rights which is biased towards the monopoly side.⁷⁸ In the long term – the period on which the responsibility of legislators and interpreters should mainly be focused – those trends are bound to produce an objective effect of slowdown, restriction

⁷⁷ J.H. REICHMAN, *Beyond the Historical Lines of Demarcation: Competition Law, Intellectual Property Rights, and International Trade after the GATT's Uruguay Round*, 20 *Brook J. Int'l L.* 75 (1993–1995) p. 76 *et seq.*

⁷⁸ I also fear that in practice (though not necessarily in conceptual terms) this kind of trend would be encouraged by proposals which, though inspired by laudable pragmatic reasons, are intended to redesign the patent system in a highly specialist way, by tailoring it to specific sectors, and thus abandoning the classic, fundamental unity of the paradigm. Even aside from the fact that the patent system is already articulated into special sectors that express significant differences in the discipline (for example as regards requirements for access to and/or the duration of the exclusive rights in the fields of biotechnologies, new plant varieties, industrial design, topographies of semiconductor products), encouraging this trend would probably increase corporatist pressures capable of undermining the ability of the present general model to combine aspects of protection and pro-competitive needs in a substantially balanced way.

and impoverishment of the pace of innovation,⁷⁹ hence also of innovation-based competition. This contrasts with the ability of the patent system to promote ‘the progress of science and useful arts’, to borrow the expression of article 1, section 8, clause 8, of the US Constitution. Moreover, this adverse effect would be fatally amplified by the oligopolistic scenarios within which the processes of contemporary industrial innovation typically take place. Finally, in the long term it would also be prejudicial to technological advancement, especially in the growing area of network industries, which require an environment that dynamically encourages interoperability, that is, open connections, in legal terms as well.

Conversely, as a reaction to the wave of overprotectionism, ancient objections to patents are being revived in some modern, more sophisticated economic analyses of law. In particular, the tendency towards a general reduction in the excluding power granted by patents is growing stronger, and there are even calls for the patent system to be abolished altogether. In the contemporary period, forerunners of these tendencies were the Freiburg Ordoliberals,⁸⁰ and later, individual scholars like William Kingston, with his proposal for full ‘monetisation’ of exclusive rights.

As is clear from what has been said above, I agree with the spirit of, and many of the arguments behind, the proposals designed to restrict the excluding power associated with patent ownership when the use of such power can bottle-neck the dynamics of innovation as well as competition. Accordingly, I interpret the concept of ‘normal exploitation’ of the patent (article 30 TRIPs), as implying the refusal to extend the scope of exclusivity beyond the limits – outlined above – strictly connected with granting innovators the chance to reap-and-retain the fruits of their efforts and investments as concerns the specific technical solution they have developed. Finally, I do not see any systemic impediments to setting limitations even to that ‘normal exercise’, provided they do not ‘*unreasonably* conflict’ (article 30 TRIPs) with the same. This happens, in my opinion, when, and only when, such limitations would sacrifice the patent’s essential function of assuring inventors a competitive

⁷⁹ As stated in Chapter 1 and in section 11 of this chapter, the dissemination of powerful intangible barriers based on exclusive patent rights (approved and enhanced by the overprotectionist tendencies already criticised) would bar the way to competitors and at the same time encourage the market leaders to rest on their laurels, that is, to prolong their exploitation of the innovation already developed (maximising short-term profits) rather than continuing to create further and more advanced innovations. It goes without saying that the more control of those exclusive rights is concentrated in the hands of competitors holding a dominant position, the more intense the competition-restricting effects will be.

⁸⁰ See D.J. GERBER, *Law and Competition in Twentieth Century Europe*, Oxford, 1998, pp. 232–65.

advantage by enforcing and preventing free riding on their achievements (but remember: licensees, even when ‘non-voluntary’, are not ‘free riders’: free riders don’t pay!).

This said, I have serious concerns that the *generalised* application (beyond the area of ‘subpatentable’ innovation: see J.H. Reichman in fn. 8 above) of the proposals claiming ‘no-exclusivity’ (when ‘no-patent’ across-the-board) might stimulate the occurrence of two negative effects: (a) that of reducing incentives to invest in innovation, especially in capital-intensive industries, where the first-mover advantage alone can be insufficient to neutralise the adverse impact of free riding on investments; (b) that of encouraging generalised path-dependence strategies and consequently slowing the pace of *independent* R&D activity.

In particular, as concerns proposals focused on the straightforward replacement of the excluding powers (‘property’) with a right to compensation for unauthorised use by third parties (‘liability’), it is true that such a shift would not eliminate the competitive advantage from which the patent holder benefits, since the burden of royalties would operate to raise rivals’ costs. And it might even happen that the profits from royalties accruing from several licensees (compulsory licences are non-exclusive by definition) might exceed those obtainable by the single patentee’s direct sales:⁸¹ indeed it might well be that the licensees’ commercial skills are superior to the patent holder’s. But that solution (I repeat: as a solution of *general* scope) seems questionable, because of the path-dependence effect it inherently generates. It would encourage competitors to limit their investments in alternative products/processes in order to avoid both the costs of research and the risk of market failure. They would be encouraged to compete with the innovator/licensor just in terms of price, by saving on the cost of production (possibly, also, ‘saving’ on quality and safety standards).

19. Some Corollaries, with Regard to Compulsory Licensing

What reforms, then, of the overall patent paradigm could opportunely be envisaged and entrusted to legislators (increasingly in transnational settings) in order to better meet the technological and economic developments, while preventing both overprotection and discouragement of innovation? As is well known, there have been several institutional and academic initiatives for reform.⁸² Here, without repeating what has already been advocated above,

⁸¹ Indeed, as Baumol points out, the transfer of technology to third parties is an excellent way of recovering the investment, at times even better than directly exploiting the patent (W. BAUMOL, *La macchina dell’innovazione*, Milan, 2002).

⁸² For an accurate overview of both types (sources) of reform initiatives, see the report by A. KUR and H. GROSSE RUSE-KAHN, *Enough is Enough—The Notion of*

such as the abolition of the utility model patent, I will briefly submit a few suggestions that are consistent with the above objective. I will concentrate on measures specifically regarding patent law itself. They mainly reduce the excluding scope of the patent. However, there are also a few which expand its scope. (Other measures, of an interpretative kind, regarding the relationship between patents and antitrust will be discussed in Chapter 5.)

Before submitting said proposals, however, I would like to draw attention to a 'defensive' need: to firmly uphold the normative line – clearly emerging, for example, in the field of biotechnology under a specific EU directive⁸³ – designed to deny protection to research tools rather than only to specific concrete applications of scientific research.⁸⁴

More broadly, major changes to the list of exclusions from patentability contained in article 52 of the EPC should be avoided (except for the explicit reinstatement of computer programs 'as such': below section 21). This obviously applies also to proposals (at present (formally) put to one side⁸⁵) designed to give, as in the US, patent protection to mere business methods.

Binding Ceilings in International Intellectual Property Protection, in *Max Planck Papers on Intellectual Property, Competition & Tax Research* No. 09-01, available at: <http://www.eiptn.org/nextsteps/Grosse%20Ruse-Khan%20&%20Kur%20Enough%20is%20Enough.pdf>.

⁸³ Article 5 of Directive 98/44/EC. See above, section 4.

⁸⁴ Interpretations favourable to that extension have been advocated in Europe by J. STRAUS (*An Updating Concerning the Protection of Biotechnological Inventions Including the Scope of Patents for Genes – An Academic Point of View*, in *Official Journal of the EPO*, Special Edition, no. 2, 2003, p. 166) and Bostyn (S.J.R. BOSTYN, *Patenting DNA Sequences (Polynucleotides) and Scope of Protection in the European Union: An Evaluation*, Brussels, 2004). For a contrary view, see V. DI CATALDO and E. AREZZO, *Scope of the Patent and Uses of the Product in the European Biotechnology Directive*, in *Italian Intellectual Property*, no. 1/2007, and similarly in the United States, R. EISENBERG, *Re-examining the Role of Patents in Appropriating the Value of DNA Sequences*, in 49 *Emory L. J.*, 2000, p. 783.

⁸⁵ I refer here to the controversy and the considerable fluctuations of opinion which have accompanied the Proposal of a Directive on the Patentability of Software-Related Inventions (see G. GHIDINI, E. AREZZO, C. DE RASIS and P. ERRICO, *Il software fra brevetto e diritto d'autore: Primi appunti sulla Proposta di Direttiva comunitaria sulle 'invenzioni attuate per mezzo di elaboratori elettronici'*, in *Riv. dir. ind.*, 2005, I, p. 81), up to spelling the death knell for it. However, the fall of the Proposal has not substantially influenced the practice of the EPO, which, although with more caution than that shown by the USPTO, has for a long time now granted patent for inventions whose implementation is achieved through a computer. See D. BOOTON, *The Patentability of Computer-implemented Inventions in Europe*, 1 *Intellectual Property Quarterly*, 92, 2007, p. 102; J. PILA, *Dispute over the Meaning of 'Invention' in Article 52(2) EPC – The Patentability of Computer-implemented Inventions in Europe*, 36 *IIC*, 2005, p. 173.

Let's now focus on specific suggestions. First of all, a more liberal approach should be adopted as concerns the circulation and transmission of innovative technologies. In particular, I propose to reasonably extend within reasonable limits (see specific cases below) the provisions for non-voluntary licences beyond the ones in favour of high-profile derivative innovations already foreseen by article 31(l) TRIPs. Even these new licences should require an unsuccessful prior attempt for a fair agreement, be non-exclusive and 'crossed' with a reciprocal licence on the licensor's patent. This extension should be based on *legislatively* well-defined cases so as to avoid encouraging widespread path-dependent strategies (above, section 16). In particular:

- I would extend the solution mechanism envisaged in article 31(l) TRIPs to cases – recalled in section 10 above, and not referable to the concept of 'dependency' – where products interfering with a third party's prior invention protected by a *product* patent have been developed through an entirely different and more advanced *process*. This should apply, at least, until such time as the dominant court law interprets and protects product patents (not 'absolutely', but more reasonably) as 'product-by-process' ones (above, section 13).
- The same solution mechanism should be applied to 'derivative' patents in well-defined high-tech sectors, for example biotechnology, nanotechnology, ICTs – *irrespective* of the check for an 'important technical advance of considerable economic significance'. The complexities of this check could lead to an ill-advised slowdown in the realisation and commercialisation of technological improvements in industrial sectors where the speed of research and innovation should be deemed of special public (social and/or economic) interest: the more so when dealing with technological sectors where the prospects of alternative research paths are few. Take, for example, anti-rejection drugs that require the use (and hence rapid development) of other drugs capable of neutralising certain harmful side effects of the main drug, and more drugs that again neutralise the side effects of these further drugs. Now, *vis-à-vis* such a pharmacological spiral, the therapeutic necessity should trigger the green light for dependent innovation immediately, irrespective of an assessment of the 'high-profile' of the various innovative steps realised.
- In the case of ICT-related patents specifically, that mechanism should be made accessible by competitors of the first innovator (that is, not just by 'dependent' innovators in proper sense) where the patent relates to a product that has become a *standard* – either *de facto* or because it has been selected by ad hoc institutions or associ-

ations.⁸⁶ The proposal's purpose is clear: to foster development of 'products' characteristic of, and instrumental to, ITC industries – hence to the network economy at large – without requiring an antitrust 'interference', i.e. frequently complicated legal proceedings whose costs would negatively (dead)weigh on small and medium competitors especially.

- Then, in specific favour of less developed countries (LDCs), I would suggest extending beyond the pharmaceutical sector the 'Doha exception' that allows such countries to postpone application of TRIPs rules on patents till 2016 (more in Appendix, § 6). This would allow them both to grant compulsory licences and/or to restore the local working requirement for sharing innovations in such fields as energy, infrastructure, transportation, food processing and conservation, house building, etc.: all crucial for putting basic overall development into gear. As a matter of fact, when an economy starts from scratch, the objectives of development are initially best served by the acquisition of basic, albeit scientifically 'mature', technologies, more than by sophisticated, high-tech ones, just such as those generated by the most advanced pharmaceutical research. (On the time frame for LDCs' adoption of the TRIPs rule, see below, the *Appendix*).
- Finally, I would harmonise the national regimes of employees' inventions with the UK pattern (section 39 of the Patent Act, which embodies the basic precepts of common law: above Chapter I, section 3 and note 13). Thus, unless the worker is employed to do basic or applied research work, or has, given her position (typically, that of senior manager or member of the board), 'a special obligation to further the interests of the employer's undertaking',⁸⁷ she should retain the original entitlement to her invention. As to the employer, she should be entitled to a licence, albeit not exclusive, which – again as in the British regime – might even be granted in return for compensation, should the employer receive an outstanding benefit from the use of the invention (I prefer this to the US solution of an employer's 'shop right' to a free,

⁸⁶ This latter extension appears all the more reasonable in view of the growing favour encountered by software patents, and the fact that it is in line with the policies of the Commission and (albeit more restrictively) the European courts as regards access to copyrighted software which has become the industry standard (I obviously have in mind the *IMS* case: see Chapter 5). Moreover, allowing this extension would mean little more than institutionalising practices which are regularly followed by organisations such as ETSI (the European Telecommunications Standards Institute).

⁸⁷ W. CORNISH, *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights*, London, 2003, p. 267.

albeit non-exclusive, licence: see US Supreme Court in *Dubilier*). Of course the rationale for this proposal is twofold: fairness ('natural justice': Cornish, *op. cit.*) on the one hand, and pro-competitive stimulus on the other.

20. Further Pro-competitive Corrections

Finally, I would consider it appropriate to introduce two easily applicable amendments, or rather additions, to patent law, designed to further reduce the anti-competitive potential of the exercise – the 'normal' exercise – of patent rights. Precisely:

- Reduce (at least in health – and environment protection – related sectors) the time which elapses before publication of patent applications, now currently delayed for 18 months after filing. This would self-evidently lead to more rapid development of subsequent derivative (and also substitutive) innovation. (I cite the reasons and considerations set forth above, section 9, discussing the protection of secrecy.)
- Promoting *low-cost* arbitration proceedings to solve patent disputes, as advocated by the 1999 Intellectual Property Rights and Science and Technology Policy Report (by the European Commission Directorate General XII, a.k.a. the ETAN Report). These proceedings could be based on the well-known model devised by WIPO.⁸⁸ However, to avoid possible conflicts with the legal systems of the various countries/Member States, I would not make such arbitration compulsory, as suggested in the report. Better to allow each party to opt for arbitration (the financially weaker ones would be more likely to opt for it) and for this option – obviously if exercised before the commencement of a judicial trial – fixing the choice of jurisdiction in accordance with a simple pre-emption mechanism.

This latter measure, if drafted with care, would attenuate, if not eliminate, the practice (often aggressively foreclosing, as well as producing inefficiencies deriving from excessive transaction costs) whereby the enforcement of patent rights, even when concerning pseudo-innovations, is carried out by harassing weaker competitors with 'sham' infringement lawsuits involving very high defence costs because of the complexity of the experts' reports

⁸⁸ See WIPO Arbitration Rules, available at <http://www.wipo.int/amc/en/arbitration/rules>.

requested, the quality of counsels and attorneys, etc.⁸⁹ This practice, ignored by the EC Enforcement Directive 2004/48, should be hit hard with specific sanctions as both objectively anti-competitive and enforcing undeserving patents – thus contradicting the function of check on the patent’s merits, entrusted, in principle, to the administrative and judicial system.

21. Some Proposals for Extending Patent Protection

In addition to these measures, designed to strengthen the pro-competitive aspects of the patent paradigm, there is a case for balanced proposals to update, and in some respects even objectively *extend*, patent protection, to be put forward. Such proposals are suggested by the technological, organisational and legislative developments of innovation processes, and their acceptance would not prejudice the context of dynamic competition in which innovation can best develop. In a nutshell, I would recommend the following.

1. Acknowledge the patentability of computer programs claimed ‘as such’, cancelling the ban set by article 52.2 of the EPC, an outdated expression of the early stage of the IT industry, focused on hardware, when freedom to use programs was functional (almost as in ‘gifts-for-purchase’) to the marketing of highly expensive professional computing machinery (for more, see Chapter 3, section 13, on the development of copyright protection of software). Thus, programs should be held patentable irrespective of whether they are connected to industrial apparatuses or affixed to a tangible medium.⁹⁰ However, this recognition (already implicit in EPO practice⁹¹) should be accompanied and ‘compensated’ by:

⁸⁹ Worthy of mention is the patent litigation insurance, proposed within the framework of the European patent as an instrument to foster access to the patent system especially by SMEs. On this subject see the study on ‘The Possible Introduction of an Insurance Against Costs for Litigation in Patent Cases’ commissioned by the European Commission in 2003 and available at http://ec.europa.eu/internal_market/indprop/docs/patent/studies/litigation_en.pdf.

⁹⁰ May I refer to my article *I programmi per computers fra brevetto e diritto d'autore*, in *Giur. comm.*, 1984, I, p. 251, where I lamented even back then the futility of the pseudo-requisite of ‘materiality/tangibility’ – which then sank without a trace – for the patenting of inventions implemented through computers. However, the requirement that a program be connected to a piece of hardware (‘apparatus’) has long been disregarded in the practice of the EPO in light of the decisions in *IBM/Computer Program Product*, T-1173/87 (in 2000 EPOR 219) and *IBM/Computer Program Product II*, T-935/97 (in 1999 EPOR 301).

⁹¹ See the EPO’s Guidelines for Examination, Part C, section 2.3.6.

- the restatement that the patent cannot cover algorithms, as mere mathematical methods (*Gottschalk v. Benson*, 1972). The patent should concern only their application to provide a useful result and therefore their use ‘on a specific manner to define structural relationships between the physical elements of the claim (in apparatus claims) or to refine claim steps (in process claims), the claim being otherwise statutory’ (*ibid.*); and
 - the abolition of the copyright protection, which would introduce a higher level of ‘selectivity’ in granting exclusive rights on software. It would also reduce the right-holder’s absolute power to bar any derivative software product should she so wish (below Chapter 3). Also, and in this connection, it would cancel the pro-monopolistic prohibition of reverse engineering for purposes other than (mere) interoperability.
2. For constitutional reasons, that is, so as to maintain *equal treatment* in the absence of good reasons to differentiate among industrial sectors, I would extend the basic mechanism of the Supplementary Protection Certificate (now only used for inventions in the chemical and pharmaceutical industries, including plant-protection products and medicines: see Regulation (EC) No. 469/2009 and Regulation (EC) No. 1610/96) to patents relating to any other business activity in which the period of actual enjoyment of the exclusive rights is necessarily eroded by the experiments, tests and other procedures required to obtain administrative authorisation for marketing the patented product or process for example, new industrial plant and process for waste disposal. I would also give careful consideration to the idea of rewarding with a *longer* protection period – linked to the effective waiting time rather than a fixed term which may be shorter than the time in reality – the manufacture of drugs designed to treat rare diseases (‘orphan drugs’) which, due to their limited market, typically require a longer time to obtain a return on the investment.
 3. I would also suggest the grant to the inventor of a one-year grace period, like the one afforded by section 35 US Patent Act 102(b) and presently under discussion in the EU.⁹² This would in particular encourage researchers to communicate and share their discoveries in scientific journals even before the filing of a patent application.

⁹² The Administrative Council of the European Patent Organisation mandated the completion of two expert opinions from Mr Jan Galama and Professor Dr Joseph Straus on the case for and against a so-called ‘grace period’; both the opinions are available at <http://www.epo.org/about-us/press/releases/archive/2000/25072000.html>. See also European Commission, *Green Paper ‘The European research area, new perspectives’*, COM (2007), 161 and the *Results of the Public Consultation on the Green Paper ‘The European research area: new perspectives’*, SEC (2008), 430, available at http://ec.europa.eu/research/era/consultation-era_en.html

4. Last, but not least, the provision for scientists and researchers of a grace period (akin to, but distinct from, that advocated above) within which they may, at the time of filing, claim priority over inventions created after the disclosure, in scientific circles, of *pre-industrial* theoretical information, evidently linked as a necessary step to the subsequent development of the inventions concerned. The reason for this proposal? To speed up the spreading and sharing of scientific knowledge by avoiding a situation whereby the scientist (and her employer) keep it secret until the effective completion of subsequent concrete industrial applications.

22. **Finale: An Overall Rethink of the System – Should Winner Take All?**

After having pointed out several often ignored merits of the patent system, and put forward some proposals for its improvement, I wonder whether an even greater role in stimulating the competitive dynamics of innovation could be achieved by a deeper rethink of the paradigm itself – starting with its underlying logic. I am referring to the grant of the patent as a *winner takes all* prize for whosoever is the first to apply for a patent (in first to file systems) or the first to invent a new item (in first to invent systems).

The hypothesis for reform, which I am mentioning as further food for thought, stems from the consideration that, in such a paradigm, competitors that were focusing their research in the same area and were beaten to the punch by the patent holder will end up witnessing a large part of their investment going to waste just because they arrived at an equivalent maybe even identical solution even a little bit later. Obviously, under current law, they would be classed as infringers, possibly by ‘equivalence’.⁹³ It is possible, of course, that

⁹³ Article 56(2) EPC provides that, in assessing the patentability of an invention made by a second-comer that has been preceded by the still secret patent application of another, the content of the latter must be taken into account solely for the purposes of judging ‘novelty’ and not ‘inventive step’. This is an admission that the second patent, applied for by a person that has finalised her invention shortly after the first inventor, may be granted if it concerns a new invention in circumstances where there is no inventive step compared to the first patent. And hence also if that invention is ‘equivalent’, provided that the first patent – be as it may the subject of a still secret application – has not been disclosed by other means. It should also be noted that in such case, the second patent must be considered as ‘dependent (derivative)’ on the first one. And since the associated invention almost coincides with that covered by the first patent, one can *ipso iure* rule out that the conditions (important technical progress of considerable economic relevance) for (the request and) the grant of a compulsory licence in favour of the second-comer will be fulfilled. Therefore, notwithstanding the legislative provision referred to above, the first patent will be the sole winner of the race. As a matter of fact,

those unhappy few *continue* their research in the direction (the only positive effect of their defeat) of a subsequent dependent innovation, which *if* leading to high-profile results may benefit (currently not in the US) from the right to a (cross-) licence, as under article 31(1) TRIPs. But even in such (infrequent) cases, a significant part of their investment will go up in smoke.

This prospect (which has nothing to do with pre-use, which presupposes not the mere completion of the invention but its effective business use⁹⁴) amounts to more than a mere private loss to the extent of its being a disincentive to invest in research and development, especially in capital-intensive areas, because of the riskiness involved (the more so in those fields, like biotechnology, where, as hinted above, fewer than usual workable alternative research paths in fact exist).

I wonder therefore if the *winner takes all* model needs rethinking. May I point out that even in horseracing – and the example is not merely trivial – both the racing team and the horse-betting industry have an incentive to invest in their respective spheres, attracted by the fact that there are also prizes for second- and third-placed runners.

In particular, it might be reasonable to conduct an in-depth study, with the aid of economic analysis covering the various aspects of innovation from competition to consumer welfare, of the feasibility and efficacy of a different paradigm in which there is room for a silver medal (and maybe even a bronze one too). This if the ‘following’ inventor could prove: (a) that she finalised a technical solution overlapping with the patented one within a certain reasonable period – say, not exceeding one year – prior to the first non-knowable application⁹⁵ filed by another to obtain the patent (this in ‘first to file’ systems,

the above principle (which enables a second or third patenting of a subsequent invention even though not representing an inventive step beyond that covered by the previous patent application, where the latter’s content is still secret) has the effect of allowing the first inventor and her alone to file subsequent patent applications relating to further refinements of her original invention (although not inventive), finalised while the original application is still secret (and hence basically until 18 months after filing).

⁹⁴ The fact that pre-use safeguards the investments made only on condition and to the extent that the invention has been independently developed and industrially applied, whereas the proposal made here would give the second inventor patent protection in competition with the first patent holder, can be justified considering that the pre-user has deliberately foregone patent protection by opting to exploit her patent in secrecy (and remunerate her investment that way).

⁹⁵ The solution proposed here presupposes that the second inventor realised its invention without having had the possibility of knowing about the previous one and hence drawing from it. Only in this case can one be sure that the two inventive processes were independent of each other and hence reward the first, second and even third place finishers. This would certainly be a clear demarcation line that avoids the risk of free riding and it could also foster a speedier disclosure (compared to the current usual 18 months after the filing of the patent application) of the first invention, with

generally adopted in Europe), or (in 'first to invent' systems) prior to the demonstration by a third party that her invention was earlier; (b) the making of relevant investments (the parameter would be shaped in concrete terms by the courts as is the case for the 'relevant investments' mentioned by the EC Directive 96/9 on databases).

Continuing with the hypothesis, the second or third prize could be structured in alternative ways. For example, a form of more limited (that is, shorter than the prescribed 20 years) exclusive right exercisable *erga omnes* – except of course the first inventor – exercisable for an appropriate length of time (one or two years) after the market entry of the first invented product, so as to guarantee an effective commercial lead time to that first inventor. As an alternative, one could provide for compulsory cross-licences in favour of the second innovator, again applicable only after a suitable interval. The followers' exclusive rights should however, in all cases, expire at the expiration of the first patent.

Obviously this hypothesis for reform requires in-depth analysis. I submit it due to the hinted concern that patent protection, in its historical current shape, might destroy relevant investments dedicated to advanced research, especially in capital-intensive industries – such as biotechnology and nanotechnology. A concern heightened by the fact that increased competition, welcome in itself, may often lead to a reduction in profits and hence less investment in research and development. This is a prospect that, even apart from stimulating cooperation in R&D, could also lead to consideration of a change of perspective in the patent system, whereby the prize awarded to the first inventor would not translate into the automatic destruction of the significant investments made by third parties who were pipped at the post. Naturally, this hypothesis would not by any means weaken the fight against free riders.⁹⁶

Moreover, if this hypothesis were to be realised, there is no reason why the reform legislation could not – as the European Commission and Parliament currently do – assess the effects thereof at a later date in order to establish whether or not the reform has worked and hence return to the traditional model if need be.

consequent benefits in terms of the dissemination of technical-scientific knowledge and more competition (above section 8).

⁹⁶ I believe that this view should be given particular attention in relation to technological sectors characterised by an intense race – bolstered by huge investments – between international public and private research centres to be the first to invent new materials, products and processes to meet energy needs and new drugs to prevent and cure serious mass diseases that have not yet been eradicated. There, in particular, I strongly doubt whether the traditional winner-takes-all approach is best suited to the dynamics of innovation in the long term.

Bibliographical Notes

'In Great Britain, the individual inventor of a new product or of a new process may obtain the exclusive right to it, by obtaining what is called a patent. While the patent remains in force, the absence of competitors enables him to raise his price far above the ordinary return of his outlay with interest, and the wages of his own industry. Thus he receives a premium from the government, charged upon the consumers of the new article'. So said Jean Baptiste SAY in *A Treatise on Political Economy: or the Production, Distribution and Consumption of Wealth*, 1803, Book I, Chapter XVII, anticipating some of the reasons for the classical school's hostility to intellectual property in general.

Among jurists there is a tradition of supporting intellectual property rights based on the fact that they rewarded and acted as an incentive for innovation: see, for example, the classical essay by F.K. BEIER, *The Significance of the Patent System for the Technical, Economic and Social Progress*, in *IIC*, 1980, p. 563. By contrast, a more critical approach is shared by several scholars who have studied and study intellectual property rights combining legal and economic analysis. Defying the scepticism of George PRIEST, who states that economic analysis of intellectual property lacks an empirical basis (in his view, it is founded on 'little more than assumptions', and consequently 'has taught us almost nothing': ID., *What Economists Can Tell Lawyers about Intellectual Property: Comment on Cheung*, in J.P. PALMER and R.O. ZERBE (eds), *Research in Law and Economics: The Economics of Patents and Copyrights*, volume 8, 1986, 19), many studies have shown great interest in the broad spectrum of effects that intellectual property in general, and patent rights in particular, produce or help to produce vis-à-vis social welfare issues and objectives – ranging from the promotion of scientific research and the circulation of its results to the incentives for technological innovation (especially in terms of the allocative efficiency of intellectual property compared with the costs of R&D, and the volume of resources actually or potentially destined for innovation), to the impact on the market competitive scenarios, with special reference to the competitive stimulus to *subsequent innovation* (or rather, the stimulus to *further* innovation by both the first inventor and its competitors), and finally, the benefits for consumers, especially in terms of prices, as well as of the variety and quality of the goods offered.

In this perspective, with special reference to patents (but with frequent glances also at copyright: see Chapter 3 and the corresponding bibliographical notes), I would suggest that any analysis of the writings on the subject (many of which deal with the interaction between intellectual property rights and antitrust law, about which more will be said in Chapter 5) should include R.P. MERGES and J.M. KUHN, *An Estoppel Doctrine for Patented Standards*, in *California Law Review*, 2008; A.B. JAFFE AND J. LERNER, *Innovation and its Discontents: How Our Broken Patent System is Endangering Innovation and Progress, and What to Do About It*, Princeton, 2006; J.H. REICHMAN, *Nurturing a Transnational System of Innovation*, in *J. of Transnational Law & Policy*, 16, 2007, 143; M. LEMLEY, *Property, Intellectual Property and Free Riding*, in *Texas Law Review*, 2005, 1031; N. JONES, *The Importance of Incremental Innovation for Development* in *Les Nouvelles – Journal of the Licensing Executives Society International*, Vol. XLI, note 1, March 2006; W. CORNISH, *Cases and Materials on Intellectual Property*, London, 2006; H. LADDIE, *Patents – What's Invention Got to Do with It?* in D. VAVER and L. BENTLY (eds), *Intellectual Property in the New Millennium: Essays in Honour of William R. Cornish*, Cambridge, 2004, 91; ID., *Ex Ante Versus Ex Post Justification for Intellectual Property*, in *Un. Chicago Law Review*, 2004, 129;

S. SCOTCHMER, *Innovation and Incentives*, Cambridge, MA, 2004 (see also, by the same author, the noted article *Standing on the Shoulders of Giants: Cumulative Research and the Patent Law*, in *J. Econ Persp.*, 1991, 29; M. LEMLEY and D. BURK, *Policy Levers in Patent Law*, in *Va. L. Rev.*, 2004, 1575; W. LANDES and R. POSNER, *The Economic Structure of Intellectual Property Law*, Cambridge, MA, 2003; F.S. KIEFF, *Property Rights and Property Rules for Commercialising Inventions*, in *Minn. L. Rev.*, 2001, 697; R.P. MERGES, P.S. MENELL and M. LEMLEY, *Intellectual Property in the New Technological Age*, Gaithersburg, NY, 2000; S. SALOP and R. ROMAINE, *Preserving Monopoly: Economic Analysis, Legal Standards and Microsoft*, in *Geo. Mason L. Rev.*, 1999, 617; S.D. ANDERMAN, *EC Competition Law and Intellectual Property Rights: The Regulation of Innovation*, Oxford, 1998; F.M. SCHERER, *Innovation and Growth: Schumpeterian Perspectives*, Cambridge, MA, 1984; M. LEHMANN, *La teoria dei Property Rights e la protezione della proprietà intellettuale e commerciale: una analisi giuridica ed economica*, in *Riv. dir. ind.*, 1984, I, 32; F.M. SCHERER, *Industrial Market Structure and Economic Performance*, Cambridge, MA, 1980; E. KITCH, *The Nature and Function of the Patent System*, in *J. of Law and Econ.*, 1977, 265; W.D. NORDHAUS, *Invention, Growth, and Welfare: A Theoretical Treatment of Technological Change*, Cambridge, MA, 1969; K.J. ARROW, *Economic Welfare and the Allocation of Resources for Invention*, in *The Rate and Direction of Incentive Activity: Economic and Social Factors*, Princeton, 1962, 609 *et seq.*; F. MACHLUP, *An Economic Review of the Patent System*, Study No. 15 of the Subcommittee on Patents, Trademarks and Copyrights, US Senate, 85th Congress, Washington, DC, 1958. And then of course there are the classics: E. PENROSE, *The Economics of the International Patent*, Baltimore, 1951; F. MACHLUP and E. PENROSE, *The Patent Controversy in the Nineteenth Century*, in *J. of Econ. History*, 1950, 1 *et seq.*; E. CHAMBERLIN, *The Theory of Monopolistic Competition*, London, 1937.

The main focus of the modern analysis of patents is on (i) the dialectic relationship between (the liberty of) scientific research and hence the respective regulation of confines and (ii) the concern for the effects on the dynamics of competition and innovation. On the first area, which is often intertwined with the second, see G. DINWOODIE and R. DREYFUSS, *Patenting Science: Protecting the Domain of Accessible Knowledge*, in L. GUIBAULT and P.B. HUGENHOLTZ (eds), *The Future of the Public Domain*, The Hague, 2006, 191; R. EISENBERG, *Patents and Data-sharing in Public Science*, in *Indus. & Corp. Change*, 2006, 1013; R. MERGES, *A New Dynamism in the Public Domain*, in *U. Chicago L. Rev.*, 2004, 183; J. BOYLE, *The Second Enclosure Movement and the Construction of the Public Domain*, in *SPG Law and Contemp. Problems*, 2003, 33; F.S. KIEFF, *Facilitating Scientific Research: Intellectual Property Rights and the Norms of Science – A Response to Rai and Eisenberg*, in *Northwestern University Law Review*, 2000, 691; A. RAI, *Evolving Scientific Norms and Intellectual Property Rights: A Reply to Kieff*, in *Northwestern U. L. Rev.*, 2002, 707; ID., *Regulating Scientific Research: Intellectual Property Rights and the Norms of Science*, 1999, available at www.ssrn.com/abstract=172032; Y. BENCHLER, *Coase's Penguin or Linux and the Nature of the Firm*, in *Yale L. J.*, 2002, 369; J.F. PICKERING, D.N. MATTHEWS, C. WILSON and J. KIRKLAND, *The University: Industry Interface in the Generation of Intellectual Property*, in *Higher Education Quarterly*, Vol. 53, 1999, 6; V. WEIL and J.W. SNAPPER (eds), *Owning Scientific and Technical Information*, London, 1989 (especially the essay by M.H. DAVIS, *Patents, Natural Rights and Natural Property*); R. EISENBERG, *Patents and the Progress of Science: Exclusive Rights and Experimental Uses*, in *Univ. Chicago L. Rev.*, 1989, 56; P. DASGUPTA and P.A. DAVID, *Information Disclosure and the Economics of Science and Technology*, in G. FEIWEL (ed.), *Arrow and the Ascent of*

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On a more specific plane, it must be noted that much of the contemporary discussion has centred and centres – particularly because of the difficulty mentioned in the text of separating the phase of basic research from that of R&D – on biotechnology-related inventions, indeed a driving sector for the development of the contemporary patent system.

Here see J. GIBSON, *Intellectual Property, Medicine and Health: Current Debates*, Aldershot, 2009; *Gene Patents and Collaborative Licensing Models*, edited by G. VAN OVERWALLE, Cambridge, 2009; M. RIMMER, *Intellectual Property and Biotechnology: Biological Inventions*, Cheltenham, UK, 2008; T. MINNSEN, *The U.S. Examination of Nonobviousness after KSR v. Teleflex with Special Emphasis on DNA-Related Inventions*, in *IIC*, 2008, 886; R.L. WANG, *Biomedical Upstream Patenting and Scientific Research: The Case for Compulsory Licences Bearing Reach-through Royalties*, in *Yale Journal of Law & Technology*, 2008, 251; S. STERCKX, *The European Patent Convention and the (Non) Patentability of Human Embryonic Stem Cells – the WARF Case*, in *Intellectual Property Quarterly*, 2008, 479; D.R. SCHNEIDER, *Patenting of Pharmaceuticals – Still a Challenge?*, in *IIC*, 2008, 511; R.J. AERTS, *Biotechnological Patents in Europe – Functions of Recombinant DNA and Expressed Protein and Satisfaction of the Industrial Applicability Requirement*, in *IIC*, 2008, 282; A. COSCELLI, G. EDWARDS and A. OVERD, *Parallel Trade in Pharmaceuticals: More Harm than Good?*, in *ECLR*, 2008, 490; O. LIIVAK, *Maintaining Competition in Copying: Narrowing the Scope of Gene Patents*, 2007, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=994354; C.R. McMANIS and S. NOH, *The Impact of the Bayh-Dole Act on Genetic Research and Development: Evaluating the Arguments and Empirical Evidence to Date*, *op cit.* in *Intellectual Property and Market Power*, ATRIP Papers 2006–2007, 633; L. BERNIER, *Justice in Genetics: Intellectual Property Law from a Cosmopolitan Liberal Perspective*, McGill Center for Intellectual Property Policy, Congress, October 2006; K. JENSEN and F. MURRAY, *Intellectual Property Landscape of the Human Genome*, available at <http://www.sciencemag.org>, Vol. 310, October 2005; D. ADELMAN, *A Fallacy of the Commons in Biotech Patent Policy*, in *Berkeley Tech. L. J.*, 2005, 985; A. RAI, *Open and Collaborative Research: A New Model for Biomedicine*, in ROBERT HAHN (ed.), *Intellectual Property Rights in Frontier Industries: Software and Biotechnology*, Washington, DC, 2005, 131; P. LEE, *Inverting the Logic of Science Discovery Applying Common Law Subject Matter Doctrine to Constrain Patent on Biotechnology Research Tools*, in *Harvard J. Law & Tech.*, 2005, 80; D. OPDERBECK, *The Penguin's Genome, or Coase and Open Source Biotechnology*, in *Harvard J. Law & Tech.*, Vol. 18, 2004, 167; F. SCOTT KIEFF, *Perspectives on Properties of the Human Genome Project*, USA, 2003; J.P. WALSH, A. ARORA and W.M. COHEN, *Effects of Research Tool Patents and Licensing on Biomedical Innovation*, in *Patents in the Knowledge-based Economy*, Washington, DC, 2003; A. RAI, *Eisenberg, Bayh-Dole Reform and the Progress of Biomedicine*, in *Law & Contemp. Probs.*, 2003, 289; D. BURK and M. LEMLEY, *Biotechnology's Uncertainty Principle*, 2002, available at <http://ssrn.com/abstract=303619>; A. OSER, *Patenting (Partial) Gene Sequences Taking Particular Account of the EST Issue*, in *IIC*, 1999, 1; M.A. HELLER and R.S. EISENBERG, *Can*

Patents Deter Innovation? The Anticommons in Biomedical Research, Science, 1998, 698. See also the important report of the US National Research Council, *Reaping the Benefits of Genomic and Proteomic Research – Intellectual Property Rights, Innovation and Public Health*, Washington, DC, 2006, available at <http://www.nap.edu/catalog711487.html>.

One can perhaps note an implicit (symmetrical and reciprocal) correspondence between the various views (essentially legal policies) on the appropriability through patents of the results of scientific research and the *expansive* or *restrictive* trends on the scope (breadth) of the exclusive rights and the requirements to be met to obtain a patent. For the debate on the first issue, which is often intertwined with reform proposals for modular scope and duration of the patent depending on the technological sector involved and even the size of the enterprise, see Y.M. GADALLAH, *Intellectual Property Rights Protection for Small and Medium-sized Enterprises and Market Structure*, in *Intellectual Property and Market Power*, ATRIP Papers 2006–2007, *op. cit.*, 541); R. PERITZ, *Patents and Program: The Incentive Conundrum*, Draft, ATRIP 2008 Congress, at <http://www.atrip.org>; ID., *Patents and Competition: Toward a Knowledge Theory of Progress*, in *Intellectual Property and Market Power*, ATRIP Papers 2006–2007, *op. cit.*, 329; R. MERGES, *Software and Patent Scope: A Report from the Middle Inning*, in *Texas Law Review*, 2007, 1627; M. LEMLEY, *Patenting Nanotechnology*, in *Stanford Law Review*, 2005, 601; D. BURK and M. LEMLEY, *Is Patent-law Technology-specific?*, in *Berk. Tech. L. J.*, 2002, 1155; M. LEMLEY and J. COHEN, *Patent Scope and Innovation in the Software Industries*, in *California Law Review*, Vol. 89, 2001, 1. Going back in time but important are H.F. CHANG, *Patent Scope, Antitrust Policy, and Cumulative Innovation*, in *Rand J. Econ.*, 1995, 34; R.P. MERGES and R.R. NELSON, *On the Complex Economics of Patent Scope*, in *Columbia L. Rev.*, 1990, 839; R. GILBERT and C. SHAPIRO, *Optimal Patent Length and Breadth*, in Univ. of California, Berkeley, Department of Economics, Working Paper No. 89, 1989; D.J. MCFETRIDGE and M. RAFIQUZZAMAN, *The Scope and Duration of the Patent Right and the Nature of Research Rivalry*, in *Res. in L. and Econ.*, 1986, 91.

Of particular interest then is the discussion on the limitation of exclusive claims on new ‘products’ as ‘product-by-process’ claims (see V. DI CATALDO, *Fra tutela assoluta del prodotto brevettato e limitazione ai procedimenti descritti ed agli usi rivendicati*, in *Riv. dir. ind.*, 2004, I, 111). The debate has been revitalised following two contrasting decisions, one American and the other English, cited in the body of the text and relating to the *Amgen* case (in *European Intellectual Property Law*, 2005, 154).

The scope (extent) of patent rights reacts in turn with the definition of the infringing equivalents. Here I would criticise – since it risks extending the patent monopoly beyond what has been effectively invented – the proposal aiming to broaden the concept of ‘equivalent’ in order to protect ‘pioneer inventions’, in which the breadth of the concept of equivalence translates (see E. STEINHAUSER, *Using the Doctrine of Equivalents to Provide Broad Protection for Pioneer Patents: Limited Protection for Improvement Patents*, *Pace L. Rev.*, 1992, p. 491) into a ‘hunting licence’ over the derivative innovation in favour of the pioneering inventor, following the line in *Graver Tank and Mfg. Co. v. Linde Air Prods. Co.*, 339 US 605, 1950. In this regard, see G. FLORIDIA, *Autonomia o dipendenza del brevetto sulla nuova utilizzazione di una sostanza nota*, in *Dir. ind.*, 2005, 155; R. ROMANDINI, *Italian Patentrecht, ilPatG, article 5, Verschlusskapseln*, 7 *GRUR Int.* 612 (2007), comment on the decision of Tribunale di Roma, 9 September 2004, available at http://courses.law.washington.edu/takenaka/P506b_WiSp09/public/Muscolo_Starsbourgsentenzagrur.pdf.

Finally, as mentioned before, there is a renewed call for rigour in the granting of

patents, in particular regarding the indulgence shown in interpreting the concept of originality, which has long been a feature of much-criticised protectionist trends. In the US, there has been strong criticism of the proliferation of the number of patents regarded as being of poor quality (*junk patents*) and the phenomena of *patent thickets* and *blocking patents* that are harmful to competition. See in this regard the proceedings of the symposium organised at Berkeley in 2004 on *Ideas into Actions: Implementing Reform of the Patent System*, in *Berkeley Technology Law Journal* 2004, Vol. 19, 1053; S. MERRILL, R. LEVIN and M. MYERS (eds), *A Patent System for the 21st Century*, Washington, 2004; K.A. MOORE, *Worthless Patents*, in *Berkeley Technology Law Journal*, 2005, 1527; see also the Federal Trade Commission report of October 2003 entitled *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy*, available at <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>; R. MERGER, *As Many as Six Impossible Patents before Breakfast: Property Rights for Business Concepts and Patent System Reform*, in *Berkeley Technology Law Journal*, 1999, 577.

On blocking patents (about which more is said in Chapter 5 regarding the antitrust aspects), see L. GOLDSTEIN and B. KEARSEY, *Technology Patent Licensing: An International Reference on 21st Century Patent Licensing, Patent Pools and Patent Platforms*, Boston, 2004; C. SHAPIRO, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, in A. JAFFE, J. LERNER, and S. STERN (eds), *Innovation Policy and the Economy*, Cambridge, MA, 2000, 119; J. LERNER and J. TIROLE, *Efficient Patent Pools*, NBER Working Paper No. W9175, 2002; R. MERGES, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, in *Tennessee Law Review*, 1994, 75.

As regards the second aspect of the (legal and economic) debate on the effects of patent law, that is, the impact on the dynamics of innovation and competition, of key importance – as mentioned in the body of the text – is the disclosure value of the patent: publishing a ‘sufficient description’ fulfils a function that is essential for promoting innovation. On the benefits of disclosure, see J. FROMER, *Invigorating the Disclosure Function of the Patent System*, 2007, available at <http://ssrn.com/abstract=967560>; J. BESSEN, *Patents and the Diffusion of Technical Information*, in *Economics Letters*, 2005, 121; S. SCOTCHMER and J. GREEN, *Novelty and Disclosure in Patent Law*, in *Rand J. of Eco*, 1991, 131.

That function is contradicted by the increasing legal weight attributed to trade secrets: R. GIBBONS and B.J. VOGEL, *The Increasing Importance of Trade Secret Protection in the Biotechnology, Pharmaceutical and Medical Device Fields*, in *J. Pat. & Trademark Off. Soc’y*, 2007, 261; G. GHIDINI and V. FALCE, *Upgrading Trade Secrets as IPRs: A Recent Breakthrough in Italian IP Law*, in *Festschrift till Marianne Levin*, Stockholm, 2008, 291; F. DESSEMONTET, *Protection of Trade Secrets and Confidential Information*, in C. CORREA and A. YUSUF (eds), *Intellectual Property and International Trade: The TRIPs Agreement*, London, 1998, 237.

The effects that patents produce on competition can be strongly influenced by the way patent rights are contractually exercised, in particular by the granting of voluntary licences and/or the imposition of compulsory licences. As regards the former – bearing in mind the risks of agreements prohibited by antitrust law (see Chapter 5) – there is a widespread view that such licences (often extended to know-how) tend to increase efficiency in technological markets. Not only – on that view – do they promote innovation in that they enable the patent holder to earn revenues to cover at least a part of the research and development costs, but they also allow for an improvement in the products offered (for example, a possible combination of the licensor’s technology with the licensee’s resources and technology).

Even on the legal plane, the positive effects for the market deriving from such contractual arrangements have been recognised at EU level in the context of the application of article 81(3) of the EC Treaty and more recently Commission Regulation (EC) No. 772/2004 of 27 April 2004 on technology transfer agreements and the associated Guidelines. See S. ANDERMAN and J. KALLAUGHER, *Technology Transfer and the New EU Competition Rules – Intellectual Property Licensing after Modernisation*, Oxford, 2006; V. KORAH, *Intellectual Property Rights and the EC Competition Rules*, Oxford, 2006; R. GILBERT, *Converging Doctrines? US and EU Antitrust Policy for the Licensing of Intellectual Property*, in *Antitrust*, 2004, 51. Analogous exemption rules apply to R&D and specialisation (Regulations 2658/2000 and 2659/2000): such agreements can lead to the creation of technology pools, joint ventures, consortia (for example, the so-called Eco-patent Commons agreement signed by four multinationals with the aim of pooling together the patents that they hold in order to foster eco-sustainable technologies) and the formation of companies in which both universities and enterprises hold stakes, a trend that emerged recently in the US (see M.A. LEMLEY, *Are Universities Patent Trolls?*, in *Fordham Intellectual Property, Media & Entertainment Law Journal*, 2008, 611).

As for compulsory licences as a tool to stimulate subsequent (or *derivative* to be more precise) innovation, worthy of note are P.A.E. FRASSI, *Innovazione derivata, brevetto dipendente e licenza obbligatoria*, in *Riv. dir. ind.*, 2006, I, 212; J. YOSICK, *Compulsory Patent Licensing for Efficient Use of Inventions (US and International Law)*, in *Univ. Illinois L. Rev.*, 2001, 1275; W. KINGSTON, *Compulsory Licensing with Capital Payments as an Alternative to Monopoly Grants for Intellectual Property*, in *Research Policy*, 1994, 661 (claiming as the title suggests that capital payments are more efficient than royalties); P. TANDON, *Optimal Patent with Compulsory Licensing*, in *J. Pol. Econ.*, 1982, 470; F.M. SCHERER, *The Economic Effects of Compulsory Patent Licensing*, Center for the Study of Fin. Inst., New York Univ. Graduate School of Business Admin., Monograph Series in Finance and Economics No. 2, 1977.

On the (partially) different issue of compulsory licences for public health reasons, see A.H. KHOURY, *The 'Public Health' of the Conventional International Patent Regime & the Ethics of 'Ethicals': Access to Patented Medicines in Cardozo Arts & Entertainment Law Journal*, Vol. 26, 2008, 25 (available also at: <http://www.qrce.org/wp-content/uploads/2008/12/amir-khoury-qrce-nov-2008.doc>); P. DANZON and A. TOWSE, *Differential Pricing for Pharmaceutical: Reconciling Access, R&D and Patents*, AEI-Brookings Joint Center Working Paper No. 03-7, available at <http://ssrn.com/abstract=422821>; C. CHIEN, *Cheap Drugs at What Price to Innovation: Does the Compulsory Licensing of Pharmaceuticals Hurt Innovation?*, in *Berkeley Technology Law Journal*, 2003, 853; C. CORREA, *Intellectual Property Rights and the Use of Compulsory Licences: Options for Developing Countries*, 1999, Working Paper No. 5, South Centre, Geneva; K.C. LIU, *Rationalising the Regime of Compulsory Patent Licensing by the Essential Facilities Doctrine*, in *IIC*, 2008, 757; G. GHIDINI, *Developing Countries' Access to Patented Essential Drugs: Are Compulsory Licenses the Optimal Means?* in A. HOMENAJE and A. BERCOVITZ, *Estudios sobre Propiedad Industrial e Intelectual y Derecho de la Competencia*, Barcelona (AIPPI), 2005, 511. The compulsory licensing of patents relating to the manufacture of pharmaceutical products for export to countries with public health problems is the subject matter of Regulation (EC) No. 816/2006 of the European Parliament and the Council of 17 May 2006.

On the implementation of compulsory licences in relation to developing countries, see also the Appendix.

3. From art to technology: the expansion of copyright

PART I

COPYRIGHT V. PATENT. COMPARING RULES AND RATIONALES

1. The Classical Model of Copyright: Historical Overview and Subject Matter

Copyright grants exclusive rights to new intellectual works in order to stimulate their creation and dissemination. Unlike patents, copyright protection relates to the representative/expressive aspect, in other words the ‘form’ (including ‘internal’)¹ and not the conceptual ‘content’. It is easily understood therefore that the new intellectual creations that the classic paradigm concerns are those typically designed for intellectual enjoyment (‘literary and artistic works’, says the original text of the Berne Convention). This offers the first basic distinction from patent protection, which concerns innovation of a utilitarian nature, satisfying material needs.²

¹ By ‘internal’ form is meant the peculiar (thus, non-standard and non-necessary) organisation of the work, the architecture so to speak of the work (the ‘organisation of the object on the basis of its expression’ in the words of M. ARE, *L’oggetto del diritto d’autore*, Milan, 1963, pp. 114 *et seq.*). For example the articulation/sequence of the arguments that a scientific thesis is founded on, or the ‘architecture’/layout of a database, covered by copyright under article 3 Directive 96/9/EC. Thus, the current concept of ‘form’ relates to the ‘external’ profile, that is, the mode of expression chosen to convey the work to third parties, allowing them to fully perceive and enjoy it.

² One might try to deny this distinction by referring to such works as geographical charts and maps, technical handbooks etc., that is, works that, albeit providing information of practical utility, are indisputably and traditionally copyrightable. I would reply that what is really copyrightable in such works is not the informational data of even practical use, but rather, and only, their expressive features (‘external’ and ‘internal’: see preceding note). Copyright could not protect the information that the road from Parma to Mantua goes north-east for some 57 kms, nor the scientific explanation of a chemistry handbook on how to obtain water combining oxygen and hydro-

The following is an attempt to reconstruct and analyse the key principles of copyright law from an evolutionary perspective.

First, it is interesting to capture and decode a signal from as far back as the Renaissance. It is common knowledge that modern copyright law originated with the advent of printing and hence with the possibility to reproduce and sell the writings of ancient and contemporary authors in great quantities. Equally well known is that copyright was originally granted – as in the case of the privileges afforded by the Venetian Republic – to booksellers, printers and publishers, even before being granted to authors. The Statute of Anne, which founded modern copyright, extended to the latter groups a protection that the Stationer's Company had previously enjoyed and which that company had sought to renew, utilising 'the claims of the authors for recognition as a vehicle for advancing their own interests'.³

In other words, modern exclusive protection originated to support and promote the publishing and cultural industry that was emerging. In that context, the very first steps to protect living authors' interests (which had not independently come to the fore up till then, given the tradition of publishing mainly ancient works) was a rational corollary of the policy of promoting and fostering that industry, including through the production of new 'contents' that the legal instrument of exclusive rights would facilitate.

It is useful to recall that ancient proto-industrial perspective, from which copyright emerged also in relation to authors.⁴ Ancient and modern.

One could observe that an immense part of the cultural heritage of mankind was created in the absence of any exclusive rights and well before the birth of any cultural industry. And one could even perhaps add that an author creates out of a personal and 'irresistible' drive to do so. Therefore, so the argument runs, there is no need to institute monopolies to stimulate the creation and spread of culture, monopolies which if anything slow down and reduce the creation and enjoyment of intellectual works. The former fact is true and the latter is very often true too. But the abolitionist consequence that some draw from these facts overlooks at least two important facts.

gen. Copyright would properly cover just the pictorial layout of the map, for example, the pictures of some monuments, typical flora and fauna of the environment of reference; as for the handbook, copyright would just protect both the wording and the structure of the exposition: all elements of intellectual fruition. A different situation occurs with software, where 'expression' and 'function' are merged, and all 'expressions' of programs are functionally driven, so that one can well affirm that, here, copyright directly protects functional/utilitarian information (see further, section 13).

³ S. RICKETSON, *The Berne Convention for the Protection of Literary and Artistic works: 1886–1986*, London, 1987, p. 4.

⁴ A reference that can naturally and immediately be extended, from an *equal rights* standpoint, to every (type of) author and work and hence also to the creation of *unique works*: neither *industrial* nor *capable of industrial application*, such as a painting or sculpture (but see note 11 and accompanying text).

Before the industrial revolution(s), in the absence of equal exclusive rights (let's not forget that 'equal'!) the creation and spread of works of culture depended almost always on the favour of civil or religious authorities, and hence on the discretion of the powerful – not always liberal supporters of freedom of thought and expression. Moreover, and in any event, that creation and spreading of culture was limited to a small circle of people of a certain social standing. Finally, when paid by the authorities, the remuneration earned by the artists came of course from the public purse. All conditions which the modern law of copyright (and patents) has swept away, thereby guaranteeing each citizen-author (as well as each citizen-publisher) an equal chance to earn based on how favourably the public (*their* public) greets their works. The linkage between author and publisher – notwithstanding the absence of any permanent coincidence of interests between the two⁵ – was indispensable to the author in order for her to reap a reliable economic benefit from her work, as well as enabling the works to be widely spread by the activity and investments of the publisher. Thus copyright afforded both economic independence to authors, and mass circulation of culture, information and entertainment. This historical and progressive contribution is unquestionable and must not be forgotten.

Prior to analysing copyright's governing principles, it is also worth looking at three special phenomena of significant economic importance relating to the *social perception of innovative processes* and the *material creative conditions* of new creative works to which copyright applies. It is helpful to recall that in accordance with the classic principle, also confirmed by article 9.2 of the TRIPS (and article 2 of the Wipo Copyright Treaty, WCT), copyright protects 'expression and not ideas' and hence solely the representative form and not the conceptual substance (more in section 3, below). The principle is not derogated even in respect of 'conceptual art', whose copyright protection however presupposes the formal representation of the embodied idea.

These phenomena operate to create a profound difference between the *subject matter* of copyright law (according to the classic model) and that of patent law and shed light on the salient differences between the two normative paradigms that as a whole protect/incentivise the creation and spread of the new.

The first differentiating aspect (touched on in the previous chapter) is crystal clear: *in the field of aesthetics and culture, the new does not inevitably*

⁵ Just think of the case of a publisher – in print or digital format – who denies an author (provided of course that the publishing agreement is in force) permission to contribute an earlier article of hers to a collection of academic essays compiled by a competing publisher. Or think, in analogous terms, of the denial by the previous publisher to re-edit a book long out of print. In all such cases, the interest of the author – economic, but first of all moral – to 'keep alive' and enhance her reputation and renown conflicts (as equally and obviously does that of the reading public) with the publisher's interest in blocking other publishers' initiatives. See also below, end of section 5.

supplant the old or speed up that process, as it typically does in the technological field. The refrigerator has replaced the ice box and the modern radio has superseded the valve radio of our grandparents. But Schoenberg has not supplanted Mozart and the success of Pop Art has not reduced visitor numbers at the Uffizi. Banal observations to be sure, but reflect for a moment on their significance for the cultural industry and its *suppliers*, the authors. It also (partly) explains the historical tendency for the holders of interests in the economic exploitation of creative works to petition legislators to extend the period of protection: precisely because if the material is intrinsically good, it never or very lately dies and hence continues to ‘sell’ for a far longer period than technological creations which are constantly made redundant by subsequent innovation.

The second differentiating aspect, in a sense symmetrical with the first (and which we shall return to in Part II, section 11 on industrial design) consists of the greater difficulty and the longer time this takes for cultural innovation to meet the general public’s tastes. It is almost in inverse proportion to its novelty. Van Gogh died almost unknown and in poverty, while the masters of Bauhaus broke through when they were old or in some cases already dead.⁶

The third differentiating aspect is less evident but equally indisputable. Merely aesthetic/intellectual creations reflect a ‘productive’ condition that is entirely free of any physical and economic conditioning, essentially depending on the intellectual energy of a person, because of the unlimited variability of the expressive form. One can well depict – as indeed in surrealism – an impossible object or machine. And the picture of a boy with a dog on a lead may be represented in millions of different ways – each covered by copyright to the same extent as the famous Picasso drawing.

By contrast, the making of something intended for practical-functional use must take account of the laws of mechanics, physics, chemistry etc., as well as technical and economic factors, including production costs. This situation conditions both the actual creation of the object and its industrial production – i.e. reproduction on a large scale with constant features. As a result, the possibility of developing alternative products capable of meeting the same type of practical need is substantially limited – hence, *inter alia*, the competition-related profiles dealt with in Chapter 2 (see also Chapter 5).

⁶ Although today’s cultural industry is equipped with marketing and communications tools capable of significantly accelerating the penetration of new styles and ideas, these tools only go so far. For instance, marketing experts theorise that it still takes thousands of new model cars to be on the road before the new design appeals to the general public.

Following on from these preliminary considerations, let us now analyse the basic principles of copyright, at the same time highlighting the (few) similarities and (many) differences with the patent paradigm.⁷

2. The Constitutional Basis and Essential Structure of Copyright

As mentioned in Chapter 1, copyright⁸ also protects the results of creative intellectual activity, and therefore shares with patent law the same general tenets of protection – all of which are of constitutional rank – such as: the enhancement of intellectual labour, the encouragement of entrepreneurial production and distribution of intellectual works, the development and dissemination of culture and knowledge, the promotion of artistic and scientific freedom.

As also mentioned before, a further special facet of copyright is the principle of freedom of expression in terms of disseminating and receiving information, a freedom that the most advanced writings on intellectual property treat also as a ‘human right’.⁹

The means used to pursue these constitutional goals are structurally similar to those adopted in patent law and once again consist in granting exclusive rights. These are subdivided into two general categories: (a) an alienable and temporary right to economically exploit the creative results (these, upon the expiry of the legal term of protection, fall into the public domain); (b) an inalienable and perpetual right (moral right, in the civil law tradition) to claim authorship of the original work (hence enforcing ‘plagiarism’, even in the absence of the violation of economic rights)¹⁰ and to protect the author’s reputation and fame: in particular (Berne Convention, article 6-*bis*) to object to any distortion, mutilation or any other modification of the work, which would be prejudicial to the author’s honour or reputation. (Moral rights of the same kind

⁷ This applies also to so-called ‘neighbouring rights’, see section 8 below.

⁸ Copyright law is governed at the supranational level by the Berne Convention and the TRIPs Agreement; at European Community level mainly under Directives 24/2009 on software, 100/92 on lending and rental rights, 83/93 on satellite broadcasting and cable retransmission, 98/93 on the term of copyright, 9/96 on databases, 71/98 on designs, 29/01 on copyright in the information society, 94/01 on *droit de suite* and 48/04 on the enforcement of intellectual property rights.

⁹ B. HUGENHOLTZ, *Copyright and Freedom of Expression in Europe*, in D. DREYFUSS, L. ZIMMERMAN and H. FIRST, *Expanding the Boundaries of Intellectual Property. Innovation Policy for the Knowledge Society*, Oxford, 2001, p. 343. The reference to such constitutional rank justifies classifying the rights of access of private individuals to sources of information and culture as an *expression of a principle and not an ‘exception’* (below section 6).

¹⁰ See R. POSNER, *The Little Book of Plagiarism*, New York, 2007.

accrue also to individual persons who are holders of ‘neighbouring rights’ (below, section 8), such as artists and performers.)

It is particularly in defining the scope and breadth of exclusive rights over protected works and the corollaries regarding enjoyment of said rights *vis-à-vis* third parties that copyright profiles the normal transfer to, and actual exercise by, entrepreneurs of economic rights on ‘intangibles’ capable of economic exploitation on an industrial scale *and* in a competitive framework.

This is to say that I share an essentially *industrial* vision of copyright, consistent with the general considerations espoused in Chapter 1, section 2 (with the sole exception of unique works like paintings or sculpture not intended for mass reproduction¹¹). This vision is consistent with the typical situation of an author who, in order to effectively realise her right, must assign it to an entrepreneur, publisher, producer or distributor. Of course, I do not ignore the fact that copyright is formally vested in the author initially – hence I used the adverb ‘substantially’. Like merging streams, the evolution from a privilege to a right went hand in hand with the extension of the exclusive right from printing and publishing firms to authors. Indeed, the formal vesting of copyright to the individual author – strengthened with the ennobling reference to the ‘creator’ – sanctioned the irrevocable individuality of the economic rights stemming from the revolutionary victory of the bourgeoisie over the *ancien régime* of *maîtrises et jurandes*.

3. The Subject Matter of Protection: Expression, Not Ideas

The teleological and structural analogies between copyright and patent law extend only to the issues outlined above. After that the two paradigms start to diverge, commencing with the basic preliminary difference that demarcates the border, typical of the classical system, between the two broad areas of ‘intellectual property’ rights for the results of creative activity.

Unlike patent law, which extends exclusive protection only to conceptual content (the specific ‘solution’) capable of industrial application (in ‘all fields of technology’: article 27 of the TRIPs Agreement, and now even article 52, 1^o paragraph, EPC, as amended by the EPC 2000), copyright protection, as recalled above (section 1), covers solely – again in the classical paradigm – expressive results generated merely for the purposes of intellectual enjoyment or ‘aesthetic’ pleasure in the broadest sense of the term. In the words of article

¹¹ This is a categorisation that modern technology is casting doubt on if one thinks of the techniques that allow paintings to be cloned so to speak, as in the recent case involving the ‘Wedding at Cana’ by Paolo Veronese, digitally reproduced by the artist Adam Lowe.

9.2 of the TRIPs Agreement, which summarise the classical principle ‘copyright protection shall extend to expressions and not to ideas’.

The distinction is therefore twofold: conceptual content and practical utility on the one hand and representative expression and ‘aesthetic utility’ – forgive the oxymoron – on the other. It must further be borne in mind that patent protection does not extend to general and abstract conceptual content, which must belong to the public domain, and covers only conceptual content capable of industrial application – that is, content that can be put to specific practical uses – irrespective of how it is expressed.

Copyright, on the other hand, extends only to the expressive form (including in the ‘internal’ one: above, note 1) of *any* type of intellectual content, while it can never extend to the latter’s conceptual essence. In this sense, the principle runs parallel to the preclusion from exclusive protection, affirmed by patent law, of general and abstract concepts that are the result of intellectual activity but are not susceptible of specific practical application. Indeed, in the field of intellectual/aesthetic creations also, ‘innovation’ typically proceeds and grows through standing on the shoulders of previous contributors, elaborating on what ‘others have sown for me’ (Goethe), in a never-ending process of ‘appropriation for elaboration’. As Picasso famously put it, ‘artists copy, geniuses steal’. This mode of production of culture – at times even subjectively unconscious – builds its justification for granting protection *on that*, and that only ‘original’ (that is, specifically individual: below, section 4(a)) representation. (Nor should we forget the systemic principle whereby IPRs, and thus also copyright, are ‘exceptions’ within a general framework of freedom – both economic and cultural.)

It must be pointed out that the principle of free circulation of information and ideas continues to apply even when the ‘sweat of the brow’ (and/or the investment) is much more engaged in searching/analysing/processing data, ideas and concepts than in representing them. One need only consider the work of historians, which involves infinitely more painstaking activity, and possibly more original results, in terms of researching and analysing documents and events, elaborating interpretations etc., when compared to the expressive (re)presentation, in itself, of the results thereof. Nonetheless, the historian will hold copyright only over the representation of his findings and not over the conceptual results of his research.

4. Key Features of Copyright (and Differences Compared to Patents)

It is in the context of this clear ‘division of labour’ that basic differences between copyright and patent law must be approached and construed. Namely:

(a) The ‘originality’ of the results, as a pre-requisite for exclusive protection. Whilst under patent law the requirement of originality is measured (albeit

with wide leeway) against evidence of ‘non-obviousness’ when compared to known techniques, copyright requires only that the expressive result be attributable to a specific person.

In other words, although the international treaties and Community law, in general, take no position with regard to the requirements for protection¹² it is an established principle – even if not unanimously agreed¹³ – that there is no need for any specific merit/aesthetic level to be attained to qualify for copyright protection, it being sufficient for the work to constitute a ‘particular expression of intellectual effort’.¹⁴ As a result, only the fruits of completely standardised processing, mere compilations made in accordance with established techniques, are excluded from copyright protection since they reflect previous and consolidated representative models rather than a modest but independent intellectual effort that might be qualified as ‘personal’.

As a corollary, in the case where a third party independently and autonomously produces a creation that is identical in all respects to a previous work, such creation does not amount to an infringement, merely constituting a ‘fortuitous encounter’ (that is, an innocent coincidence) that allows both parties to enjoy copyright over their respective – ‘personal’ – works, side by side, each of them being entitled, independently of the other, to seek enforcement of her copyright as against any other party. This strikes another difference with the patent paradigm, where only the first inventor is entitled to the exclusive right.

In the tradition of continental copyright law (*droit d’auteur*), the already noted *subjective* character of the notion of originality corresponds to the primarily natural-law conception (that Hegel, and then von Gierke and Kohler, borrowed from Kant) of creative works as an expression of the human personality (giving rise, in the French version, to proprietary title – ‘*la propriété la plus sacrée*’ – in the fruits of one’s own labour).¹⁵ Accordingly, creative works are protected as such, irrespective of the mediocrity or otherwise of the expressive results.

¹² A reference to the nature of intellectual creations appears in respect of databases in article 10(2) of the TRIPs Agreement. The reference is extendable to copy-rightable works in general.

¹³ The subjective notion of so-called ‘originality’ is preferable to the objective one because it avoids at the root discrimination and exclusion based on the mere arbiter of dominant taste, at times influenced by changes and contradictions as well as preconceived ideologies.

¹⁴ I am quoting article 2576 of the Italian Civil Code and article 6 of the Italian Copyright Law.

¹⁵ Language that the Loi Le Chapelier on copyright (1791) borrowed from the famous definition that Turgot gave to the *droit de travail* in 1756 when he proclaimed the need to abolish corporations and privileges. For an overview of the philosophical bases of the theories of intellectual property, see V. FALCE, *Sulle fondazioni filosofiche delle moderne dottrine economiche dell’innovazione*, in *Riv.dir. ind.*, 2004, I, p. 125.

The Anglo-Saxon legal framework has been portrayed by several continental scholars as offering a different underlying principle – more economically oriented, rooted in *fair remuneration* for the fruits of intellectual labour,¹⁶ with a correspondingly low emphasis on moral rights (which, in any event, enjoy protection under the common law and basically against the same types of infringements). From this standpoint, therefore, *originality* involves the apparently different concept of *independent creation*: protection extends to the objective attainment of a result, albeit of mediocre creative value, arising from a contribution that is recognisably neither copied from anyone else nor reproduced using known standard models.

As a matter of fact, the philosophical (*pseudo-*) differences regarding the underlying principles of copyright protection are reconciled in the common goal shared by continental systems and the common law: the protection of personally produced independent expressive results.¹⁷

(b) Copyright arises by the very fact of creation without the need for applications and/or registrations as in the case of patent protection (article 5(2) of the Berne Convention). Inclusion in specific registers of protected works is merely declaratory in value and constitutes only prima-facie evidence of authorship, although it provides conclusive proof of the date on which the copyright arose in the case of dispute by third parties.

Even this difference between copyright and the patent system is essentially a corollary of the concept of ‘originality’ in copyright law (above, lett. a)). Formalities giving rise to the right to protection make sense if access to the right is subject to an ‘examination’ that, however, is not required in the case where protection is afforded on the basis of originality in mere subjective sense, without an assessment over the creative merits (above, in this paragraph, lett. a)).

(c) Copyright need not necessarily be accompanied by the publication of the protected work and hence there is no obligation to activate the right as in the case for patents. The absence of that burden can be justified on the basis of the unlimited forms the expression may take¹⁸ and the consequent lack of urgency in bringing the work – in that form – to the market: hence the freedom of the author to decide if and when to exercise her rights of publication.

¹⁶ From this standpoint Lockean theory is reminiscent of the Roman law doctrine of *specificatio*. According to such doctrine, *specificatio* occurs when someone works on a certain good/raw material and the latter, as a result of such work, loses its original features and becomes a different object capable of performing a different function. In Roman law, if the worker is not the owner of the raw material, the transformation she performs on the material can buy her the title of ownership of the whole.

¹⁷ This was inevitable, even on the international level, after the US became a signatory to the Berne Convention.

¹⁸ See section 9 below.

This implies that copyright protection arises and is maintained even if the work is kept secret (that is to say, not published): a fact that does not in any way result in 'reduced' protection of the created work. This principle too can give rise to clearly anti-competitive effects when copyright, departing from the classic model, is used to protect creations susceptible of practical application, as in the case of computer software.

(d) The duration of copyright protection is not only much longer than patent's, but, as concern living authors, is also objectively uncertain, as it depends on the time of death of the author (hence, it changes for every work).¹⁹ This is a typical feature of copyright law allied to a historical trend to continually extend the period of protection. This tendency has traditionally been justified, even by legislative rhetoric, by the need to support the personal well-being of the author and her family, widower and orphans included (what about 'poor' inventors?! All rich and single?!). However, in modern times, that trend benefits even more the firm to which the author assigns the economic exploitation rights. In the words of Bill Cornish 'the just cause in favour of the author, acknowledged by this long duration, is dissipated in any commercial world where most authors dispose of their copyright for a lump sum at the outset and the publisher or producer gains whatever returns then flow from the success of the work through the extensive period of protection'.²⁰ Proof of this comes also from the latest (for now) 20-year extension of the copyright period introduced in the United States such that the term there is now 95 years for rights held by corporations!²¹

On the other hand, the long duration of copyright, projected over several generations of the 'paying public' (instead of just one generation, as in the case of patent protection), suits the typical objective material difference – ultimately, psychological and cognitive in nature – between 'intellectual/aesthetic' works and practical/utilitarian ones. As recalled, these differences concern, on the one hand, the much more persistent success – at times, historically unlimited – of intellectual/aesthetic works (Plato and Mozart not displaced by Whitehead and Stockhausen) and, on the other hand and symmetrically, their much longer and more difficult way to obtaining the vast public's

¹⁹ In the EU, following Directive 93/98/EEC, 70 years following the death of the author or creator of the work. In the USA, also the 1998 Copyright Term Extension Act, otherwise known as the Sonny Bono Copyright Term Extension Act, established that copyright lasts for 70 years after the author's death.

²⁰ W. CORNISH, *Intellectual Property: Omnipresent, Distracting, Irrelevant?*, Oxford, 2004, p. 42.

²¹ The aforementioned Copyright Term Extension Act provides that for such works (*works for hire*), the copyright term is 95 years after publication or 120 years after creation, if earlier.

confidence and agreement. On the other hand, as also recalled, a new product that better meets a practical need (especially if the need is universal in nature, such as health) is normally accepted by the public much more quickly than a new trend in aesthetic style or thought. The history of culture clearly illustrates that the more an emerging cultural and/or aesthetic trend is radically innovative, the more current tastes and/or ways of thinking will hinder its widespread social acceptance.

(e) Moreover, as anticipated (sections 2 and 4), the author's moral right far exceeds – unlike the inventor's – the claim to mere authorship, encompassing the defence and the enhancement of her reputation and fame. Thus, while the inventor cannot object, for instance, to an application of her invention that she feels to be of very poor quality and therefore susceptible of discrediting her invention, the author may well object to any transformation, reduction etc. that is possibly prejudicial to her honour or reputation (article 6-*bis* of the Berne Convention).²²

5. Plurality and Independence of the Exclusive Economic Faculties Granted by Copyright Law: The Power to Bar the Publication of Derivative Works (Including Translations)

Those major and immediately evident features of copyright are not the only differences with patent law. Others are set out below.

(f) Copyright by tacit universal consent confirmed in domestic and international practice gives rise to various powers that are *independent* of each other with reference to both the expressive form created by the author and the technical manner of expression/fixation. Consequently, except where differently agreed, the author's consent to use the work for a particular purpose (translation, for instance) does not *include* other purposes (screenplay adaptation, for instance), just as consent to publish the work in print form does not include authorisation to broadcast the same over radio and television networks. Accordingly, the author's (or his assignee's) specific consent is required for each of the 'other' uses (save for those inextricably linked to the authorised ones).²³

²² The duration of moral rights has so far escaped harmonisation at both the Community and international level. However, due to their nature, they should be regarded as perpetual and in any case exercisable throughout the author's entire life span.

²³ Such partitioning of the exclusive power is also in the interests above all of the publisher, as it gives the latter wide flexibility in the acquisition of copyright, where the firm will obviously exercise its (usually) greater bargaining power.

As the above examples show, some of those powers relate to the right to control any alterations or transformation of the original work, such as the adaptation of the work in a different artistic form (for example, a novel into a film, a straight play into a musical) or its conversion into another expressive form (such as the reduction to prose of a poem, or a translation of an essay into a foreign language). Now, that copyright extends in principle to 'derivative works' – themselves of course the object of the derivative author's copyright – seems in itself consistent with full protection of the author, covering all ways of exploiting the work. Consequently, the exploitation/publication of the derivative work occurs 'without prejudice' to the rights in the original work, that is, is subject to the approval of the author of the original work. However a generalised extension of the principle is hardly justified, specifically in relation to transformations leading to *quite different forms of expression* from that of the original work. In such a case the *derivative* character has more to do with the *idea* of the original work; now, copyright is not supposed to protect ideas, is it? Thus, the rule requiring authorisation by the original author should be applied only where, and to the extent that, there is a (total or partial: article 19.2) *formal* 'dependence' – including *internal* form – upon the original work.²⁴ In short: mere *conceptual* 'dependence' is not enough to constitute a derivative work in legal sense.

Unlike patent holders (article 31(I) TRIPs), the copyright owner is under no obligation to grant any licence whatsoever to the author of a *derivative* work even if the latter is of ground-breaking importance. We shall go into certain specific significant consequences of this difference when dealing with the extension of copyright to the technical results of creative works, especially information technology 'products' such as software (below, sections 13 and 14). Here let me make a few remarks with reference to the classical domain of copyright, that is, 'intellectual/aesthetic' works.

That absolute power to block the publication of a derivative work has particularly grave consequences for *translations*, which serve to the circulation of culture and information beyond national boundaries. The Berne Convention of 1886 granted the author absolute translation rights solely for ten years, a model that had its forerunner in the legal system of the Austrian Hungarian Empire²⁵ and was also included in several national laws of the 19th

²⁴ In this sense, see E. PIOLA CASELLI, *Trattato del diritto d'autore*, Naples, 1927, p. 612. See also V. DE SANCTIS, *Il carattere creativo delle opere dell'ingegno*, Milan, 1971, p. 130.

²⁵ It is no coincidence that that empire, comprising Germans, Austrians, Hungarians, Italians, Serbs and Spanish (a forerunner, I daresay, of the European Union), had the foresight to reject the idea of an exclusive right over translations for the entire long term of copyright.

century. In short, in the classic system, the author could only block translation for any (economic or ideological) reason for just a few years.²⁶

The same can be said for the unconditional maintenance of copyright in out-of-print works (the only ‘exception’ concerning the mere ‘private copy’: see next paragraph, note 32). As hinted above (note 5, and accompanying text), there are no good reasons for blocking the publication of a work that the former publisher (assignee of the economic rights) has abandoned for years. Here too, modern copyright law signals a backward evolution: termination of copyright in such cases was decreed by a Danish order of 1741.²⁷ *Bravo* Google, then, who is trying, by means of agreements with publishers, to digitally ‘re-edit’ out of print books. And *bravissimo*, a legislator that will establish an ‘automatic’ FRAND licence, after, e.g., five years out of print.

6. Copyright and Third Parties’ Access: The Debatable Approach of Directive 2001/29: ‘Free/Fair Uses’ as Discretionary ‘Exceptions’; on the Limits of Admissibility of Technological Protection Measures (TPM)

As is well known, in 2001 the EU issued an important Directive (2001/29/EC, the so-called Information Society Directive: InfoSoc) aimed at harmonising Member States’ protection of copyright and related (‘neighbouring’) rights in the digital environment, and especially in the online world.

The Directive, while claiming to pursue ‘a fair balance of rights and interests between ... rightholders and users’ (recital 31), strikes a clear balance in favour of the former, even starting with its structural approach. Let me briefly argue my opinion.

I. The protection of rightholders (of ‘copyrights and related rights in the framework of the internal market’, article 1.1) is asserted as a *mandatory* task of Member States (‘*shall* provide...’: articles 2.1, 3.1, 4.1), while the provision of free access faculties (qualified as ‘limitations and exceptions’: see below) in favour of various categories of users (researchers and teachers, journalists, critics, etc., article 5) is *discretionary* for Member States (‘*may* provide’: article 5.2 and 5.3), in respect of both type and extent of those ‘exceptions’. Moreover, the Directive, while ensuring the broadest possible scope of copy-

²⁶ Emblematic is the legal action brought by Hitler to block the translation of *Mein Kampf*, so as to prevent its circulation in a ‘Negroid France’ (*vernegerte Frankreich*). See *Das neue Tage-Buch* (Jewish weekly newspaper published in France and Holland), Paris and Amsterdam, Société Néerlandaise d’Editions, 1934, no. 14, p. 319

²⁷ See the English text in S. LADAS, *The International Protection of Literary and Artistic Property*, New York, 1938, I, p. 18.

right protection²⁸ clearly affirms that the list of those exceptions is 'exhaustive' (recital 32). *Nec ultra*, in other words: *il catalogo é questo* – and this only. Thus, since the 'permission' of such exceptions is facultative, as noticed, granting more is excluded, granting less is free and fully discretionary by the Member States.²⁹

This strait-jacket, imposed on Member States as regards their faculty to balance copyrights and access rights, marks first of all a significant difference with the more open US approach adopted in the Digital Millennium Copyright Act (DMCA) 2000, based on the 'fair use' doctrine³⁰ – which does not restrict the power of the courts to acknowledge users' legitimate access rights to cases that have been specifically defined a priori. (It must be acknowledged, however, that even the 'fair use' doctrine shares the same ideological approach to users' rights as exceptions to copyright, thus in fact upgrading the latter's constitutional rank.) Thus, for example, InfoSoc would not allow, even with fair compensation, that books long since out of print be re-published without the consent of the original publisher – to the obvious detriment of the public *and* the authors themselves.

That narrow and 'closed' approach also marks a significant departure from the normative model of the Berne Convention. Indeed, within the framework of InfoSoc, the actual enjoyment of an 'exception' granted by a national law is *further* subject to possible judicial scrutiny aimed at establishing that, in the specific ('special') cases, the exceptions and limitations whose application is

²⁸ The protection of rightholders against unauthorised acts of reproduction and communication to the public must be assured on the basis of 'a broad definition of these acts' (recital 21); the rights of reproduction and communication 'should be understood in a broad sense covering all communication...', and 'all acts of making available...' (recitals 23 and 24) 'by any means and in any form' (article 2).

²⁹ After the implementation of the InfoSoc Directive, many differences have emerged regarding the copyright exceptions in Member States' legislation. See, for example, the private copy exception provided for by Article 5.2 of the Directive. Recently, in some states the compensations ('levies') for private copying are extended to many ITC products (like PCs; mobile phones; HD TV) that are capable of being used – even if not univocally – to reproduce protected works. Thus all users pay, even those who never engage in acts of private copying. In this matter, in the absence of a uniform Community-wide levy system, the European Commission launched two public consultations, in 2006 and in 2008, in order to value the impact of the existing differences on the functioning of the internal market. See http://ec.europa.eu/internal_market/copyright/levy_reform/index_en.htm.

³⁰ On the differences between the 'open' American system based on a case-by-case analysis under the doctrine of *fair use* (codified at 17 USC § 107) and the European system, based on a closed and exhaustive list of exceptions, see S. DUSSOLIER, *Exceptions and Technological Measures in the European Copyright Directive of 2001 – An Empty Promise*, IIC, 34, 1/2003, p. 62.

sought 'do not conflict with a normal exploitation of the work...and do not unreasonably prejudice the legitimate interests of the rightholder' (article 5.5). Notwithstanding the identical wording, said provision does *not* represent a mere application/transposition of article 9 of Berne Convention (or of article 13 TRIPs). The latter is indeed explicitly addressed only to national legislators (' Member States...'), and frames a general triple tier of principles/guidelines (the 'three-step test') 'to be followed by same legislators in balancing rightholders' and users' rights (recital 31).

On the contrary, the Directive, after precisely and 'exhaustively' listing the various exceptions and limitations 'permitted' (sic: recital 14), reuses, so to say, the triple guidelines that Berne addressed to national legislators, in order to introduce a specific screen, also at the level of the judicial 'application' (article 5.5) of said exceptions.³¹

It seems all too reasonable to argue that the Directive's exhaustive provision of the various exceptions and limitations already embodies (in the general and abstract terms typical of legislative rules) the basic substantive guidelines set by Berne. The more so since that provision is not limited to the *type* but often also encompasses the *modes* prescribed for the granting of the exceptions (take, for example, the detailed conditions for allowing reproduction of articles on topics of public interest; article 5.2(c)). Hence, article 5.5 InfoSoc would just sound repetitious, that is, fully superfluous if it were interpreted as only directed to national legislators. On the contrary, it makes full sense as directed also to national Judges: precisely in order to provide a further stance of protection – case by case – of rightholders' interests, possibly restricting the exercise of users' faculties of access even when legislatively acknowledged. Recent French and Italian case law seems to confirm this view. In applying the three-step test (incorporated in both national copyright legislations), the judges validated the refusal of a rightholder to remove, as requested by a user, a TPM that impeded making a private copy of a regularly bought DVD. That removal, they argued, would be unreasonably prejudicial to the legitimate interests of the rightholder because of the 'uncontrollable use' of the user's copy.³² Thus, in order to prevent a merely hypothetical future excessive duplication, the courts restricted the enjoyment of the private copy exception the user was actually entitled to.

³¹ In this sense, see also M. SENFLEBEN. *Fair Use in the Netherlands – a Renaissance?* Paper delivered at the Annual ATRIP Congress, Vilnius, 14–16 September 2009 (forthcoming in ATRIP papers, www.atrip.org). Also quite noteworthy is the essay by C. GEIGER, *The Role of the Three-step Test in the Adaptation of Copyright Law to the Information Society*, e-Copyright Bulletin, January–March 2007, available at: http://portal.unesco.org/culture/en/files/34481/11883823381test_trois_etapes_en.pdf/test_trois_etapes_en.pdf.

³² See Tribunal de Grande Instance, Paris, 3me ch, 30 April 2004, confirmed by Cour de Cassation, Paris, 1re ch, 28 February 2006 (comment by C. GEIGER, *Three Steps Test, a Threat to a Balanced Copyright Law?* in *IIC*, 6/2006, p. 683), and Tribunale di Milano, Section for intellectual property, 1 July 2009, no. 8787 (available at <http://www.ictlex.net/?p=1102>).

Thus, thanks to this ‘last mile’ case-by-case judicial checkpoint, the rightholders might claim that in ‘that’ case the exercise of ‘that’ freedom of access in fact conflicts with their rights and prejudices their legitimate interests (the three conditions should be understood as cumulative³³). All this can evidently act as a further means of dissuasion of even legitimate (under the law) third-party users. In fact, the simple threat of such an action might well discourage the latter, due also to the prospective litigation costs, from taking advantage of the ‘exception’ itself. (In this connection, it can also be observed that InfoSoc’s three step test does not envisage any equilibrium with users’ rights as that expressively foreseen by the TRIPs Agreement in art. 26.2 on design and models.)

II. The en bloc qualification of users’ faculties of access in terms of ‘exceptions’ (a significant, not merely lexical shift from the ‘fair uses’ of Berne Convention: see articles 10 and 10-*bis*) expresses a cultural marker that runs counter to the idea that the freedom of access to and use of data and information for reasons of public, constitutionally grounded interests (such as those linked to scientific research, teaching and political and cultural debate) reflects ‘equal [at least!] rights’ to be fairly balanced with those of copyright owners (a balance to which the Directive, recital 31, pays lip service). The perspective of the ‘exception’ fits indeed, first of all, copyright itself (above, section 3). However, it might be accepted as regards the making of a private copy of a recent popular song in MP3 format. But the same does not hold for reproductions made for research purposes: think, by way of example, of the possibility of quoting and sharing in scientific discussion the latest relevant paper on a new cancer therapy (this, by the way, shows that the undue restriction of knowledge can translate into a risk to the public interest, such as health: the more the medical class is updated on research’s progresses, the higher the chances that better therapies are widely dispensed).³⁴

III. The criticised approach to users’ faculties of access as en bloc of an ‘exceptional’ character deeply interplays with a major feature introduced by the Directive: the *ex ante* protection of copyright through the prohibition of any act of ‘circumvention’ of the so-called TPMs (the technical side of the

³³ In this regard, see *A Balanced Interpretation of the ‘Three-Step Test’*, in *Copyright Law*, declaration signed by European academics, published in 39 *IIC* 707 (2008), section 2.

³⁴ The restrictive approach of InfoSoc weighs also even on *authors’* freedom of expression in respect of creative works that should be acknowledged as ‘non-derivative’ in the proper legal sense (see above, § 5). This is the case with ‘caricature, parody or pastiche’ (see article 5.3 (k)), whose free creation should not be downgraded to an ‘exception’ (on the ‘independent’ nature of parody, see Tribunale di Milano, decree 29 January 1996, *Tamaro e Baldini & Castoldi v. Comix srl and PDE srl*, in *AIDA*, 1996, p. 669.

overall systems of Digital Rights Management (DRM)), 'designed to prevent or restrict acts, in respect of works or other subject-matter which are not authorized by the rightholder' (article 6.3):³⁵ in short, software programs which allow the barring of access to and/or down/uploading of online digital content. Now, while the facility and speed of perfect reproduction that the digital format allows certainly provides in principle a material justification even for an *ex ante* protection of copyrighted works against counterfeiting, the specific ways and terms in which InfoSoc translates such justification seems far from reflecting a reasonable and balanced consideration of copyright holders' legitimate interests against unauthorised reproduction (including 'plagiarism' in the strict sense)³⁶ *vis-à-vis* the exercise of users' faculties of constitutional basis to access and share information and science.

First of all, the Directive sounds rather coy in ensuring that TPMs will not be applied also to non-copyrighable or however 'off copyright' content (as regards the 'exceptions', see below). To be precise: albeit not so clearly as the two 1996 WIPO Treaties, the systemic coherence and several textual hints of InfoSoc³⁷ are commensurate with the application of such measures to works protected by copyrights or neighbouring rights.³⁸ And the Directive also fore-

³⁵ S. DUSSOLIER, *Electrifying the Fence: The Legal Protection of Technological Measures for Protecting Copyright*, *EIPR*, 21, 1999, p. 285.

³⁶ I refer to the 'theft' of paternity, certainly illegal even in absence of any economic exploitation (see R. POSNER, *The Little Book of Plagiarism*, New York, 2007).

³⁷ Both WIPO Treaties of December 1996, respectively on copyright (WCT) and on performances and phonograms (WPPT), explicitly link those blocking measures 'with the exercise of the rights (authors' and users') contemplated by this Treaty or the Berne Convention' (WCT article 11, and WPPT article 18). As concerns InfoSoc, several textual indications (see, for example, article 6.3 and 6.4, and recitals 12 and 21) forbid one from interpreting it as allowing an unbridled blocking power to the holder of the copyright – or the neighbouring rights. Accordingly, national laws implementing the Directive should be construed so as to deny protection of TPMs in case these cover data, information and works either non-copyrighted or non-copyrighable or in any event subject to legitimate free access. Consequently, as hinted in the text (below in this section, under III), the onus must be on the plaintiff alleging a circumvention of a TPM to prove that the blocking technology was applied in protection of a valid copyright.

³⁸ If this did not happen, the implications of an excessive width and discretion to the rightholders' blocking power would be disquieting. On the one hand, that discretion would *per se* hinder the standardisation of technological protection measures and hence also *interoperability*, the lifeblood of IT, especially in the digital world. On the other hand, an unbridled blocking power would enable the rightholder to block access to information contained in databases *beyond* the limits otherwise permitted by Directive 96/9/ EC of 1996 (below, section 15). This would be true both in relation to non-commercial uses such as research and teaching, and to the quali/quantitative limits on the freedom of extraction envisaged by the *sui generis* rules on database creators – limits that would thus be openly circumvented.

sees that 'Member States shall take appropriate measures to ensure that rights holders make available to the beneficiary of an exception or limitation... the means of benefiting from that exception or limitation...' (article 6.4).

The problem is not simply that all such provisions are too broad and leave excessive scope for arbitrary conduct. The fact is they lack teeth. The Directive does not provide any effective means to prevent and chastise, with appropriate sanctions and procedures, the application of TPM to non-copyrighted or non-copyrightable data and information. This weakness has been confirmed by experience. Most Member States have 'ignored' article 6.4.³⁹ (*A fortiori*, the Directive cannot effectively prevent the subtler risk that national laws, as happens in Italy, subject the right to obtain the removal of undue blocks to time-consuming and burdensome conditions, so as to effectively discourage the exercise of rights of free access.⁴⁰)

Moreover, this weakness directly and even more gravely impacts on the actual enjoyment of the 'exceptions'. Do the broad references to copyrighted materials encompass the duty to abstain from applying TPM to 'contents' that are the object of 'exceptions'? It should be so in a systemically correct perspective, but this opinion lacks textual support. Moreover, since the actual acknowledgement of 'exceptions' is discretionary for each Member State – while the enforcement of TPM is mandatory for all of them – the lack of any clear guideline on this crucial point may well lead to a regulatory anarchy that only profits the copyright holders, encouraged to apply TPM at their own discretion in the different Member States. (Please note that this remark about InfoSoc's lack of teeth as regards the effective protection of users against

³⁹ Only France, as far as I know, has recently instituted an authority in order to monitor the way TPMs are applied, in order to avoid users being deprived of the chance to effectively benefit from the 'exceptions' provided by copyright law, as well as to effectively ensure interoperability (*Code de la propriété intellectuelle*, article L 331-8). See C. GEIGER, *The New French Law on Copyright and Neighbouring Rights of 1 August 2006 – An Adaptation to the Needs of the Information Society?*, in *IIC*, 4/2007, p. 441. Some years ago, the institution of an administrative agency, especially dedicated to alternative dispute resolution between rightholders and users, was proposed in the US by M. LEMLEY and A. REESE, *Reducing Copyright Infringement without Restricting Innovation*, in *Stanford L. Rev.*, 2004, p. 1345.

⁴⁰ Article 71-*quinquies*.2 of Italian Copyright Law provides in vague terms an obligation for the rightholder 'to adopt suitable solutions [...] to enable the exercise of the exceptions under articles 55, 68.1, 68.2, 69.2, 70.1, 71-*bis* and 71-*quater*, at the express request of the beneficiary and on condition that the beneficiary has obtained lawful title to a copy of the protected work or material'. Therefore, as emphasised by P. SPADA (*Copia privata ed opera sotto chiave*, in *Riv. Dir. Ind.*, I, in 6/2002, p. 591, p. 601), the beneficiaries of the exception blocked by the arbitrary lock can demand that the latter be opened for them, but only by suing the rightholder to force her to comply with her obligations.

misuse/abuse of TPM is confirmed by the parallel absence of *ad hoc* pro-user provisions in the so-called ‘Enforcement Directive’ 2004/48/EC.) Also in this regard, the EC Directive seems less concerned with preserving a fair balance of interests between rightholders and users than does the American DMCA.⁴¹

Now, to conclude on this point, minimal fairness requires that legislators (hopefully including the EU) fill those *lacunae* in order to make the regime of TPMs effectively consistent with the need to preserve both users’ *full and unrestricted* freedom to access and share any materials ‘off copyright’, as well as their right to fully and easily enjoy the ‘exceptions’ legislatively foreseen.

After all, as hackers who encroach on copyrights are specifically sanctioned and prosecuted, why shouldn’t those who, abusing copyright, encroach on citizens’ rights – even those of constitutional rank – to access and share information and data that are or have become in the public domain?

En attendant Godot, at least two interpretative criteria should be adopted by courts when requested to enforce TPM against alleged ‘circumventions’:

- it should be for the plaintiff to prove that such measures have been applied (1) on actually copyrighted contents, and (2) so as to allow the proper enjoyment of legislatively foreseen ‘exceptions’;
- the defendant user should be allowed to prove, so to say symmetrically vis-à-vis article 5.5, that the imposition of TPM, due to its ways and modes, ‘conflicts with a normal exploitation’ of her faculty to enjoy a certain ‘exception’, and ‘unreasonably prejudices her interests’ as a legitimate user. *Par condicio!*

Finally, the insufficiently regulated freedom to impose TPMs often encroaches on traditional user-friendly modes of enjoyment of the works that

⁴¹ Unlike in InfoSoc (and its judicial applications to date in France and Italy: see above, note 32 and accompanying text), DMCA envisages a twofold treatment for anti-access and anti-copy measures. In the first case (that is, anti-access measures), DMCA punishes both the act of circumvention by end users (17 USC 1201(a) 1) and the so-called *trafficking* in devices mainly aimed at circumventing or facilitating the circumvention of the TPM (17 USC 1201(a) 2). In the second case (that is, anti-copying measures), only *trafficking* is punished (17 USC 1201(b) 1), and there is no provision prohibiting *tout court* the circumvention of the technological protection. As a consequence, users who have legitimately accessed the work and who circumvent the anti-copy measure can be punished only if the reproduction they make after the removal of the TPM infringes upon the copyright of the work. Furthermore, DMCA encompasses a significant provision to preserve fair uses in the digital environment, explicitly demanding that ‘nothing in this section shall affect rights, remedies, *limitations or defenses to copyright infringement, including fair use*, under this title’ (17 USC 1201(c)). On this topic, see E. AREZZO, *Misure tecnologiche di protezione, software e interoperabilità nell’era digitale*, in *Dir. Aut.*, 3/2008, p. 341.

non-digital formats allow. Take, for example, the possibility of restricting access to online content to its use on a specific hardware (iTune music accessible only on iPod): as if, when I buy a Sony CD, I could not listen to it unless I bought a Sony CD player. Or take the possibility of restricting access – even paying access – to every single act of use, be it my own browsing or the sharing with a colleague for discussion of the content. As if, when I buy a book, I could not read it over as many times I want, or lend it to a friend. InfoSoc allows these restrictions since ‘every online service is in fact an act which should be subject to authorization’ (recital 29).

IV. InfoSoc allows the ‘research exception’ only if the scientific activity is aimed at ‘non commercial purpose’ (article 5.3(a)). Unlike in the patent paradigm (as reconstrued under a systemically coherent approach)⁴² this a priori excludes researchers who work in and for firms (a quite typical condition) elaborating on the previous ‘state of the art’.

May I remark – partially anticipating the discussion on the copyright protection of software (Part II, section 11, in this chapter) – that this narrow perspective becomes even more restricted in respect of the main tools of IT, that is, computer programs: a subject matter explicitly excluded from the range of Directive 2001/29 (article 2(a) thereof) and regulated by Directive 2009/24/CE (the Computer Program Directive). There one can first of all see how even further limited is the ‘experimental exception’. Under article 5.3 of the Computer Program Directive, whoever ‘is entitled to use a copy of the program’ can, without the authorisation of the rightholder, ‘observe [sic], study or test the functioning of the program in order to determine the ideas and principles’ on which every element of the program is based: but this solely in the process of putting the program into operation and as part of that process. Subject to the same conditions is the adaptation and transformation of the program up to (how generous!) the ‘correction of errors’ (article 5.1). Similarly, the copying and translation of the form of the code in order to modify the latter (so-called ‘reverse engineering’) is allowed solely where ‘indispensable to ... achieve interoperability... with other programs’ (article 6.1).

⁴² The basic goal, of constitutional rank, of the patent system, that is, the enhancement of technical and scientific progress does not allow such a restriction of the ‘experimental use’. No such restriction is foreseen, in particular, by article 27(b) of the Community Patent Convention (CPC, Luxembourg, 30 December 1989). Highly noteworthy are the measures designed by Belgian legislation enlarging the research exception in ‘an attempt to better balance the rights of patent holders and patent users, and to restrict potential negative effects of patents on research and health care’ (G. VAN OVERWALLE, *The Implementation of the Biotechnology Directive in Belgium and its After-effects: The Introduction of a New Research Exception and a Compulsory Licence for Public Health*, in *IIC*, 2006, 889, at pp. 905 *et seq.*)

In substance, the Directive (article 6.2(a) and (c)) prevents – even in a non-commercial context – the use of programs for study and research purposes aimed at making a more advanced derivative program ‘substantially similar in its expression’. In other words, *you cannot research on a copyrighted program in order to achieve an improvement thereof*. But what else is research typically carried out for? Mere private curiosity?

Now, as hinted, this feature represents a further restriction – not envisaged by the general copyright paradigm – imposed on authors of derivative programs. Indeed, whereas said general paradigm encourages authors to create derivative works – granting them their own copyright thereon (take, for example, a translation), while keeping them subject to the consent of the author of the original work as concerns the profile, at large, of the exploitation (basically publication) of the derivative work itself, in the case of computer programs even *the mere elaboration* of a derivative program – essentially, an improvement – is subject to the previous author’s authorisation.⁴³

7. Circulation: Attenuated Exhaustion

Unlike in patent law, some of the exclusive faculties associated with copyright or neighbouring rights (on these, see next section) concern phases and stages of circulation of the work (be it fixed on a tangible medium or diffused over electronic networks) *subsequent* to its first launch on the market: in other words, there is no full *exhaustion* of such copyright. In particular, the copyright (or neighbouring rights) holder or her heirs can prohibit the work from being used for purposes, like rental, that expand the circle of users without benefiting authors/assignees. As mentioned, this applies especially, but not exclusively,⁴⁴ to the power/right to authorise rental or lending by third parties (that is to say, the purchasers): a right that ‘shall not be exhausted by any sale or other act of distribution of originals and copies of copyright works’ (article 1.2, Directive 2006/115/EC, codified version of Directive 92/100 EEC ‘on rental right and lending right and on certain rights related to copyright in the field of intellectual property’, as amended by Directive 93/98/EEC).⁴⁵ This rule is expressly confirmed within article 1(2)(b) of afore-quoted Directive 2001/29/EC. Similarly, as regards electronic distribution, ‘the exclusive right

⁴³ Incidentally (more below, section 13), this further confirms that copyright protection of software actually covers ‘ideas’, not mere ‘expressions’.

⁴⁴ Think, for example, of the right to retransmit a previously broadcast work.

⁴⁵ Such provision expressly bans any likely interferences with rights set forth in Directive 92/100/EEC establishing the independence of rental and lending rights from the exclusive right to distribute the work. See also article 4(2) of the same Directive, read in light of recital 29.

of communication to the public by cable or by wireless means is not exhausted by act of communication to the public, including making available to the public' (article 3.3 of Directive 2001/29).

As Davide Sarti (1996) rightly points out, the author enjoys an independent right over the *second degree uses* of his works:⁴⁶ that is to say, even over uses following exploitation of the work at the first stage of distribution. Thus, while under patent law, after the invention's first sale on the market, patent protection is fully exhausted so that, for example, the purchaser of a patented machinery can quite freely rent it to any third party of her choice (without any need for authorisation from, and/or an obligation to pay compensation to, the patent owner), under copyright law, on the contrary, after the first distributive stage, authors (and assignees) only lose their property right over the product/support that incorporates the work but *not* their copyright except for merely private enjoyment in respect of any purchaser's uses which, as noted above, can expand the ambit of enjoyment.

This legal 'reduction' of the purchaser's faculties is also highlighted, as Charles McManis points out, in the current texts of those unilateral, commonly known as *shrink-wrapped*, licences which producers insert, in more or less standardised form, in the packaging of the works in order to emphasise the fact that the purchaser's proprietary rights are limited to the mere private use of said works.⁴⁷

8. Neighbouring Rights

Moreover, in addition to copyright in the strict sense – that is to say, the right of authors and of their assignees – the legal system encompasses *neighbouring rights* that are also exclusive and also have a very long duration (currently 50 years⁴⁸). Such rights are enjoyed by parties who are not *authors* in the

⁴⁶ According to this author, the extension of the exclusivity to secondary uses is another expression of the principle of the independence of the rights; D. SARTI, *Diritti esclusivi e circolazione dei beni*, Milan, 1996, p. 397.

⁴⁷ See C. MCMANIS, *The Privatization (or 'Shrink-Wrapping') of American Copyright Law*, in *Calif. L. Rev.*, 1999, p. 173. While these licences have no contractual value (contracts require consent of all parties!) they can be considered as a legitimate information about existing copyright rules – albeit sometimes arbitrarily containing further restrictions such as that of private person-to-person free lending.

⁴⁸ As is well known, the European Commission has proposed extending the term of neighbouring rights to 95 years: see Proposal for a European Parliament and Council Directive amending Directive 2006/116/EC on the term of protection for copyright and certain related rights (COM (2008) 464/3). Apart from the term, it should be noted that while the rights are acquired for the holder of copyright upon creation, the same is not true for the holders of neighbouring rights. Accordingly, the current term of 50 years

proper sense of the term but who play an essential role in the production and diffusion to the public of copyrighted works. Such rights (encompassing, as hinted above, the moral rights of the individual persons concerned, such as performers and artists) include fixation right, reproduction right, right to broadcast and communication to the public, as well as distribution right (rental and lending rights, in particular, pertain to both authors and holders of neighbouring rights: see article 3.1(a), (b), (c), (d), Directive 115/2006/EC) in respect of fixations of the works produced and/or broadcast.

These rights are enjoyed, in particular, by producers of phonograms, performers (artists), producers of cinematographic and audiovisual works, broadcasting organisations, etc. (see articles 4–6 of the Rome Convention of 26 October 1961 for the protection of performers, producers of phonograms and broadcasting organisations; see article 3.1 (b), (c), (d), Directive 115/2006/EC as well as articles 2–3 of Directive 2001/29/EC). Their duration is set, as hinted, at 50 years from fixation on a tangible medium or first publication of the work, or alternatively – for artists and performers – first public performance.

These neighbouring rights are typically economically advantageous for authors – as distinguished from the persons who industrially package and organise the circulation of the work. In fact, the possibility for these other parties – who play an instrumental role in the creation of the work and/or in making it available to the public – to receive exclusive remuneration for their efforts normally also enhances the authors' opportunities to economically exploit their work.⁴⁹

for the producers of phonograms runs from the date of fixation of the phonogram or more often from the date of first publication of the work (done within 50 years after fixation). The property rights of artists and performers run from 1 January of the year after the first making or dissemination of the fixation of the performance.

⁴⁹ One could also note that the granting of autonomous rights to different persons with different contractual strength (on the one side, authors and artists and, on the other, big companies – like film and music producers) may eventually disadvantage those who are not directly involved in the production stage: namely the authors. This for the following reasons.

- If consumer demand is very elastic (meaning that consumers' willingness to pay decreases proportionally to the increase in the price of the product), the final price of the product cannot simply derive from the sum of rights (copyrights and neighbouring rights) of the entitled owners. Rather, the final price will result from the royalties' redistribution among all the entitled owners (so-called 'cake' theory). However, since authors historically and structurally are at the very beginning of the chain, there is a good chance that the former will be ultimately affected by the process.
- The granting of exclusive rights to producers can cause an impairment of authors' and artists' position. Think, for example, that authors and artists are usually requested to cede their exclusive reproduction rights to the music producer, who will later compensate them: in this way, though, music producers in practice

But while the protection afforded under these neighbouring rights may find a reasonable explanation in the personal and creative nature of interpreters' and artists' performance, the exclusive faculties granted to entrepreneurs (phonogram and films producers) represent a further and independent monopolistic protection of the efforts and investments of these other parties, as distinct from authors' (and their direct assignees, such as publishers). This provides a privileged protection as compared to the patent system.

In fact, the distribution chain for the production and circulation of a patented invention is often based on a set of powers that are *decentralised* – through specific licences – from the *one and only* existing exclusive right: that is, the patent holder's. Indeed, third-party producers and/or distributors of the patented product never acquire any own distinct exclusive right to protection. Their right to exclusively exploit the patented invention always derives from a licence issued by the patentee. Accordingly, the rights of such licensees – active links in the production and distribution chain – are always conditioned upstream by the validity of the inventor's right so that they will either stand or fall with the latter. Their rights are also conditional upon the exhaustion of the patentee's right at the first stage of distribution.

In contrast, the exclusive neighbouring rights we are discussing are independent of the author's. If the work of the original author falls into the public domain, the producer of the phonogram retains its exclusive rights over the version it produces for the market. It should be noted that to obtain this result, the rights of the performing artists in respect of their performance are – must be – independent; their performance is an essential component characterising the version of the copyrighted work selected by the producer for fixation and distribution.

The *concentration in the industrial producer's sole hands* of her own neighbouring rights plus both performers' (neighbouring) rights *and* authors' own rights (copyrights in a proper sense) has certain monopolistic implications. Such a transfer is even presumed in the case of the rental and lending rights of the performers in cinematographic or audiovisual works (see article 3(4) of Directive 2006/115/EC).

The producer who is the ultimate entire holder of all such *bundles* of rights (her own and the performers' neighbouring rights as well as the author's copyright) acquires an enormous, even total degree of control over the circulation of the mass-produced and distributed copyrighted work. This control encompasses,

become the sole intermediary towards final users. This phenomenon is quite common, *inter alia*, in the music market, where editors have gradually become subject to phonogram producers. This is also true for the online music markets where phonogram producers have become the sole *gatekeepers* of online utilisation in the USA. And Europe is rapidly heading in the same direction.

as mentioned, phases and repetitions of the use of the work, in any form and for any reason whatsoever, including non-profit purposes, even after its first sale on the market (see articles 4, 6 and 12 of the Rome Convention, articles 7–9 of Directive 2006/11/EC and articles 2–3 of Directive 2001/29/EC). This concentration in the producer's hand is and will be a feature of the digital environment.

9. The Articulated *Rationale* of Copyright

All these differences, apart from the (not always respected!)⁵⁰ classical dichotomy between *idea* and *expression*, lend copyright a much wider scope than patent protection. Copyright is inexpensive and unselective on the merits; is much longer in duration; entails a much wider moral right, with clear implications even in economic terms. It does not afford third parties any right to licences on derivative works; the principle of exhaustion is significantly attenuated. Moreover, it gives rise to a subjectively articulated dual series of rights, copyright in the strict sense and neighbouring rights, all of which are exclusive (save for very marginal exceptions regarding neighbouring rights of so-called 'mere compensation'), and independent of each other, so as to provide watertight protection along the vertical chain of creation/production/ distribution of possibly non-authorised uses of the works. This ensures the highest return on investment in respect of the production and marketing of the copyrighted work.

At this juncture, it seems useful to go into the reasons underlying the distinct nature and basic features of the copyright paradigm which, even irrespective of the many additions introduced over time, has traditionally expressed⁵¹ a much lower *competitive sensitivity* than the patent paradigm. This lower competitive sensitivity becomes blatantly 'protectionist' when copyright is used to protect utilitarian subject matters like software.⁵²

It is worth recalling and linking these observations with some special *factual* features of the works protected by copyright under the classical paradigm. First, the creative conditions of such works. The production of (the expressive 'form' of) merely aesthetic/intellectual creation is entirely free from any physical and economic constraints, so that artistic and literary works are open to unlimited variations (above, section 1). This is to say that – so long as copyright respects the classical division of labour by actually protecting just

⁵⁰ See sections 13 *et seq.* regarding the copyright protection of computer software.

⁵¹ One need only consider the characteristics dealt with in points (a), (c), (d) and (f) in sections 4 and 5, above.

⁵² See below section 13.

the expressive features of works satisfying purely intellectual needs – the social cost of the related monopoly is practically zero. Briefly put, the unlimited substitutability of purely aesthetic/intellectual creations does not negatively affect competition between copyright holders: just as a regime of free appropriation would not.

Conversely, as hinted, the exclusive appropriation of utilitarian innovations in patent law entails a much higher social cost, precisely in terms of prejudice to competition and consumer welfare (as regards prices), since, in this area, the actual realisation of alternative solutions and competition by substitution is technically and economically limited (see above, Chapter 2, section 15); while all such alternative solutions can be patented. Besides, nothing in the patent paradigm can (only antitrust can, in specific circumstances: Chapter 5) stop a single rightholder from acquiring all or most of the patented alternative solutions conceivable at that particular time. Consequently, the prices of useful products risk being inflated by the exclusivity resulting from patent protection and the intrinsic scarcity of technical alternatives typically available.

That is why, in relation to new purely intellectual/aesthetic works, there is objectively a far lower, and less ‘urgent’ need to ensure a competition-friendly framework for their production and distribution (see Chapter 2, *passim*).⁵³ Thus, there is a much lesser need, for example, to restrict access to a ‘monopoly’ through a selection on the merits (see, above, on the concept of ‘originality’ in copyright law). And also, the longer period of exclusive economic rights is (partially) justified by the existence of potentially unlimited alternative modes of expression, hence of equally copyrightable works of the same kind. (On this latter point, consideration should also be given to the two socio-cultural phenomena, recalled above (section 1), that is, that in the field of intellectual/artistic works, the *old* continues to be appreciated and sought after, often for centuries, while the *new* often struggles for acceptance in the face of current tastes and established trends. The exact opposite occurs, as also hinted, in the field of utilitarian works, where the new typically and rapidly supplants the old – and where accordingly producers have traditionally shown a stronger interest in widening the scope rather than the length of their patents.)

⁵³ See also V. DI CATALDO, *L'imitazione servile*, Milan, 1979, pp. 187 *et seq.*

PART II

‘TECHNOLOGY COPYRIGHT’: THE RATIONALE OF A ‘TRESPASS’, AND THE RELATED RISKS FOR THE DEVELOPMENT OF SUBSEQUENT INNOVATION AND COMPETITION

10. Foreword on the Contemporary Features of *Technology Copyright*

A comparative analysis of copyright and patent law shows that copyright offers an exclusive protection that, in addition to its long duration, is much less selective and expensive to access (‘no test, no cost’), and totally ‘shut’ to third parties’ faculties to ‘work on’, even for improving, the protected works (‘no access’). Further, such protection is granted, not only to authors (and their assignees), but also to firms and professionals involved in the production and diffusion of intellectual creations reproducible on an industrial scale.

This twofold consideration is crucial to a full understanding of the emergence of the so-called *technology copyright* and to shedding light on the reasons underlying the trend in modern intellectual property law (already touched upon in Chapter 1) to increasingly invoke copyright to protect new utilitarian/functional results that as such in the classical framework would have been only protectable under patent law.

As is well known, copyright (in a broad sense, including neighbouring rights) has progressively embraced also utilitarian works, thereby departing from its initial remit, ‘literary and artistic works’, to cite the original text of the Convention. I am referring to the so-called ‘works of *applied art*’ (today *industrial design*), architectural projects, and more recently computer software and databases. Some of these creations, like the two first quoted, have a dual dimension, aesthetic and functional, while the other two (that is, computer software and databases) only exhibit a utilitarian purpose (see below).⁵⁴ This distinction serves to explain, from a systemic point of view, the direction and expansionist trends of copyright, including the most recent legislative developments.

⁵⁴ I would add that this is also true when computer programs are intended to achieve an aesthetic result such as computer art, videogames, etc. In these cases, too, the software as such is a technological instrument while the subject matter of the copyright is the aesthetic representation whose technical attainment is entrusted to the computer program. See G. GHIDINI, *I programmi per computer fra brevetto e diritto d'autore*, in *Giur. comm.*, 1984, I, p. 254.

As regards the first type of work (of both functional and aesthetic enjoyment), the classical paradigm afforded protection on the basis of the separability of the two profiles. As regards architectural works, the original 1886 text of the Berne Convention afforded copyright protection solely to drawings, sketches and plastics (article 4) and not to the construction itself, the heart of the utilitarian aspect.⁵⁵

As regards artistic works applied to utilitarian objects, the Berne Convention (article 2(7)) granted contracting States *freedom of choice* of the forms and conditions of protection for works of applied art. It furthermore provided (article 7(4), (6) and (7)) that such protection could derogate from the ordinary term of copyright, hence be shorter in length (albeit for no less than 25 years, except for shorter time limitations already in force when the Convention was signed).

Now, with the notable exception of France, which profited from that freedom of choice to grant copyright protection across the board to works of applied art (under the shield of the instrumental concept of '*l'unité de l'art*'), a majority of legislations and courts managed to cope with the distinction between the two profiles – and the 'message' from article 7 of the Convention. In short, copyright protection would generally be afforded to the statuette of a nymph decorating a lamp's stem, whereas the intrinsic shape of the lamp would have been eligible for (the much shorter) design patent protection. This was easily feasible as long as the aesthetic elements were, as the term emphasises, 'applied' to the utilitarian structure, as in the case of the lamp. However, it was no longer possible with the advent of modern *industrial design*, where the utilitarian and aesthetic aspects merge into *one* form. Accordingly, the intrinsic three-dimensional shape of an industrial product was afforded design-law protection, much shorter (and certain) in duration and much more stimulating to competition, with related social welfare benefits in terms of product quality and price. On the other hand, copyright protection was applicable – and still is: art. 25.2 TRIPs – to two-dimensional shapes, such as those capable also of a (non-utilitarian) use as works of art (a textile fabric design can well be – e.g. Sonia Delaunay's tissues designs – hung on a wall as a picture), or even three-dimensional forms 'extrinsically added' – thus, '*applied art*' – to the product's intrinsic shape (e.g., the statuette on the bonnet of a Rolls Royce⁵⁶).

Contemporary copyright law has distanced itself from that approach, opting for a protection that seemingly allows the 'cumulation' of the two previously alternative protections. Under this debatable approach authors and industries

⁵⁵ See also N. STOLFI, *La proprietà intellettuale, II*, Turin, 1917, pp. 677 *et seq.*

⁵⁶ Such forms can also be objects of a 'shape' trademark: see Ch. 4, § 4.

are allowed to rely on copyright protection upon the expiry (and *a fortiori*, in the absence of) design patent protection, thus bypassing its time limits (below, following sections).

For information technology, pressure grew for a less selective, less costly and more intensely exclusive protection than that possibly granted under the patent paradigm. This led to the acknowledgement of copyright protection for such basic tools of information technologies as computer programs and databases (below, sections 13 and 14).

I THE CONVERGENCE BETWEEN FUNCTION AND AESTHETICS: FROM *APPLIED ART* TO *INDUSTRIAL DESIGN*

11. The Terms of the Question from an International Perspective. Or the Ambiguities of the EC Regulation

In its attempts at harmonisation, Directive 98/71/EC 'on the legal protection of designs' (hereinafter 'Design Directive') has created new ambiguities in relation to the question of cumulability and the protection of design in general.⁵⁷ On the one hand, the Directive affords exclusive protection to designs and models based on prior registration for a non-renewable period of 25 years (more than the traditional duration of design patents under national laws).⁵⁸ Under this profile, the Directive's basic option is in line with patent-type protection. On the other hand, article 17 of the Directive states that registered models and designs 'shall be eligible for protection under the law of copyright of that State', which may 'determine' (that is, is free to choose in keeping with article 2(7) of the Berne Convention) the extent to which, and the conditions under which, such a protection is conferred, including the level of originality required.

According to many commentators, this last provision definitely entrenches the principle of the cumulation of the two protections in the domestic law of the Member States, subject to first satisfying the relevant national requirements for copyright. In some jurisdictions, such as Italy, that condition lies in *artistic value and creative nature*, in other words, a particular and differentiating aesthetic merit that departs from the general basically 'subjective' standard of originality (see above, § 4, a)). This is not only a normative break of dubi-

⁵⁷ On the contradiction with the rules on shape marks, see Chapter 4, section 4.

⁵⁸ Regulation (EC) No. 6/2002 affords more limited protection to an unregistered design (three years after the date it has first been made available to the public).

ous rationality for the administration of law (see below), but also probably objectionable on constitutional grounds vis-à-vis the principle of equality under the law. Consider that in order to enjoy copyright protection, the design industry should produce objects of particular aesthetic merit, typically implying high investments, while this is not required of authors and industries that can copyright other 'intellectual works' also of a utilitarian nature such as software. Moreover, such an approach would entail, as Paolo Auteri clearly highlighted years ago, a negative impact on the competitive structure of the market for industrial products, owing to a systemic legal contradiction whereby the limited protection afforded by a registered design would be circumvented by the longer copyright period.

Further, it would give rise to uncertain, arbitrary and possibly manipulatory applications of the law that lays down the conditions for access to copyright protection. How would courts decide on 'artistic merit'? On the basis of the judge's personal tastes or relying on an art expert witness, again based on her individual opinion? What affordable scope would there be for appealing decisions on inevitably subjective assessments? Nor would the arbitrariness be eliminated if in the case of registration, the elapsing of 25 years were to permit a *prevailing view* on artistic merit to form – inevitably based on the market success achieved by the work. On this point, made by Davide Sarti,⁵⁹ one can reply that copyright protection can be invoked right from the very start, including by those who have not registered. And in this connection it could further be argued that the availability of such a generous duration of protection based on just an assessment of artistic merit could well further dampen the propensity for registration, already enfeebled by the much shorter protection the latter offers, and at a much higher cost, especially if international in scope.

12. Playing Fields Distinction, Not Mere Cumulation, i.e., Amassing of Legal Protections

Certainly, pointing at inconveniences is not a sufficient basis to reject a solution imposed by law. But is this really the case? Is *sequential* cumulation of IP protections the only, mandatory and therefore inescapable solution?

I doubt it, for logical and systemic reasons. Under the principle of non-contradiction, a given segment of the legal system should not be construed in clear contradiction of another, dealing with the same subject matter.⁶⁰ This consideration encourages a different tentative interpretation than that which

⁵⁹ D. SARTI, *Tutela dei disegni e modelli comunitari tra imitazione servile e protezione del diritto d'autore*, in *Diritto industriale*, 2008, p. 170.

⁶⁰ For a further systemic contradiction with trademark regulation as concerns 'shape marks', see Chapter 4, section 4, below.

entails a mere sequential cumulation ('summing') of the two forms of protection. Moreover, an interpretation that finds its basis in the systemic need for a non-conflicting harmonisation of the two disciplines, draws inspiration from the approach of both Berne Convention (article 7.4) and UK law (sections 51 and 52 of the Copyright, Designs and Patents Act (CDPA) of 1988). The former affords copyright protection to works of applied art 'insofar as they are protected as artistic works' (emphasis added); the latter limits the exclusive protection of works of applied art to 25 years.⁶¹ The distinction/'separation' of the two protections is also confirmed by articles 12 and 25 of the TRIPs Agreement. The former excludes works of applied art from the normal copyright protection terms. The latter does not foresee copyright protection for industrial designs, with the – indeed confirmatory – exception of *textile designs*, i.e. *bi-dimensional* creations that can also be the object of a 'separate', all-aesthetic enjoyment (see above, § 11). Further, the same norm also excludes any *ménage à deux*, allowing national legislation to apply either design or copyright protection – i.e. it excludes cumulation.

Thus, it is reasonable to construe article 17 of the Directive in a way that avoids both the systemic contradiction and the monopolistic effect that would arise from an essentially indiscriminate application of sequential cumulation of copyright and patent-like protection envisaged by Directive 98/71/EC. In particular, I believe that the Directive can be construed to allow for the *parallel* coexistence of the two types of protection, each with its own specific scope to be determined on the basis of the difference in the objective *market use* of the work of design. This would be done on the basis of the (type) of market – *of industrial products or of artefacts* – to which the work of design is channelled.

In order to clarify this interpretative proposal, let us consider a couple of famous works of modern design, such as, for instance, Henry Dreyfuss' doughnut-shaped portable radio and Philip Starck's spider juicer. These practical objects are – or have been – sold as utilitarian products, but they are also *enjoyable* at the aesthetic level. In different circumstances, they might well also be sold and copied as *objets d'art* through distribution channels typical of the so-called 'art market'. (In fact, as late as May 2009, the Whitney Museum of Contemporary Art in New York displayed a work by Jeff Koons, consisting of a plain glass framework containing four ordinary Hoover vacuum cleaners.)

To my mind, this forms the empirical basis of the differentiation that allows for the *parallel but not cumulative* application of copyright protection and patent law, without mutually contradictory overlaps. Let us go back to the two

⁶¹ See further W. CORNISH, *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights*, London, 2007, Chapter 15.

examples. As practical products sold on the market of portable radios and household goods, those items would be covered under patent protection arising from their registration (at the Community and/or national level), and therefore, for a period of 25 years. On the other hand, as individual or multiple artefacts possibly sold on the art market, their shape could not be reproduced by third parties *for* works of figurative art (and as such, also marketed or to be launched on the art market) for the statutory period of 70 years following the designer's death.

It must be pointed out that this distinction between types of exclusive protection of the same product on the basis of its different destination⁶² does not create any difficulties or uncertainty as regards concrete identification. Indeed, the type of applicable protection is *objectively and precisely* 'certified' by the type of infringement, or rather, the type of market targeted by the infringement. Therefore, if Starck's spider is imitated, even on a different scale, by a sculptor to produce a work offered on the so-called art market through its typical channels (this does not apply here, of course, but doesn't the huge spider that Louise Bourgeois put on display some years ago in the Turbine Hall at the Tate Modern, come to mind?), the designer and/or her assignee would be entitled to bring action against the sculptor or the art gallery precisely on the basis of copyright law. Conversely, if the shape is copied by a manufacturer of household products and offered for sale on that market, the only exclusive protection should be the one afforded under the registration of the design.

Within the framework of the proposed solution, the parallel coexistence of the two types of protection by definition precludes (unlike directives held before in countries like Italy) any *pre-emption* of copyright protection by virtue of the fact that the design was registered at Community or national level.⁶³ In other words, the provision cited in article 17 of the Directive, under which Community registration of a design or pattern does not preclude copyright protection in harmony with the domestic legal framework, ought to be construed to read: 'should the infringement of a design product arise on the art market, registration of the shape as a design pursuant to the Directive or domestic legislation shall not in itself preclude recourse to copyright protection'.

⁶² The distinction is not entirely new in the IP field. Just think of a copyrightable pictorial creation that at the same time can constitute a trademark.

⁶³ And obviously, even more so, in case the rightholder failed to complete any of the formalities required under national copyright laws – especially since such formalities are generally not essential for copyright protection given that such arises on creation.

II COPYRIGHT AND INFORMATION TECHNOLOGY

13. Origins and Scope of Copyright Protection for Computer Programs

Let us now examine the other more ground-breaking expression of the expansion of contemporary copyright into the realm of utilitarian innovation: the protection of information technology and in particular computer programs (software) and databases. Here, one can appropriately speak of *technology copyright*.

I will first focus on the landmark legislation that regulates software at international level. Its significance is highlighted by even a brief glance at its historical development.

This history naturally commences where the technological and economic phenomenon began and matured, that is, the United States. It was there that the demand for exclusive protection of computer programs (over and above that assured by non-competition and/or confidentiality agreements and secrecy rules) originated, coinciding with the gradual development and commercialisation of software as independent of the hardware.⁶⁴ Consequently, the progressive process of *vertical integration* of the PC market⁶⁵ and the simultaneous creation of a market for software as distinct from the market for the PC as an integrated product (software-hardware) created a dual necessity. First, there was a need for a stronger defence against competitors; industrial secrets allied to contractual arrangements managed to provide adequate protection as between parties, but did not cover possible free riding by third parties.⁶⁶ Second, there was a need for suitable incentives for new enterprises

⁶⁴ Reference is made here to the development of the market for *package software* and the gradual entry of *independent software vendors* (ISV), which commenced towards the end of the 1960s and reached its height in the period from the late 1970s and mid-1990s with the spread of the personal computer.

⁶⁵ Whereas initially the personal computer market was made up of vertically integrated companies that put a finished product on the market, with the separation of hardware and software and the evolution of the computer industry, that one original market fragmented into a multitude of distinct scenarios where various companies compete at a number of levels. For example, according to a 1995 study, there was one market for chips (where Intel and Motorola competed), a second for computers (with Dell, Compaq, IBM, Hewlett Packard, etc.) and a third for operating systems (with Windows, Unix, Mac) and a fourth for software applications (Word, Word Perfect, etc.). The study is mentioned in T.F. BRESNAHAN, *New Modes of Competition: Implication for the Future Structure of the Computer Industry*, 1998, also available at <http://www.stanford.edu/~tbres/research/pff.pdf>.

⁶⁶ Needless to say, however, the availability of copyright protection does not eliminate reliance on secrecy in order to protect the source code.

(many of them small at the beginning), dedicated exclusively to developing software for computers.⁶⁷ These needs led the industry players to hone in on copyright as the paradigm that could grant exclusive (*erga omnes*) protection against free riders, but – unlike patents – with trifling access costs and no selection hurdles of ‘inventive step’ to be overcome. (The long protection period was generally of secondary importance.)

Thus, the preference originally expressed by some far-sighted authors for software protection to be based on patents, in view of the benefits in terms of a more reliable ‘certification’ of innovative value,⁶⁸ remained marginalised. The pro-copyright stance was given further impetus by the rather cool reception that the US courts and the USPTO⁶⁹ had initially given to the idea of including software in patentable subject matter.⁷⁰ Remember the concerns expressed by the US Supreme Court in *Gottschalk v. Benson* (1972): that in the absence of precise functional limits, patentability could extend to algorithms and other mental steps and in any event to general-purpose ideas capable of covering various applications, perhaps even unknown at the time. One could therefore end up limiting competition and hindering the work of future innovators by monopolising – in the words of Justice Douglas – ‘the basic tools of scientific and technical work’.⁷¹

That said, even the pro-copyright approach, just based on a wishful interpretation of the general law, originally encountered serious opposition (mostly, for the same reasons). Some courts, fearful of letting in by the back door what patent law refused entry to by the front door, were initially quite rigid in judging any resort to copyright protection, even going so far in some cases as to deny the possibility of distinguishing ‘expression’ from ‘ideas’ in programs (see, for example, *Data Cash Systems*, District Court, ND Texas, 1978, in 203 USPQ 1979, pp. 735 *et seq.*). Perplexity was also expressed by the US Copyright Office, which issued the first certificates of protection under the aegis of the ‘rule of doubt’.⁷²

⁶⁷ The sale by vertically integrated companies of a single item (computer incorporating both hardware and software) had up to then enabled an adequate remuneration also for the creation of the programs.

⁶⁸ V.P. MENELL, *An Analysis of the Scope of Copyright Protection for Application Programs*, in *Stanford Law Review*, 41, 1984, p. 1045.

⁶⁹ The 1968 Guidelines (33 Fed. Reg. 15.609, 15.610) stated that: ‘a computer programming process which produces no more than a numerical, statistical or other informational result is not directed to patentable subject matter’.

⁷⁰ Also a 1966 Presidential Commission came out in clear terms against patenting computer software (*Report of the President’s Commission on the Patent System, ‘To Promote the Progress of ... Useful Arts’ in an Age of Exploding Technology*), US Govt. Print Off., Washington, DC, 1967.

⁷¹ *Gottschalk v. Benson* 409 US 63 (1972).

⁷² The Copyright Office granted certificates of protection indicating its qualms

A mere stroke of the pen was required to overcome these difficulties. The legislative process, spurred on by the computer industry led by IBM's CEO and with the support of the position adopted by the National Commission on New Technological Uses of Copyrighted Works (CONTU), set up by the US government, led to an amendment of the Copyright Act 1980 and thus to the specific inclusion of computer programs in the list of creations that could be afforded copyright protection.⁷³

All was well then, so much so that in the first interpretations of the new law the federal courts, commencing from *Apple v. Franklin* in 1983 (ruling that software was protectable as a literary work⁷⁴), went so far as to extend copyright protection to non-literal elements such as structure, sequence and organisation of programs.⁷⁵ This, together with the above-mentioned advantage of accessibility to protection ('no cost, no test') was the optimum result for creators of software and in particular the major companies that were capable of churning out programs one after another.

It was only natural in a global sector like IT that the approach which found favour in the US would make its way around the world, thanks also to strong diplomatic pressure. Although the attempt to have software expressly recog-

in respect of whether copyright protection could apply to 'machine-readable versions' of the programs and left it up to the courts to decide the issue on the merits in future litigation. See M.A. LEMLEY, P.S. MENELL, R.P. MERGES and P. SAMUELSON, *Software and Internet Law*, New York, 2000. The US courts, before the 1980 legislative stroke of the pen, held that order and sequence are 'expressed ideas not expressions' and that only to the extent that the expressions involve stylistic creativity above and beyond the bare expression of sequence and arrangement should they (the programs) be protected. See *Data Cash System v. JS & A*, District Court, N.D. Illinois E. Division, 26 September 1979, in 203 USPQ (1979), pp. 735 *et seq.*

⁷³ Accepting the recommendations made by CONTU, the US Congress amended section 101 of the Copyright Law to include the definition of a 'computer program' as 'a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result' (17 USC § 101).

⁷⁴ 'Thus a computer program, whether in object code or source code, is a 'literary work' and is protected from unauthorized copying, whether from its object code or source code version', *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240 (3rd Circ. 1983).

⁷⁵ These are the so-called 'look and feel cases' in relation to non-literal copying. See in particular *Whelan Associates v. Jaslow Dental Laboratory*, 797 F.2d 1222 (3rd Cir. 1986), where, in an attempt to distinguish between mere expression that was protectable and the underlying idea, the court stated: '[...] where there are many means of achieving the desired purpose, then the particular means chosen is not necessary to the purpose; hence, there is expression, not idea'. This stance was severely criticised also because it was feared that it could unduly widen what could be protected by copyright. See P.S. MENELL, *Can Our Current Conception of Copyright Law Survive the Internet Age?: Envisioning Copyright Law's Digital Future*, in 46 *NYL Sch. L. Rev.* 63, 2002–2003.

nised as a 'protected work' in the Berne Convention failed, Europe chose the same approach as the US in Directive 91/250/EEC (now, Directive 2009/24/CE). Hence the American solution was adopted, along with the legal fiction that software was to be treated as a literary work. The fiction is self-evident.⁷⁶ *Software is intrinsically technology*; indeed it is the paradigm of information technologies. Programs' 'form' is always functional and it is of no importance that it can be varied, since the possible variations typically correspond to functional concepts of it and not to any 'aesthetic freedom', let alone 'capriciousness'. There is a merger, a permeation (a structural connection) between expression and function. The same practical result can be achieved through different formulations, but what counts, I insist, is that each of them is guided by a functional and not aesthetic purpose. This holds true even when the programs also aim at achieving an aesthetic result – computer art, video games etc. The program as such is a technological instrument, while the subject matter of copyright is the aesthetic representation whose technical realisation is entrusted to the program.⁷⁷

Finally, it must be pointed out – in concluding this excursus on the marriage of software to copyright – that in today's technological copyright *labyrinthisch irren Lauf*,⁷⁸ the protection of software through copyright law is in addition to that afforded by patent law. In Europe, software-related patents have also become the subject of renewed, although cost-selective, interest by the most innovative producers. Moreover, the EPO, with a natural knock-on effect on national patent offices, has been adopting an ever more open policy to granting patents. In an article from 2005 (co-written with Arezzo, De Rasis and Errico⁷⁹), I spelt out the economic reasons for this renewed love affair, essentially linked to the (relatively) greater 'certification value' of innovativeness and hence the greater defendability in concrete terms of patent rights compared to those founded on copyright, which is devalued by the ease of access to its form of protection. Greater value, in the light of experience originating once again in the US, can translate into economic and financial advantage. For example, it can result in signing more advantageous licences, greater ease of raising finance and venture capital, increased bargaining power and stronger deterrence vis-à-vis competitors, etc.

Pro-cumulation tendencies are a typical expression of the oft-criticised overprotectionism in IP law, and the main effect of this new 'foul congrega-

⁷⁶ And even paradoxical in respect of machine-readable only programs.

⁷⁷ Above 54.

⁷⁸ GOETHE, *Faust* (Dedica, line 14).

⁷⁹ G. GHIDINI, E. AREZZO, C. DE RASIS and P. ERRICO, *Il software fra brevetto e diritto d'autore: Primi appunti sulla Proposta di Direttiva comunitaria sulle 'invenzioni attuate per mezzo di elaboratori elettronici'*, in *Riv. dir. ind.*, 2005, I, 81.

tion' of legal protections is the fact that the parallel protectability under copyright creates an umbrella against exceptions to patentability and the granting of patents. In other words, that cumulation of protections allows back-door entry to what European patent law (from article 52 of the European Patent Convention to 'harmonised' national laws) would typically wish to shut out. Take, for example, software-related inventions that express mere business methods or programs that would not pass the non-obviousness test.

Again, it is worth stressing that copyright, contrary to a widespread perception in some business quarters, does not protect just 'that' certain configuration but also the rights of the holder in translations (in an electronic context, in relation to another computer language), transformations, changes, improvements, etc. that in themselves constitute original works and hence in turn are subject to the copyright of the *second* author (article 2.3 of the Berne Convention). It follows that the latter must always request authorisation from the first author in order to economically exploit her derivative creation, unlike what happens (Ch. 2, above) in the case of patents on 'high profile' derivative inventions.⁸⁰

Consequently, I cannot but confirm the proposal set forth in Chapter 2 above: 'drop' copyright and admit just patent protection for software (irrespective of its material fixation or combination with an 'apparatus'). This would ensure a more competitive framework for its exploitation, as well as more selective access to exclusive protection.

14. The Protection of Databases

Alongside the *blitz* in relation to computer software, one must mention another development in a distinct field of information technology, that is, the European Community Database Directive 96/9/EC codifying copyright protection of databases – as regard to their structure and architecture (article 3) – and introducing an entirely new, all European, set of rights, under the heading of '*sui generis*' rights, aimed at protecting the content of the database. As far as copyright protection is concerned, one cannot refrain from thinking that structured

⁸⁰ The absence of any compulsory licensing in copyright is important when assessing a second aspect relevant to the coexistence of the two forms of protection: the substantive effects of cumulation in the case of patented software. What would be the consequences of granting copyright to software whose inventive technical solution is protected by a patent? Or of granting a patent that improves the working of a program previously afforded copyright protection? The answer in both cases is an inderogable need to obtain the consent of the first rightholder in order to avoid counterfeiting claims once the second product enters the market. See G. GUGLIELMETTI, *La Proposta di direttiva sulla brevettazione delle invenzioni in materia di software*, in *Riv. dir. ind.*, 2002, I, p. 460.

gatherings of information closely resemble the 'presentation of information' that article 52 of the European Patent Convention excludes 'as such' from patentability. Thus databases find in copyright their safe harbour – remember the *IMS Health* case? Even more debatable is the *sui generis* right – a (sort of) neighbouring right – granted to a potentially different subject from the 'author' of the 'architecture': the 'maker', that is, the collector/assembler of the data and information stored in the databank (articles 7–11). The Database Directive modulates the substantive scope of protection depending on economic parameters that measure the investments made and the detriment suffered by the maker from unauthorised 'extraction' and 'reutilisation' by third parties. Now, the attribution of such a right – which can obviously cover even non-copyrighted or copyrightable elements – violates the classical principle of denying exclusive protection⁸¹ to informational data as distinct from the representative form thereof. Notwithstanding the declared aim (so far unfulfilled, by the way)⁸² to stimulate the development of a specific sector of the information technology industry, the *sui generis* right is indeed 'a legal monstrosity' (Jerome Reichman), which can block access to even non-copyrighted or copyrightable information.

Wisdom would suggest a reform of the Directive by substituting this *sui generis* right with a simple and straightforward third parties' mechanism of 'paying access'. The model for this is provided by a well-balanced norm of Italian copyright law (article 99) concerning 'engineering projects and similar works which constitute original solutions to technical problems' – i.e. also wholly utilitarian works. That norm affords the author of such projects a *non-exclusionary* protection that hinges on the 'right to fair remuneration from any person [builders] who, *with gainful intent and without the consent of the author*, carries out the technical project concerned' (emphasis added). A similar solution

⁸¹ Defined by solely economic considerations pertaining, on one hand, to the size of the investment required for collecting the data and on the other, to the commercial value of the information withdrawn without authorisation. This would not eliminate or reduce the exclusive nature of the protection. Also the criminal liability attaching to theft of the material would be influenced by its possible tenuous value.

⁸² In a December 2005 report (*DG Internal Market and Service Working Paper, First Evaluation of Directive 96/9/EC on the Legal Protection of Databases*, Brussels, 12 December 2005), the European Commission proposed a series of solutions designed to circumscribe the scope of the *sui generis* right, if not to eliminate it altogether, as advocated in 2001 by Hugenholtz, Meurer and Onsrud, who showed that the Directive had been a failure as a tool to stimulate and grow the database industry (see STEPHEN M. MAURER, P. BERNT HUGENHOLTZ and HARLAN J. ONSRUD, *Europe's Database Experiment*, in *Science*, 26 October 2001, Vol. 294). See also V. FALCE, *La disciplina comunitaria sulle banche dati: Un bilancio a dieci anni dall'adozione*, in *Riv. dir. ind.*, 2006, pp. 227 *et seq.*)

would strike a fair balance between the need to compensate the research and assembling work of the maker of the database with that of granting third parties access to non-copyrighted, or not even copyrightable information and data.

III AN EFFECT-ORIENTED ASSESSMENT OF TECHNOLOGY COPYRIGHT

15. The Substantive Reasons: ‘No Cost, No Test, No Access’

It should come as no surprise, therefore, that protectionist interests have pressured lawmakers and the courts to broaden the scope of copyright protection. For these lobbies, copyright protection is much more ‘reliable’ since, compared to patent protection, it is easier and less expensive to access, longer in duration, richer in monopolistic content, even *vis-à-vis* the application of the principle of exhaustion. ‘No test, no cost, no access’: no surprise, then, if the many industrial and financial interests involved in developing the innovations typical of modern advanced technology – especially innovations consisting in representations expressing informative content intended for purely functional purposes – have sought succour within the realm of copyright: a realm much less characterised by anti-monopolistic concerns than the patent-based regulatory framework of technological innovation. Thus, rather like tax havens, in modern times copyright has become increasingly sought after and has grown, with intense protectionist grafting onto the originally fertile terrain, like an off-shore paradise providing refuge against the various pro-competitive limits and restrictions imposed by patent law. In my view, it is here that one finds the paradoxical *secret* of the success of technology copyright: precisely that *non-competitive imprint* that marks (as a result of the already noted characteristics of purely intellectual/aesthetic creation) the traditional layout of copyright, and that, as such, almost totally disregards the competitive fabric of the market. It is precisely because of this feature that reliance on copyright has been ‘rediscovered’, especially by firms with a dominant position in high-tech sectors, seeking greater protection, either as replacement for or in addition to patent protection, of their investments in information technologies.

16. Has The Classic Model been Superseded in the Contemporary Context of Innovation?

So what?, the reader may well ask. What is the point of all these complaints about the *invasions* of copyright? Why all this nostalgia for the classical system, this obsession with the *propriété intellectuelle du grand-père*? The reader might object that once copyright protection has been acknowledged as

providing greater advantages in terms of securing returns on the investments made in high-tech innovation, it would be in fact useless, sterile and exceedingly conservative to continue to harp on about the blurring of the borders between the two types of exclusive protection. Isn't this blurring a sign of the vitality of a system that in fact adapts to new situations by updating and reinforcing its ability to promote innovation, which is far more important than the need to avoid distortive interpretations of the classical model. Hasn't the law always progressed thanks to innovative, nay unorthodox interpretations?

This argument is not without merit and cannot be countered merely by a profession of faith in the classical model as such, nor by relying on the fact that the classical paradigm is still strongly entrenched in statute. Quite to the contrary, the gauntlet cast by this argument must be picked up at the level properly defined by the rationale of the criticised expansionist trend: that is to say, the balance of interests emerging *today*. It is on this basis that the classical model must be either upheld or condemned. Nor, to be sure, does the issue involve merely an analysis of the loopholes in the classical model encountered so far. If the copyright paradigm were to prove more effective in maintaining the balance of interests that promote innovation in today's context and which would therefore be worthy of protection, this would be sufficient to justify not only past but also future expansions.

In order to analyse the persistent validity of the classical dual model based on the 'division of labour' between patent law (utilitarian innovations) and copyright ('aesthetic' creations), one must first of all compare the model with the framework of interests at play in the development of high-tech innovation.

This framework not only encompasses the interests of the inventors/authors and the financiers/investors, it also applies to the conflicting interests of third-party competitors. The former tend to maximise, while the latter tend to minimise (and even, if possible, to eliminate) the enjoyment of exclusive rights. Nor is the framework completed by taking into account, as one must anyway, the interests of consumers who, at least at first glance, appear 'neutral' insofar as they are attracted as much by qualitative innovation (possibly promoted through exclusive rights) as by reduced prices (encouraged by free competition). Due account must further be taken of the general interest in ensuring a *workable competitive fabric of the markets involved in innovation*. A healthy competitive fabric is necessary to preserve the system's ability to develop innovation. This, in turn, requires – especially in market contexts with a strong oligopolistic bent – a clear enhancement of competitive dynamics, actual and potential and also, on the other hand, an equally clear discouragement of anti-competitive foreclosures and/or rent-seeking positions, which tend to maintain high prices, while reducing consumers' alternatives. In this framework, the freedom of research and the associated freedom to exchange knowledge would also be organically enhanced.

17. Specific Reference to Network Industries and Conclusion

This competitive framework seems particularly appropriate when applied to information technologies, a key component of the contemporary industrial revolution. As is well known, such technologies are typically developed and promoted through systems of *networks*, that is, widespread connections amongst various users. Equally well known, within such systems value is no longer generated in accordance with the traditional principle of decreasing quantities. On the contrary, precisely as a result of the widespread sharing of information (in the broad sense of the term) and, therefore, the amount of links amongst various users, increasing numbers of users generate value. This is the so-called phenomenon of ‘network effects’. Briefly put, the logic of the network economies is ‘what is open is good, what is closed is bad’. This logic was illustrated by the rapid and huge success achieved by the IBM personal computer largely thanks to the compatibility of its operating system – while in turn this compatibility allowed other competitors to launch their own products and gain market share. The same applies in the software sector. Thus, market success – the actual, effective final reward for innovators and investors – can often be best pursued through openness to exchanges, interconnections and widespread distribution, rather than by clinging to traditional forms of proprietary exclusions⁸³ for a certain technology.

The recourse to the copyright paradigm to ensure exclusive protection to innovative technologies in the ICT sector⁸⁴ must be viewed as openly contradictory with that pro-openness perspective. In particular, the copyright holder’s unrestricted faculty to refuse, without exceptions, to grant licences (on fair and non-discriminatory terms⁸⁵) over her software products, may well hinder competition in the same market, or related (up- or downstream) ones,

⁸³ Various jurists and economists are opposed to granting any kind of exclusive protection (under either copyright and patent law) to the ‘interfaces’ that allow various types of computer programs to interact. In my view, interfaces could be treated as ‘essential facilities’, so as to allow, on one side, unjustified denials of access to be qualified as abuses of a dominant position, and, on the other, grant fair compensation to the first innovator.

⁸⁴ Some proposals have claimed the extension even to bioengineering: see, for example, S.R. WILSON, *Copyright Protection for DNA Sequences: Can the Biotech Industry Harmonize Science with Song?*, *Jurimetrics*, 2004, p. 409; M. RIMMER, *Beyond Blue Gene: Intellectual Property and Bio-informatics*, IIC, 2003, p. 31.

⁸⁵ I agree with those (for example, Robert Merges) who would prefer that the said stance be adopted in the last instance, that is, after the failure of negotiations between the private parties. As mentioned in Chapter 2 on patents, compulsory licensing is useful, especially in terms of encouraging parties to negotiate fair terms and as such not weighed down by transaction costs stemming from recourse to judicial or arbitral proceedings.

as the *Microsoft* case(s) famously disclosed (see Chapter 5). Thus the rightholder can impede interaction between different programs, bar exchanges and interconnections over electronic networks, and also foreclose, as we have seen, derivative innovation. Of course, the ensuing effects could be especially obnoxious if foreclosures were practised by a firm in a dominant position. Here, only an 'antitrust interference' could break the wall erected by the copyright holder (it is no coincidence that the 'antitrust storm', as Francesco Denozza names it, especially and more frequently limits the exercise of copyright; below, Chapter 5). However, as well known, current European case law has limited antitrust actions to 'exceptional circumstances'.⁸⁶

Thus, even – or should I say: all the more – vis-à-vis the contemporary, typically oligopolistic⁸⁷ market scenario of network industries, only the re-establishment of copyright's 'classical' boundaries as concerns utilitarian products and ITs could fully serve the goal of preventing exclusionary conduct detrimental to dynamic competition, that is, competition by innovation.

If one shares the views espoused above with special (but not exclusive) reference to network industries, the inescapable conclusion is that the (discussed) expansionary trend of copyright is historically not a balanced and modern response to the undoubted need to protect investment in innovation but rather a strongly privileged protection on an international scale of the interests of the current leaders in technology to create and maintain for as long as possible situations that avoid or reduce actual or potential competition.

In conclusion, even in relation to utilitarian creations, the balance between *right* and *access* (or between *ownership* and *freedom*) that underlies the classic model of intellectual property with its clear regulation of the borders between patent and copyright expresses a trade-off that optimally ensures that temporary exclusive rights be attributed and exercised in order to effectively promote 'science and useful arts'. That model, with just a few minor refinements, strikes an excellent balance of relevant social interests and should be vigorously rehabilitated in the face of the protectionist pressures that have increasingly eroded it, and which even the business world is beginning to understand as detrimental to its own long-term interests.

⁸⁶ Below, Chapter 5.

⁸⁷ Along the same theological lines, one could advocate the repeal of the prohibition on reverse engineering for the purposes of creating more advanced software, a repeal that could be accompanied by a system of cross-licences between the owner of the original software and the subsequent innovator, in accordance with the model in article 31(I) of the TRIPs Agreement.

PART III

COPYRIGHT AND THE DIFFUSION OF CULTURE AND INFORMATION THROUGH THE NEW COMMUNICATION TECHNOLOGIES

18. The Risk of Cultural Exclusion

The proliferation, side by side with copyright, of neighbouring rights, the lengthening of both, the attenuation of the principle of exhaustion, the adoption, in connection with digital works, of technological protection measures blocking access and sharing of information and data, etc. – concerns and affects not only the field of utilitarian works that enjoy copyright protection (the technology copyright we just discussed above), but also the regime of mass enjoyment of culture, information and entertainment: music, cinema, home video, multimedia works, etc.: ‘classical’ subject matter of copyright law.

Thus, in particular, modern copyright’s normative architecture allows the holder of the exploitation rights (normally not the author but her assignee, who often ends up also owning the neighbouring rights; above, section 3), to control a monopolistic chain covering the entire cycle of the production and distribution on an industrial scale of the intellectual creation.

This chain is much heavier than that in patent law regulating the circulation of products deriving from industrial innovation.⁸⁸ The image of the chain springs to mind from the words of Mr Justice Laddie: ‘in the case of copyright not only the mediaeval chains remain, but they have been reinforced with late 20th century steel’.⁸⁹ These chains would be even more unsupportable if they were to hamper the free circulation and exchange of the fruits of basic science (as distinguished from R&D), as already observed above (section 6), while discussing the InfoSoc Directive.

It is evident that the situation vividly depicted by Hugh Laddie contrasts with the underlying constitutional foundations of copyright. It cannot be forgotten that following the industrial revolution in the second half of the 18th century and commencing with North America, copyright was given constitutional rank as a *means* to the end of promoting ‘science and useful arts’. The

⁸⁸ One can also observe that the sum of the benefits that copyright grants compared to patents is a distinct advantage for whoever operates in the information and entertainment business as opposed, for example, to the pharmaceutical industry.

⁸⁹ H. LADDIE, *Copyright: Over-strength, Over-regulated, Over-rated?*, in *EIPR*, 1996, p. 253.

remuneration paid to authors (and investors) was even in modern times acknowledged to be instrumental to that purpose (a point made by the US Supreme Court on various occasions: *Feist Publications v. Rural Tel. Serv.*, 1991, *Sony v. Universal Studios*, 1984, and *US v. Paramount Pictures*, 1948). It is my opinion that even at the level of human (universal) rights, the same 'means-to-end' relationship should frame the entitlement of IP rights on one side, and of those to 'seek, receive and impart information and ideas' on the other.⁹⁰

Nor should we fail to reflect that through modern digital and electronic information technologies the spreading of information, culture and entertainment is for the first time in history immediately available to a huge part of the population. This development goes hand in hand with the ever growing view that one should not pay high prices for access given the savings that electronic distribution has made possible. This is specially so in relation to access for research and scientific purposes: as mentioned before, culture and science typically nourish themselves on the exchange, comparison and sharing of information. Fulfilling this need – with greater ease and lower costs compared to accessing and downloading pop songs – is of course a paramount public interest of constitutional rank.

Accordingly, one cannot avoid questioning the wisdom of enhancing the pro-monopolistic features of copyright as has happened and keeps happening within the EU as a result of intense – mainly non-European – lobbying. Containing the omni-excluding force of copyright would not only serve the interests of the public of users and promote the opening of new horizons within the 'cultural industry',⁹¹ some of which emerged owing to the fact that

⁹⁰ See Universal Declaration of Human Rights adopted by the UN General Assembly on 10 December 1948, articles 19 ("Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers"), 27.1.1 ("Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits") and 27.2 ("Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary, or artistic production of which he is the author").

⁹¹ Another important aspect that speaks in favour of such containment involves the multimedia industry, especially with regard to the problem of obtaining consent from a potentially very large number of holders of copyright and/or related rights for the use of pieces of their works in the multimedia 'finished product'. Once again, it would perhaps be useful to mitigate exclusive rights through systems of compulsory licensing against payment (and therefore precluding free riding), which, as suggested by several scholars, could be placed under 'collective' management through specific collecting societies, so as to avoid slowing down and burdening with excessive negotiation ('transaction') costs, the production processes and, therefore, the development

the Internet has so far basically been treated as commons. It would also further the interests of the category of authors, as Richard Posner points out.⁹² In the ultimate analysis, containing copyright's expansionist thrust will be necessary to ensure that we will not wake up some sad day to find that the information highways – along which, one hopes, a huge traffic of culture and information will flow for the benefit of all humanity – is cluttered with toll-booths at every kilometre, thereby making access to the transported information not only slower but prohibitively expensive for too many. I do share the concern that over the long term unbridled copyright expansion is bound to generate foreclosure of both industrial development and access to information and culture.

19. Remuneration of Creative Work and Related Investments: New Content Distribution Models

The foregoing arguments in no way detract from the fully justified need for the efforts of authors as well as the culture and entertainment industry's production and commercial investments to be fairly compensated,⁹³ without which the creation and spread of intellectual works would be drastically reduced,⁹⁴ a paradox if one considers the almost endless possibilities offered today by modern digital communication technology.

The fulfilment of those needs does not require that the most rigid exclusionary aspects of copyright must be maintained or even strengthened, *except to* contain free riding. Recent developments in content distribution models, especially electronic networks, evidence a real possibility of marrying those needs with the aim of spreading culture, information and entertainment devoid of significant economic discrimination. These developments have been born of a new convergence among distinct values and interests.

In fact, as a result of changed social attitudes, priorities and values, access to cultural works and services – as against the sphere of (non-essential) consumption goods – has come to be considered tantamount to a fundamental

of an emerging sector of the publishing industry, with enormous potential in terms of the dissemination of culture and information. See further G. GHIDINI and M.F. QUATTRONE, *Opere multimediali e copyrights di terzi*, in *Riv. dir. ind.*, 1998, I, p. 5.

⁹² In his *Law and Literature*, Harvard, 1988, R. POSNER claims that less intensive copyright protection would benefit authors (as a category), since the mushrooming of works by others would provide them with precious input for their own future works. This view is also shared by L. LESSIG, *Code and Other Laws of Cyberspace*, New York, 1999.

⁹³ The arguments presented above, therefore, do not imply support for the ideology and proposals of the 'no-copyright' movement.

⁹⁴ This would also be true even if reliance were to be mainly placed on the growing phenomenon of *community sharing* as in *peer-to-peer systems*, confined in any event to *online* distribution.

right in the broad sense of the term, to such an extent that any attempt at imposing excessive and/or discriminatory limitations on access will be instinctively resisted. Lawmakers mindful of the ever-changing demands of open democratic societies must necessarily take due account of this social attitude, which James Tobin has labelled 'specific egalitarianism'. Moreover, significant elements of the cultural industry are attempting to meet the socio-cultural needs now evoked, organising new and non-exclusionary forms of content distribution. This occurs not only out of opportunism but also, as hinted, in light of a new conception of what is best economically. In short, it is an industrial and distribution policy that seeks to exploit in a new way the exponential multiplication of the enjoyment of content offered electronically. From this standpoint, offering information, entertainment and culture at low prices (especially through monthly subscriptions whose costs can depend on the amount of access required⁹⁵) or even free of charge (thanks to advertising revenue or money earned from 'live' representations as well as additional services) is not a sort of compromise, but an attractive and loyalty-inducing tool to capture a mass of consumers, who also serve as the audience for online advertising as well as direct purchasers of the content transmitted.⁹⁶ Of course, deep economic crises, like the global one we are going through, can slow down the pace of these new trends, especially owing to the general drop in advertising investments, typically associated with such crises. But all the 'structural' factors evidenced above allow the reasonable forecast that such trends will eventually be consolidated.

Obviously, the concrete implementation of said low cost or even no cost distribution models is tied, in turn, in a virtuous circle, to the reduction of the marginal costs of distribution (rather than production) of the various content made possible by digital technology and the aforementioned expansion of information consumption on a scale never before seen in history.

In short, business models are arising which, in order to better and more extensively cater to consumer preferences and streamline transactions with them, are adopting non-exclusionary intellectual property paradigms ('non-exclusionary' obviously does not mean, I eagerly repeat, allowing free riding). This trend concerns not only relations with consumers/users but more significantly also business negotiations for rights. Take, for example, the increasing interest of professional circles – especially in connection with multimedia

⁹⁵ The first service of this type was introduced by Napster, which allowed the downloading of an unlimited number of musical files by simply paying \$9.95 a month. However, to continue to legally use the downloaded files the user had to renew the subscription every month. See 'subscription service and music store terms' at <http://free.napster.com/terms.html>.

⁹⁶ On this perspective see also Ch. 1, fn. 49 and accompanying text.

works⁹⁷ – in forms of ‘automatic’ licences in order to manage more rapidly, flexibly and at lower cost, the relationships and revenues stemming from copyright and neighbouring rights.

In turn, this trend determines and shapes technological developments, giving rise to selective and not all-excluding technological protection measures capable of enabling a user to enjoy the personal freedom of not only accessing the content ephemerally but also conserving and sharing within a reasonably restricted circle the text, images and music disseminated through electronic networks.

The progressive advent of those new distribution models organised online confirm that ‘over-enforcement’ strategies, that is, a blanket repression (covering both competitors and single users) is not the only or most advantageous policy pursuable, including in terms of achieving economic returns for producers, distributors and investors. Maybe the authors can worry about distribution models in which income does not stem from the enjoyment of their single works. However, remuneration for authors can also come from participation in profits flowing from the use of their works, a prospect that can be efficiently dealt with by the copyright collecting societies.

20. Cultural Pluralism at Risk?

Is a hint of blue sky peeking through the cloudy horizon of modern copyright, as in a Poussin painting? One can reasonably hope so in light of the points made above. However, I fear that such a perspective of no or low-cost access, albeit important, will not be sufficient to guarantee the best of both worlds. New clouds are gathering: although not blown this time by the winds of copyright protectionism, they could act as a brake on the direction of a wider, more participatory, more creative and more plural circulation of information and culture, which is after all the true and supreme aim of copyright.⁹⁸

More *plural*, yes: this is the greatest concern that I share, and which rears its head even in connection with the free or low-cost new models of distribution of content. This is not only for the previously mentioned but surmountable risk of marginalisation of the figure and role of the author in a scheme of circulation of creative work, hinging on distribution models in which revenues do not entirely or principally stem from the price paid to enjoy the work. And it is not only because the advertising that often supports those new models of distribution may often heavily influence the choice of content to be shown,

⁹⁷ See, note 99.

⁹⁸ See also, for the references, R.S. BROWN, *Eligibility for Copyright Protection: A Search for Principled Standards*, in R.G. MERGES and J. GINSBURG, *Foundations of Intellectual Property*, New York, 2004, pp. 303 *et seq.*

especially on electronic media and networks – including television for these purposes. (Moreover, that content must be consistent with current tastes and above all the cultural level of the general public, so that the greatest number of people can be reached by the advertising, the revenue from which is proportional to how big the audience is. This ‘law’ is rigorously applied, including through the ratings system, the more the companies managing the distribution networks depend on advertising revenues. There is, after all, a reason why reality shows are broadcast in primetime, while movies like *Ladri di biciclette* are shown at midnight if at all.)

There is more, I fear. The greatest worry, dampening satisfaction with the proclaimed low or even no cost distribution models, relates to the distinct international tendency to concentrate in single entities networks (from TV to Internet) and content production, including online newspapers. Put simply, this means that on my highway I choose who passes. This is one of the most alarming aspects of network liberalisation, which risks throwing out the ‘network neutrality’ baby with the ‘monopoly’ bathwater. And which also risks reducing the plurality and independence of the press, as even cost constraints increasingly force it to go online.

At risk is pluralism, the democracy of information, and it is therefore necessary to mobilise effective and inflexible legislative and regulatory tools to prevent this scenario from actually occurring. There is no shortage of authoritative and concrete proposals to remedy the situation and give effect to the constitutional guarantee of freedom of information. Of particular interest are the proposals on issuing public tenders to independent suppliers of content⁹⁹ to be overseen by Competition Authorities. The realisation of such and similar proposals, inspired by the principle of universal service, could be aided by the increase in transmission capacity that new technology (especially broadband) could open up, thereby enabling adequate space to be given to other expressions, beyond the actual niche that they currently occupy.

This is much more important, in my view, than being able to download content (except research- and study-related) for free: an objective that, if anything, in a context of pronounced and unregulated concentration/integration of control of both networks and contents, could give rise to a disgraceful result: serving not the cause of greater plurality but cultural models that pursue the hegemony of special interests.

⁹⁹ With reference to the issue of granting access to producers of independent content, see F. GRAZIADEI, *Accesso al mercato delle reti e dei contenuti nella transizione alla tv digitale terrestre*, in *Contratto e impresa*, 2005, p. 229.

Bibliographical Notes

Save for a few, albeit sometimes important, differences between legal frameworks – for instance, in terms of the meaning and degree of the creative character required for protection (see KATHERINE L. MCDANIEL and J. JUO, *A Quantum of Originality in Copyright*, in *Chicago Kent Journal of Intellectual Property*, 2009, 169; G. SCHRICKER, *Farewell to the 'Level of Creativity' (Schoepfungshoehe) in German Copyright Law?*, in *IIC*, 1995, 41) – the age-long dispute as to the philosophical roots of copyright – the dispute between those who favour the doctrine of the 'creative personality' (sourced from Kant) and those who advocate the concept (dating back to J. LOCKE, *An Essay Concerning the True Original Extent and End of Civil Government*, 1690) that labour is the legitimising basis of individual property – appears today mostly as the fruit of a 'faux débat théorique' (A. BERTRAND, *Le droit d'auteur et les droits voisins*, Paris, 1999, chapter II, pp. 51 *et seq.*). See U. LOEWENHEIM, *Copyright in Civil Law and Common Law Countries: A Narrowing Gap*, in *AIDA*, 1994, 161 *et seq.*; J. C. GINSBURG, *A Tale of Two Copyrights: Literary Property in Revolutionary France and America*, in *Tulane L. Rev.*, 1990, 991 *et seq.*

However, for modern expression of that dispute, at academic level, see C. COLOMBET, *Propriété littéraire et artistique*, Paris, 1986, and H. HUBMANN, *Urheber- und Verlagsrecht*, Munich, 1966. For an economic perspective, see M. and D. NIMMER, *Nimmer on Copyright*, New York, 1995, and K. GARTNETT, J. RAYNER JAMES and G. HARBOTTLE, *Copinger and Skone on Copyright*, 15th edition, London, 2007.

On a distinct plane, one can discern a growing interest, since the 1990s and especially in the United States, for reviewing copyright in the light of natural law principles: see in particular W.J. GORDON, *A Property Right in Self-expression: Equality and Individualism in the Natural Law of Intellectual Property*, in *Yale L. J.*, 1993, 1533; A.C. YEN, *Restoring the Natural Law: Copyright as Labor and Possession*, in *Ohio State L. J.*, 1990, 517; T.G. PALMER, *Are Patents and Copyrights Morally Justified? The Philosophy of Property Rights and Ideal Objects*, in *Harvard J. L. & Pub. Policy*, 1990, 817; J. HUGHES, *The Philosophy of Intellectual Property*, *Geo. L. J.*, 1988, 287; M. RADIN, *Property and Personhood*, in *Stanford L. Rev.*, 1982, 957 and finally R.M. HURT and R.M. SCHUCHMAN, *The Economic Rationale of Copyright*, in *Am. Econ. Rev.*, 1966, 421, denying the justification of copyright as 'necessary remuneration' (for both authors and publishers). Among Italian scholars, see P. RESCIGNO, *Proprietà-Dir. privato*, *Enc. dir.*, Milan, 1988, 254, especially 280.

Another split in modern copyright, this time of truly significant systemic importance, is that between copyright in the traditional sense applied to works whose enjoyment is merely intellectual/aesthetic and technology copyright. The dichotomy and the corresponding encroachment of copyright into the technology field are at the root of contemporary analysis of copyright protection. In this regard, see W. CORNISH, *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights*, London, 2007; ID., *Copyright Across the Quarter-Century*, in *IIC*, 1995, 801; J.C. GINSBURG and R.P. MERGES, *Foundations of Intellectual Property*, New York, 2004; R. MERGES, P.S. MENELL and M. LEMLEY, *Intellectual Property in the New Technological Age*, Gaithersburg, NY, 2000; and again JANE GINSBURG (with R.A. GORMAN), *Copyright for the Nineties*, Charlottesville, VA, 1993. And again many essays strongly influenced by an economic analysis: W. FRASE, *The Economic Rationale of Copyright*, in *Am. Econ. Rev.*, 1966, 434; P.S. MENELL, *Intellectual Property: General Theories*, in B. BOUCKAERT and G. DE GEEST (eds), *Encyclopaedia of Law and Economics*, Cheltenham, UK, 2000, 129; M. PENDLETON, *The Danger of Protecting Too Much: A*

Comparative Analysis of Aspects of Intellectual Property in Hong Kong, Britain and the United States, *ivi*, 2000, 69; M. LEMLEY, *Romantic Authorship and the Rhetoric of Property*, in *Texas L. R.*, 1997, 873; J. COHEN, *Some Reflections on Copyright Management Systems and Laws Designed to Protect them*, in *Berkeley Tech. L. J.*, 1997, 161; H. LADDIE, *Copyright: Over-strength, Over-regulated, Over-rated?*, in *EIPR*, 1996, 253; K. BOWREY, *Who's Writing Copyright's History?*, *ivi*, 1996, 322; T. PRICE, *The Economic Importance of Copyright*, London, 1993; M. ROSE, *Authors and Owners: The Invention of Copyright*, Cambridge and London, 1993; J. LITMAN, *Copyright as Myth*, in *U. Pittsburgh L. Rev.*, 1991, 235; P. JASZI, *Toward a Theory of Copyright: The Metamorphoses of 'Authorship'*, in *Duke L. J.*, 1991, 455; F. H. EASTERBROOK, *Intellectual Property is Still Property*, in *Harvard J. of Law and Public Policy*, 1990, 108; W. LANDES and R.A. POSNER, *An Economic Analysis of Copyright Law*, in *J. of Legal Studies*, 1989, 325; W.R. JOHNSON, *The Economics of Copyright*, in *J. Pol. Econ.*, 1985, 158.

All these works provide precious insight also into the economic rationale of international rules (periodic updates of which can be found in the series *Copyright Laws and Treaties of the World*, compiled by UNESCO and published, since 1956 in Washington, DC, by the Bureau of National Affairs. On this topic, see also J. GINSBURG and S. RICKETSON, *International Copyright and Neighbouring Rights – The Berne Convention and Beyond*, Oxford, 2005). Economic considerations, in fact, underlie the overprotectionist content of several major developments in contemporary copyright law, especially of Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society. See here B. HUGENHOLTZ, L. GUIBAULT, G. WESTKAMP, T. RIEBER-MOHN *et al.*, *Study on the Implementation and Effect in Member States' Laws of Directive 2001/29/EC on the Harmonization of Certain Aspects of Copyright and Related Rights in the Information Society, Final Report*, a study commissioned by the European Commission in February 2007, available on the website: http://www.ivir.nl/publications/guibault/Infosoc_report_2007.pdf). See also F. BRISON and B. MICHAUX, *La nouvelle loi du 22 mai 2005 adapté le droit d'auteur au numérique*, in *Auteurs & Media*, 2005, 3, 212–22; U. GASSER and M. GIRSBERGER, *Transposing the Copyright Directive: Legal Protection of Technological Measures in EU-Member States: A Genie Stuck in the Bottle?*, Berkman Publication Series, no. 2004-10, November 2004 ; L. BEARD, V. BUDD, A. HALLER *et al.*, *Harmonization of Copyright Law in the European Community: A Comparative Overview of the Implementation of the Copyright Directive (2001/29/EC) in France, Germany and the United Kingdom*, in *Computer Law Review International*, 2004, 2, 33–41; G. WESTKAMP, *Towards Access Control in UK Copyright Law? Some Remarks on the Proposed Implementation of the EU Copyright Directive*, in *Computer Law Review International*, 2003, 1, 11–16; L. GUIBAULT, *Le tir manqué de la directive européenne sur le droit d'auteur dans la société de l'information*, in *Les Cahiers de Propriété Intellectuelle*, 2003, 2, 537–73; J.P. TRIAILLE, *La directive sur le droit d'auteur du 22 mai 2001 et l'acquis communautaire*, in *Auteurs & Media*, 2002, 1, 8–13; J. REINBOTHE, *Die EG-Richtlinie zum Urheberrecht in der Informationsgesellschaft*, in *GRUR International*, 2001, 8–9, 733–45; P.B. HUGENHOLTZ, *Why the Copyright Directive is Unimportant, and Possibly Invalid*, in *EIPR*, 2000, 11, 499–505.

Regarding the so-called neighbouring rights or *droits voisins* (a category not formally recognised in the common law tradition and brought under the wing of the general paradigm: see R. ARNOLD, *Performers' Rights and Recording Rights*, Oxford, 1990; H. COHEN JEHOAM, *The Relationship between Copyright and Neighboring Rights*, in *Rev. int. dr. aut.*, 1990, 103), their analysis should proceed on the basis of a

constant comparison with copyright in the strict sense. For an international perspective, see P. KAMINA, *Towards New Forms of Neighbouring Rights within the European Union?*, in D. VAVER and L. BENTLY (eds), *Intellectual Property in the New Millennium: Essays in Honour of William R. Cornish*, Cambridge, 2004, 280; O. MORGAN, *The Problem of International Protection of Audiovisual Performances*, in *IIC*, 2002, 810; A. BERTRAND, *op. cit.*, chapter 16; G. SCHRICKER, *Einleitung*, in G. SCHRICKER, *Urheberrecht-Kommentar*, Munich, 1999; P.W. HERTIN, *Verwandte Schutzrechte*, Köln, 1998. See also C. COLOMBET, *Grands principes du droit d'auteur et des droits voisins dans le monde*, Paris, 1992; H. DESBOIS, A. FRANCON and A. KEREVER, *Les conventions internationales du droit d'auteur et des droits voisins*, Paris, 1976.

The most relevant specific expression of 'technology copyright' concerns computer programs, that is, software, the most relevant area where copyright has trespassed in technological sectors, that is, essentially utilitarian ones, to use the words of the US Federal Court of Appeals (2nd Circuit) in *Computer Assocs. Int'l v. Altai* (1992). The rich literature on the subject can be approached by starting with the reconstruction of the European scenario provided from a comparative standpoint by J. HUET and J.C. GINSBURG (*Computer Programs in Europe: A Comparative Analysis of the 1991 EC Software Directive*, *Columbia J. of Transnat. L.*, 1992, 327) and more recently by G. GHIDINI, E. AREZZO, C. DE RASIS and P. ERRICO (*Il software fra brevetto e diritto d'auteur: Primi appunti sulla Proposta di Direttiva comunitaria sulle 'invenzioni attuate per mezzo di elaboratori elettronici'*, in *Riv. dir. ind.*, 2005, I, 81). As hinted in the text, the study of technology copyright should proceed in the framework of the relationship/distinction between copyright and patent paradigms. See, *ex multis*, C. LE STANC, *Logiciels entre droit d'auteur et brevet: implications juridiques et économiques*, in G. GHIDINI and M. GENOVESI (eds), *Intellectual Property and Market Power*, ATRIP Papers 2006–2007, *op. cit.*, 295; G. GHIDINI and E. AREZZO, *Patent and Copyrights Paradigms vis-à-vis Derivative Innovation: The Case of Computer Programs*, *IIC*, 2005, 159; B. KLEMENS, *Math You Can't Use – Patents, Copyright and Software*, Washington, 2005; L.B. SMITH and S.O. MANN, *Innovation and Intellectual Property Protection in the Software Industry: An Emerging Role for Patents?*, in *U. Chi. L. Rev.*, 2004, 241; J.P. SUMNER, *The Copyright/Patent Interface: Patent Protection for the Structure of Program Code*, in *Jurimetrics J.*, 1989, 107; A. LUCAS, *Droit d'auteur et numérique*, Paris, 1998; D. KARJALA, *The Protection of Operating Software under Japanese Copyright Law*, *ivi*, 1988, 43. For a more recent view on aspects relating to the patentability of software-related inventions, see D. BOOTON, *The Patentability of Computer-implemented Inventions in Europe*, *Intellectual Property Quarterly*, 1, 2007, 92; J. PILA, *Dispute over the Meaning of 'Invention' in Article 52(2) EPC – The Patentability of Computer-implemented Inventions in Europe*, *IIC*, 36, 2005, 173.

The debate also touches on antitrust aspects, especially those related to the so-called merger doctrine, under which recourse to copyright is precluded in the case where the idea and its expression are closely intertwined. See here L. SPIVOCK, *Does Form Follow Function? The Idea/Expression Dichotomy in Copyright Protection of Computer Software*, in *UCLA L. R.*, 1988, 723, as well as to the issues of interoperability (the scope of reverse engineering and access to interfaces) and network effects. On these antitrust-related aspects reference should be made, *ex multis*, to the following works: P. SAMUELSON, *Are Patents on Interfaces Impeding Interoperability?*, in *Minn. L. Rev.*, 94, 2009, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1323838; S. ANDERMAN, *Microsoft v. Commission and the Interoperability Issue*, in *EIPR* 2008, 395; H.A. SHELANSKI, *Why Copyright Excludes Systems and Processes From the Scope of its Protection*, in *Texas L. Rev.*, 2007, 1921; C. REED and J. ANGEL,

Computer Law – The Law and Regulation of Information Technologies, Oxford, 2007; M. LEMLEY, P. MENELL, R. MERGES and P. SAMUELSON, *Software and Internet Law*, New York, 2006; P. SAMUELSON and S. SCOTCHMER, *The Law and Economics of Reverse Engineering*, in *Yale L. J.*, 2002, 1575; R.H. LANDE and S.M. SOBIN, *Reverse Engineering of Computer Software and U.S. Antitrust Law*, in *Symposium: High Technology, Antitrust & the Regulation of Competition*, in *Harv. J. L. & Tech.*, 1996, 237; L.D. GRAHAM and RO. ZERBE Jr, *Economically Efficient Treatment of Computer Software: Reverse Engineering, Protection, and Disclosure*, in *Rutgers Computer & Tech. L. J.* 1996, 61. See again V.M. LEMLEY, *Convergence in the Law of Software Copyright?*, in *High Tech. L. J.*, 1995, 1; D. KARJALA, *Copyright Protection of Computer Documents, Reverse Engineering, and Professor Miller*, in *Dayton L. Rev.*, 1994, 975; P. BERNT HUGENHOLTZ, *Convergence and Divergence in Intellectual Property Law: The Case of the Software Directive*, in *Information Law towards the 21st Century*, Deventer, 1992, p. 319; J.H. REICHMAN and P. GOLDSTEIN, *On Copyright Law: A Realist's Approach to a Technological Age*, in *Stanford. L. Rev.*, 1991, 943; D.S. CHISUM, R. COOPER DREYFUSS, P. GOLDSTEIN, R.A. GORMAN, D. KARJALA, E. KITCH, P. MENELL, L.J. RASKIND, J.H. REICHMAN and P. SAMUELSON, *Last Frontiera Conference Report on Copyright Protection of Computer Software*, in *Jurimetrics J.*, 1989, 15; P. SAMUELSON, *CONTU Revisited: The Case Against Copyright Protection for Computer Programs in Machine-readable Form*, in *Duke L. J.*, 1984, 663; D.S. CHISUM, *Copyright, Computer Programs and the Apple Cases: A Compromise Solution*, in *EIPR*, 1983, 236.

See also the Bibliographical Note at the end of Chapter 5.

In connection with software protection, worthy of special mention is the Open Source system (which, far from excluding, actually presupposes copyright: G. GHIDINI and V. FALCE, *Open Source, General Public Licence e incentivo all'innovazione*, in *AIDA*, 2004, 3). See here G. WESTKAMP, *The Limits of Open Source: Lawful User Rights, Exhaustion and Co-Existence with Copyright Law*, in *Intellectual Property Quarterly*, 2008, 14; W. GROSHEIDE and D.J.B. BOSSCHER, *Proprietary and Open-source Models in Software Development and Distribution (with Special Attention to the GPL/GNU, Open Source Licenses and Creative Commons Licences)*, in G. GHIDINI and M. GENOVESI (eds), *Intellectual Property and Market Power*, ATRIP Papers 2006–2007, 211; G. YUNG, *The Continuing Debate of Software Patents and The Open Source Movement*, in *Intell. Prop. L. J.*, 2005, 171; S. WEBER, *The Success of Open Source*, Harvard, 2004; J. ZITTRAIN, *Normative Principles for Evaluating Free and Proprietary Software*, in *U. Chi. L. Rev.*, 71, 2004, 265; R.P. MERGES, *From Medieval Guilds to Open Source Software: Informal Norms, Appropriability Institutions, and Innovation*, 2004, available on the website <http://ssrn.com/abstract=661543>; D.S. EVANS and B.J. REDDY, *Government Preferences for Promoting Open-Source Software: A Solution in Search of a Problem*, in *9 Mich. Telecomm. Tech. L. Rev.*, 2003, 313; J.W. WACHA, *Open, Software, Free Software and the General Public License*, in *Computer and Internet Lawyer*, Vol. 2, 3, 2003, 20; S. DUSOLIER, *Open Source and Copyright: Authorship Reconsidered?*, in *26 Colum. J. L. & Arts*, 2003, 281; J. LERNER and J. TIROLE, *Some Simple Economics of Open Source*, *Journal of Industrial Economics*, 2002, 197; C.H. NADAN, *Open Source Licensing: Virus or Virtue?*, in *10 Tex. Intell. Prop. L. J.*, 2002, 349; Y. BENKLER, *Coase's Pinguins, or, Linux and the Nature of the Firm*, in *Yale Law J.*, 2002, 112; D. MCGOWAN, *Legal Implications of Open Source Software*, *U. Ill. L. Rev.*, 2001, 241.

Another expression of technology copyright relates to the legal protection of *databases* under Directive 96/6/EC. Here see, *ex multis*, E. DERCLAYE, *The Legal Protection*

of Databases: A Comparative Analysis, Cheltenham, UK, 2008; ID., *Can and Should Misappropriation also Protect Databases?* in P. TORREMAN, *Copyright Law – A Handbook of Contemporary Research*, Cheltenham, UK, 2007, 83; A. KUR, R.M. HILTY, M. LEISTNER and C. GEIGER, *First Evaluation of Directive 96/9/EC on the Legal Protection of Databases*, in IIC, 2006, 551; E. DERCLAYE, *Databases Sui Generis Right: What is a Substantial Investment? A Tentative Definition*, in IIC, 2005, 2; ID., *Databases Sui Generis Right: Should we Adopt the Spin-Off Theory?*, in EIPR, 2004, 402; G. WESTKAMP, *Protecting Databases under US and European Law*, in IIC, 2003, 772; J.L. GASTER, *The EC Sui Generis Right Revisited after Two Years: A Review of the Practice of Database Protection in the 15 EU Member States*, in *Communications Law*, 2000, 87; R.R.H. WEBER, *Schutz von Datenbanken – Ein neues Immaterialgueterrecht?*, UFITA, 1996, 14. Before the Directive see T. DREIER, *Die Harmonisierung des Rechtsschutzes von Datenbanken in der EG*, GRUR Int., 1992, 739.

The Directive drew fierce criticism – from the time it was first proposed – in the US, especially in light of US Supreme Court decisions like *Feist*, 1991. In this regard, see J.H. REICHMAN and P. UHLIR, *A Contractually Reconstructed Research Commons for Scientific Data in Highly Protectionist Intellectual Property Environment, Law and Contemporary Problems*, 2003, 315; J. LIPTON, *Balancing Private Rights and Public Property*, in *Databases, Berkeley Technology L. J.*, 2003, 773; J.H. REICHMAN, *Database Protection in a Global Economy*, *Revue Internationale de Droit Economique*, 2002, 455; J.H. REICHMAN and P. SAMUELSON, *Intellectual Property in Data?*, *Vanderbilt L. Rev.*, 1997, 51.

As for industrial design, covering both utilitarian and aesthetic enjoyment, among the recent works, may I refer to G. GHIDINI, *From Here to Eternity? On the Overlap of Shape Trade Marks with Design Protection*, in *Liber Amicorum Hanns Ullrich*, München, 2009, 81; A. KUR, *Cumulation of IP Rights Pertaining to Product Shapes – An ‘Illegitimate Offspring’ of IP Law?*, in G. GHIDINI and M. GENOVESI (eds), *Intellectual Property and Market Power*, ATRIP Papers 2006–2007, 613; N. GARNIER, *La Protection Juridique des Créations du Design*, *Revue Internationale du Droit d’Auteur*, 2004, 3; M. HOWE QC, *Russell-Clarke on Industrial Designs*, London, 2004; C.H. MASSA and A. STROWEL, *Community Design: Cinderella Revamped*, EIPR, 2003, 68; M. SCHLÖTELBURG, *The Community Design*, EIPR, 2003, 383; D.D. MUSKER, *Community Design Law Principles and Practice*, London, 2002; C.H. JEHORAM, *Cumulation of Protection in the EC Design Proposal*, EIPR, 1994, 514. From a TRIPs perspective, see A.G. DE BORJA, *Exceptions to Design Rights: The Potential Impact of Article 26 (2) TRIPs*, in EIPR 2008, 500; KUR, *TRIPs and Design Protection*, IIC Studies, *From GATT to TRIPs*, Vol. 18, Munich, 1996, 141; T.S. PATAKY, *Industrial Designs*, in *International Chamber of Commerce (ed.), Intellectual Property & International Trade – A Guide to the Uruguay Round TRIPs Agreement*, Paris, 1996, 1. Finally, one should consider the North American approach, with special reference to the application of the ‘functionality rule’: here see J.H. REICHMAN, *Design Protection and the New Technologies: The United States Experience in a Transnational Perspective*, *Baltimore L. Rev.*, 1991, 6 *et seq.*, 40 *et seq.*; MERGES, *et al.*, *Intellectual Property in the New Technological Age*, *op. cit.*, 333. For a comparison between US and Canadian law, see T. SCASSA, *Originality and Utilitarian Works: The Uneasy Relationship between Copyright and Unfair Competition*, in *U. of Ottawa L. & Tech J.*, 2003–2004, 51.

Lastly, and just for the record, a short mention may be made of those proposals (hopefully now fading) which expressed the daring attempt to use copyright as a means

of circumventing the limits on patents (for more, see the bibliographical notes at the end of Chapter 2). I am referring to proposed extension of copyright protection even to genetic mapping and biotechnology works in general. The following articles, some expressing doubts and reserves, are worthy of mention: S.R. WILSON, *Copyright Protection for DNA Sequences: Can the Biotech Industry Harmonize Science with Song?*, in *Jurimetrics*, 2004, 409; M. RIMMER, *Beyond Blue Gene: Intellectual Property and Bio-informatics*, IIC, 2003, 31; D.M. HOGLE, *Copyright for Innovative Biotechnological Research: An Attractive Alternative to Patent or Trade Secret Protection*, in *High Tech L. J.*, 1990, 75; D.L. BURK, *Copyrightability of Recombinant DNA Sequences*, in *Jurimetrics J.*, 1989, 469; D. SMITH, *Copyright Protection for the Intellectual Property Rights to Recombinant Deoxyribonucleic Acid: A Proposal*, in *St Mary's L. J.*, 1988, 1083; I. KAYTON, *Copyright in Genetically Engineered Works*, in *G. Wash. L. Rev.*, 1982, 191.

Let us turn now to the issue of the production and circulation (distribution) of intellectual works. As regards the first aspect, a most important issue seems to be the evolution of reproduction technology and the development of *multimedia works* as derivative works (on this point, see P. GOLDSTEIN, *Derivative Rights and Derivative Works in Copyright*, in *J. Copyright Society*, 1983, 209), consisting of a combination of works or – more commonly – portions of pre-existing works, generally expressed through a wide variety of media (literature, music, painting, cinema, etc.). In this regard, see I. STAMATOUDI, *Could Multimedia Works be Protected as a Form of Audiovisual Works?* in P. TORREMANS, *Copyright Law – A Handbook of Contemporary Research*, 2007, 185. See also U. LOEWENHEIM, *Multimedia and the European Copyright Law*, IIC, 1996, 45, for a theory of multimedia works as databases. The number and variety of works and portions thereof that digital technology allows to assemble has led to a crisis in the traditional model of individual agreements for obtaining the consent of the holders of copyright and related rights on specific works (see P. SAMUELSON, *Digital Media and the Changing Face of Intellectual Property Law*, *Rutgers Computer and Tech. L. J.*, 1990, 4; A. GROGAN, *Acquiring Content for New Media Works: The Rights and Acquisition Process and Contract Drafting Consideration*, in J. BAUMGARTEN, M. EPSTEIN and A. GROGAN (eds), *Online Law: Emerging Legal and Business Issues*, New York, 1996). In short, such a crisis can be resolved on two – for some, alternative, for others, concurring – fronts. One involves recourse to compulsory licensing mechanisms, on the basis of models already tested in the copyright sector (even in the US; see R. COOPER DREYFUSS and R. ROSENTHAL KWALL, *Intellectual Property: Trademark, Copyright and Patent Law*, New York, 1996, 437; B. RINGER, *Technology and Copyright*, Mt. Airy, Maryland, 1979, 200. See further, J.H. REICHMAN and P. SAMUELSON, *Intellectual Property on Data?*, *op cit.*, who propose the introduction of compulsory licences for extracting information from databases). The other involves a management system of copyrights based on ‘collecting societies’ or ‘agencies’ professionally in charge of obtaining the many necessary consents for the use of the large number of various (portions of) copyrighted works (on this issue, see P. SPADA (ed.), *Gestione collettiva dell’offerta e della domanda di prodotti culturali*, in *Quaderno n. 16 di AIDA*, Milan, 2006; R.P. MERGES, *Intellectual Property and Digital Content: Notes on a Scorecard*, in *Riv. dir. ind.*, 1998, I, 261).

The debate on the second and newest aspect of the adaptation of copyright to digital reproduction and transmission technologies and the dissemination of works electronically (over the Internet) has concentrated above on access and in particular digital rights management (DRM) systems and the associated technological protection measures (TPM). On this point, especially for a legal and economic analysis, see M.L.

MONTAGNANI, *A New Interface between Copyright Law and Technology: How User-generated Content will Shape the Future of Online Distribution*, in *Cardozo Arts & Entertainment Law Journal*, 2009, 721; P. MAGNANI and M.L. MONTAGNANI, *Digital Rights Management System and Competition – What Developments within the Much Debated Interface between Intellectual Property and Competition Law?*, in *IIC*, 2008, 83; G. MAZZIOTTI, *EU Digital Copyright Law and the End-user*, Heidelberg, 2008; J.C. GINSBURG (ed.), *The Pros and Cons of Strengthening Intellectual Property Protection: Technological Protection Measures and Section 1201 of the US Copyright Act (February 1, 2007)*, Columbia Public Law Research Paper No. 07-137, available at SSRN: <http://ssrn.com/abstract=960724>. See further Y. BENCHLER, *The Wealth of Nations*, New Haven, CT, 2006; G. GHIDINI and M.L. MONTAGNANI, *Esercizio del diritto d'autore e dei diritti connessi in ambiente digitale e dispositivi tecnologici di controllo dell'accesso ai contenuti*, in P. SPADA (ed.), *Gestione collettiva dell'offerta e della domanda di prodotti culturali*, in *Quaderni di AIDA*, Milan, 2006; C.B. GRABER, C. GOVONI, M. GIRSBERGER and M. NENOVA, *Digital Rights Management: The End of Collecting Societies?*, New York, 2005; D.L. BURK, *Legal and Technical Standards in Digital Rights Management Technology*, Minnesota Legal Studies Research Paper, No. 05-16, 2005; R. CASO, *Digital Rights Management*, Padua, 2004; A. OTTOLIA, *Preserving Users' Rights in DRM: Dealing with Juridical Particularism in the Information Society*, in *IIC*, 2004, 491; W.M. LANDES and R.A. POSNER, *An Economic Analysis of Copyright law*, in *J. Legal Studies*, 1989, 325. Worth reading again is T.C. VINJE, *A Brave New World of Technical Protection Systems: Will There Still be Room for Copyright?*, in *EIPR*, 1996, 431.

For an overview of the future of copyright in the digital age, it is interesting to compare and contrast the views expressed by authors on both sides of the Atlantic. Among European contributions I would mention S. von LEWINSKI, *Rights Management Information and Technical Protection Measures as Implemented in EC Member States*, in *IIC*, 2004, 844; S. DUSOLLIER, *Exceptions and Technological Measures in the European Copyright Directive of 2001 – An Empty Promise*, in *IIC*, 2003, 62; N. BRAUN, *The Interface between the Protection of Technological Measures and the Exercise of Exceptions to Copyright and Related Rights: Comparing the Situation in the United States and in the European Community*, in *EIPR*, 2003, 496; M. LEHMANN, *The EC Directive on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society – A Short Comment*, in *IIC*, 2003, 521; J. FARCHY and F. ROCHELANDET, *Copyright Protection, Appropriability and New Cultural Behaviour*, in R. TOWSE, *Copyright in the Cultural Industries*, Cheltenham, UK, 2002, 178; M. RICOLFI, *A Copyright for Cyberspace? The European Dilemmas*, in *AIDA*, 2000, 443; T. DREIER, *Adjustment of Copyright Law to the Requirements of the Information Society*, in *IIC*, 1998, 623 (this article summarises the in-depth research carried out by the Max Planck Institute of Munich for the German government and used in shaping legislative reforms aimed at addressing the new problems arising from the development of digital technology. The research results were later published in a compilation edited by GERHARD SCHRICKER, *Urheberrecht auf dem Weg zur Informationsgesellschaft*, Baden, 1997); U. LOWENHEIM, *Urheberrechtliche Probleme bei Multimedienanwendungen*, in *GRUR*, 1996, 830; J.J. PHILLIPS, *The Diminishing Domain*, *ivi*, 1996, 429; S. NORMAN, *The Electronic Environment: The Librarian's View*, *ivi*, 1996, 71.

For a US viewpoint, I would suggest J. BOYLE, *The Public Domain: Enclosing the Commons of the Mind*, New Haven, Conn., 2008; M. ROTH, *Entering the DRM Free-zone: An Intellectual Property and Antitrust Analysis of the Online Music Industry*, in *Fordham Intellectual Property, Media & Entertainment Law Journal*, 2008, 515; P.

SAMUELSON, *Preliminary Thoughts on Copyright Reform*, in *Utah Law Review*, 2007, 1; J.H. REICHMAN, G. DINWOODIE and P. SAMUELSON, *A Reverse Notice and Takedown Regime to Enable Fair Uses of Technically Protected Copyrighted Works*, in *Berkeley Tech. L. J.*, 2007, 981; K. BLIND, J. EDLER and M. FRIEDEWALD, *Software Patents – Economic Impacts and Policy Implications*, Cheltenham, UK, 2005; M.A. LEMLEY and R.A. REESE, *Reducing Digital Copyright Infringement without Restricting Innovation*, in *Stanford L. Rev.*, 2004, 134; P.S. MENELL, *Envisioning Copyright Law Digital Future*, in *N.Y. School L. Rev.*, 2003; M.A. LEMLEY, *Place and Cyberspace*, in *Cal. L. Rev.*, 2003, 521; D. NIMMER, *Appreciating Legislative History: The Sweet and Sour Spots of the DMCA's Commentary*, in *Cardozo L. Rev.*, 23, 2002, 909; A.D. THIERER and W. CREWS (eds), *Copyrights: The Future of Intellectual Property in the Information Age*, Washington, 2002; J. LITMAN, *Digital Copyright*, New York, 2001; D.L. BURK and J.E. COHEN, *Fair Use Infrastructure for Rights Management Systems*, in *Harvard J. of L. and Tech*, 2001, 43; L. LESSING, *The Future of Ideas: The Fate of the Commons in a Connected World*, New York, 2001; L. JONES, *An Artist's Entry into Cyberspace: Intellectual Property on the Internet*, *EIPR*, 2000, 79; M. LEMLEY, P.S. MENELL, R.P. MERGES and P. SAMUELSON, *Software and Internet Law*, New York, 2000; P. SAMUELSON, *Intellectual Property and the Digital Economy: Why the Circumvention Regulations Need to Be Revised*, in *Berkeley Tech. L. J.*, 1999, 519; L. LESSIG, *Code and Other Laws of Cyberspace*, New York, 1999; D. HURLEY and H. VARIAN, *Internet Publishing and Beyond: The Economics of Digital Information and Intellectual Property*, Cambridge, MA, 1998; D.A. RICE, *Digital Information as Property and Product: U. C. C. Article 2B*, in *Univ. Dayton L. Rev.*, 1997, 621; T. FELDMAN, *An Introduction to Digital Media*, Routledge, 1997; M. STEFIK, *Shifting the Possible: How Trusted Systems and Digital Property Rights Challenge us to Rethink Digital Publishing*, in *Berkeley Tech. L. J.*, 1997, 137; J. BOYLE, *Shamans, Software, and Spleens: Law and the Construction of the Information Society*, Cambridge, MA, 1996; Id., *Intellectual Property Policy Online: A Young Person's Guide*, in *Harvard J. of L. and Tech.*, 1996, 47; M.J. LITMAN, *Revising Copyright for the Information Age*, in *Oregon L. Rev.*, 1996, 19; P. GOLDSTEIN, *Copyright's Highway: The Law and Lore of Copyright from Gutenberg to the Celestial Jukebox*, New York, 1994; P. SAMUELSON, *Digital Media and the Changing Face of Intellectual Property Law*, *Rutgers Computer and Tech.*, 1990, 323.

Also of interest is the Chinese perspective illustrated by H. XUE, *What Direction is the Wind Blowing? Protection of DRM in China*, in G. GHIDINI and M. GENOVESI (eds), *Intellectual Property and Market Power*, ATRIP Papers 2006–2007, 812.

Many of the authors cited above have criticised the progressive restriction of the scope of free use. As far back as 1955 M. FABIANI (*La nozione di uso personale nel diritto d'autore nei confronti delle possibilità offerte dalla tecnica moderna all'utilizzazione delle opere dell'ingegno*, in *IDA*, 1955, 161) specified that there are some limits to copyright that are intrinsic and essential to the subject matter thereof. In this regard, as argued in this chapter, it seems systematically improper to consider those limitations as mere 'exceptions'. On this issue, see C. GEIGER, *The Answer to the Machine Should not be the Machine: Safeguarding the Private Copy Exception in the Digital Environment*, in *EIPR*, 2008, N. HELBERGER and P.B. HUGENHOLTZ, *No Place Like Home for Making a Copy: Private Copying in European Copyright Law and Consumer Law*, in *Berkeley Technology Law Journal*, 2007, available at <http://ssrn.com/abstract=1012305121>; T. APLIN, *Factoring of the Public Interest into Private Enforcement of Copyright*, in M.L. MONTAGNANI and M. BORGHI (eds), *Proprietà Digitale, Diritti D'Autore, Nuove Tecnologie e Digital Rights Management*,

Milan, 2006, 165; J. DREXL, *Diritto d'autore in ambiente digitale: dall'efficienza economica all'efficienza normativa*, in M.L. MONTAGNANI and M. BORGHI (eds), *Proprietà Digitale, Diritti D'Autore, Nuove Tecnologie e Digital Rights Management*, Milan, 2005, 53; S. DUSSOLIER, *Technology as an Imperative for Regulating Copyright: From the Public Exploitation to the Private Use of the Work*, 27 *EIPR*, 2005, 201; G. OLIVIERI, *Videoregistrazione a distanza, copia privata e diritto d'autore*, in *Studi di diritto industriale in onore di Adriano Vanzetti: proprietà intellettuale e concorrenza*, Milan, 2004, p. 1130; P. ROTT, *Die privatkopie aus der Perspektive des Verbraucherrechts*, in R. HILTY and A. PEUKERT (eds), *Balance of Interests in Copyright Law*, 2004, p. 280; P. SPADA, *Copia privata ed opere sotto chiave*, in *Riv. dir. ind.*, 2002, I, 596; L. GUIBAULT, *Copyright Limitations and Contracts*, The Hague, 2002, p. 256; P. SPADA, *Copia privata ed opere sotto chiave*, in *Riv. dir. ind.*, 2002, I, 596; N. ABRIANI, *Le utilizzazioni libere nella società dell'informazione: considerazioni generali*, in *AIDA*, 2002, 98; S. DUSSOLIER, *Electrifying the Fence: The Legal Protection of the Technological Measures for Protecting Copyright*, 21 *EIPR*, 1999, 285. Moreover, and especially following the approval of Directive 2001/29/EC, numerous authors – and not only European ones – have advocated extending the scope of free use for lawful users. In particular, see the declaration on 'A balanced interpretation of the "three-step test" in Copyright Law' made at the ATRIP Congress in 2008 (see note 31 and accompanying text).

Moreover, as the European Commission stressed in its document on private copies following the public consultation of April 2008 (available at: http://ec.europa.eu/internal_market/copyright/docs/levy_reform/background_en.pdf): see in particular section 4.6–4.7), the new models for distributing works must be taken into account when determining so-called 'exceptions'. Free distribution or in any event distribution subject to acceptance of a creative commons licence is increasingly frequent (and in such cases, it is not logical for the user to have to pay any fees for the copy of the work involved).

Again, on the question of free use, of paramount importance is the issue of access to, and sharing of, copyrighted works for research and study purposes. Referring back to the point made in section 18 of this chapter, a reform of the current law is called for in the sense of providing greater freedom for those who engage in study and research. This aim would seem to be shared by the European Commission: see its Green Paper *Copyright in the knowledge economy* (COM (2008) 466/3), available at http://ec.europa.eu/internal_market/copyright/docs/green_paper_en.pdf (see section 3.3 of the document in particular). See also R. HILTY, *Copyright Law and Scientific Research*, in P. TORREMANS, *Copyright Law – A Handbook of Contemporary Research*, 2007, 315; G.B. RAMELLO, *Incentives, Efficiency and Social Justice: The Strange Case of Intellectual Property and Knowledge*, POLIS Working Paper, October 2008, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1031884.

On the need to strike a balance between protection of intellectual property and safeguarding other constitutional values, such as promoting culture and safeguarding freedom of information (and the right to privacy: see here the European Court of Justice of 29 January 2008, *Promusica*, C-275/06), I suggest S.T.M. NEWMAN, *Human Rights and Copyrights: A Look at Practical Jurisprudence with Reference to Authors' Rights*, in *EIPR*, 2009, 88; C. GEIGER, *Flexibiling Copyright – Remedies to the Privatisation of Information by Copyright Law*, in *IIC*, 2008, 178; P. TORREMANS, *Copyright and Human Rights*, Austin, Tex., 2008; R. CASO, *Il conflitto tra copyright e privacy nelle reti peer to peer: in margine al caso Peppermint: Profili di diritto comparato*, in *Dir. dell'internet*, 2007, 471; R. GROSS, *Il rapporto tra proprietà intellettuale e diritto nell'era tecnologica e le minacce alle libertà civili e all'innovazione poste dall'espans-*

sione dell'ambito di tutela del copyright, in *Cyberspazio e diritto*, 2007, 313; A. STROWEL and F. TULKENS (eds), *Droit d'auteur et liberté d'expression, Regards francophones, d'Europe et d'ailleurs*, Brussels, 2006; L. LESSING, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity*, New York, 2004.

Regarding freedom of information and especially the right to diffuse and not just receive information, digital technology has fostered the so-called *user-generated content*, where the latter may be made up of a mixture of copyrighted and uncopyrighted material distributed directly and free of charge with a peer-to-peer system. On this rather recent and expanding phenomenon, see E.M. NOAM and L. PUPILLO (eds), *Peer-to-Peer Video – The Economics, Policy and Culture of Today*, New York, 2008. On the issues that this gives rise to, see the OECD *Report on Participative Web: User-Created Content*, 12 April 2007, DSTI/IIC/IE(2006) 7/ FINAL. See further E. LEE, *Warming Up User-generated Content*, forthcoming publication in *U. Il. L. Rev.*, 2008, vol. 5 (currently available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1116671); E.M. NOAM, *The Economics of User Generated Content and Peer-to-Peer: The Commons as the Enabler of Commerce*, in *Peer-to-Peer Video, op cit.*, 3; M.A. EINHORN, *Gorillas in our Midst: Searching for King Kong in the Music Jungle* (2007), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1030886.

4. The distinguishing function and advertising value of the trademark: aspects and critique of the European reform

There are other factors, emotive as much as rational, which still today divide attitudes towards the legal protection of trade-marks. Pro-branders argue for generous extensive support, branding-sceptics for limited and controlled assistance. I shall label the former green-lighters and the latter red-lighters. I declare at once that my own inclination has long been to see red, rather than green. (W. Cornish, *Intellectual Property: Omnipresent, Distracting, Irrelevant?*, Oxford, 2004)

PART I

THE CLASSIC SYSTEM (BEFORE THE REFORM)¹

1. The Fundamental Distinguishing Function of Trademarks

Distinctive signs fulfil an essential function in the market economy. They enhance firms' own market identity by emphasising their difference from competing firms and businesses. The importance of that function (which was also associated with a quality guarantee before the introduction of free-market principles, especially in the age of guilds) was exalted in the trading system ushered in by the industrial revolution because of three main factors: (a) first and foremost, with the advent of *freedom of competition*, institutional *pluralism* became a hallmark of economic action; (b) second, with the *expansion of markets* – following on from better means of transportation, new product conservation techniques, development of distribution networks and faster

¹ The term 'reform' essentially refers to Council Directive 89/104/EEC of 21 December 1988 to harmonise the laws of the Member States relating to trademarks (now in codified version as Directive 2008/95 EC) and Council Regulation (EC) No. 40/94 on the Community trademark (now in codified version as Regulation 207/2009).

communications – the physical distance between firms and consumers increased such that they no longer came into close or even personal contact as was the case in the cottage industry-based economy, a distance that could only be bridged by a distinguishing sign, used on an exclusive, permanent basis which enabled consumers to recognise a given source of business and products and therefore to make or repeat preferential choices when purchasing certain goods and services; (c) finally, the *standardisation of products*, which allowed consumers to choose exactly *that* certain model of product.

It must be stressed that both firms and consumers share an interest in the distinctive function of the sign: consumer choices may be diverted as a result of mistake about the origin of the products. This diversion prejudices consumers (whose desire to purchase from X instead of Y will be thwarted by the misunderstanding) as well as the trademark owners, who will lose current and potential customers to their competitors.

Despite the evidence that the public is directly prejudiced by misleading use of trademarks (below, sections 14 and 15), the trademark legislation of some countries entitles only the owners and licensees of trademarks, and not public Authorities (judiciary or administrative), to take proceedings for infringement: enforcement is therefore dealt with as a matter of private interest.

The legal and policy choices underlying that approach are very clear and moreover confirmed by other characteristic aspects of the specific law on trademarks.² In those countries, therefore, that limit to enforcement can only be overridden outside trademark law: for instance, under criminal law enforcing abuses of ‘public’s faith’ or under consumer and/or advertising legislation considering an infringing trademark as a form of misleading advertising.

The interest in correct identification of the source of goods and services that legitimate trademark owners and consumers share is protected per se as an expression of freedom of choice, unrelated to the quality of the product. Irrespective of whether the goods or services that may be purchased as a result of the confusion are of similar, worse or even better quality than the product actually desired, that interest requires (and most legislation guarantees) an

² Another markedly private-law feature of trademark law emerges in the case of invalidity of a sign identical or confusingly similar to a prior registered trademark. This is the possibility that the legitimate owner authorises the registration of the later trademark: article 4(5) of Directive 89/104 (now 2008/95) and article 52(3) of Council Regulation (EC) No. 40/94 on the Community trademark (now article 53(3) Regulation 207/2009). This provision is consistent with the broader principle, laid down in the said Directive and Regulation (articles 5(1) and 8(5) respectively), according to which an owner may consent to a third party’s use of its trademark – thus with an increased risk of confusing the public.

equal degree of legal protection³ for both business and consumers that could be prejudiced by the confusion caused.

The nature and object of that interest further affects the duration of the trademark's legal protection, as regulated by most national legislation. On the one hand, full effective defence against confusion requires the prohibition on misleading signs to apply 'immediately' i.e. to the time when the risk of confusion arises, without waiting for actual prejudice to take place. On the other hand, as the need to distinguish obviously remains as long as the trademark owner carries on his business, it is inconceivable for the need to avoid confusion to be subject to a time limit. Full protection of the sign therefore requires a duration scaled to the effective persistence of the firm's activity, and is hence *potentially perpetual*.

2. The Classic Paradigm Based on Protection of the Distinguishing Function

Up to the 1990s, until the implementation into national legislation of Directive 89/104/EEC (now 2008/95) and the coming into effect of Regulation (EC) No. 40/94 (now 207/2009), in a number of European countries, including Italy, the legal protection granted under the classic paradigm of trademark law focused exclusively on protecting the distinguishing function of the sign. In particular, the legislation only granted to the party that first registered (or in some jurisdictions first adopted) the trademark, a right to forbid any unauthorised third party from making any commercial use (including advertising)⁴ of the same or of a confusingly similar sign to brand products in the same or similar sector as that of registration (or prior use) offered for sale in, imported to or exported from the country of registration.⁵ This right was later extended to commercial uses in telecom networks, in relation to which the law of trademarks provides

³ That is, in the same manner and relying on the same judicial remedies applicable in the case of the lower quality of the product acquired as a result of the confusion (except of course an action for damages to cover economic loss, for which there would actually be no standing in the event the purchased products were of higher quality).

⁴ In the case of e-commerce, the owner of a trademark cannot oppose the mere use in *advertising* of an identical or similar sign which is lawfully registered and/or used by other parties in other countries, even when it is (inevitably) extended to the country of registration. The indivisibility of telematic networks, especially the Internet, means that, in this case, exclusive national trademark rights work to bar third parties from manufacturing and distributing (not, repeat, from advertising as such), that is, from commercial uses of the trademark which by definition – and unlike advertising – involve a physical location. See the lucid ruling of *Playboy Enterprises v. Tattilo and others*, US District Court, So. District NY, 1996.

⁵ Without prejudice to the principle of 'Community exhaustion' (see section 5).

the fundamental regulatory paradigm (with some adaptations imposed by the cross-border nature of the medium) of specific distinguishing signs of electronic communication, in particular domain names.

Qualifying domain names as distinctive signs raises the problem of consistency with the 'first come, first served' principle that governs the rules on the registration of domain names themselves. In fact, the rigid application of that principle risks giving precedence to the person who registers first, even when there are pre-existing rights over perfectly lawful distinctive signs, which it does not seem fair to sacrifice in the name of the registration rules (a mere *posterius* compared to the substantive right). A solution that also safeguards the interests of the market and consumers in transparency could be based on an old European Commission suggestion in cases of trademarks once held by one firm and then 'split' (in this sense shared) between two distinct national independent owners (below, end of § 14). To avoid a confusing coexistence, it was proposed to rely on 'distinguishing additions'. In the case of domain names, such a rule could serve also to fairly regulate the coexistence on the Internet of domain names corresponding to trademarks legitimately used by distinct owners in different countries.

The focus on the distinguishing function expresses the traditional *relativity* of trademark protection that operates within the limits of the risk of confusion (passing-off), a risk typically related to the use of the signs in identical or at least neighbouring industrial fields. Thus, in the classic paradigm, the use of an identical, or at least very similar, trademark beyond those limits was not deemed unlawful in itself: if no confusion might occur, the interests of both firms and consumers in correctly identifying manufacturing sources could not be prejudiced. Hence, also, the fundamental requirement for the validity of the trademark, namely *novelty* (that is, not being identical or similar to a sign previously adopted by others), could only be ruled out if the prior registration (or *de facto* adoption) by another party related to products of the same or similar kind. As we shall see shortly, the Community reform has sharply restricted this freedom.

The exclusive reference to protection of the distinguishing function, typical of the classic paradigm, entailed a close and constant association between the trademark and the registering firm. If the function of the trademark protected by the legal system was to assure the identification of the source of origin of the products offered and hence to distinguish with certainty the goods and services of firm X from those of its competitors, it was necessary that the trademark be constantly connected to the firm that produced or in any case supplied the goods and services concerned. The aims of the prohibition were twofold: one aim was to guarantee that the circulation of the trademark could not induce consumers to be misled about the source of the goods and this rationale led to the corollary rule that third parties could be granted only exclusive licences with the sole (apparent) exception of the so-called 'licence for use',

corresponding to mere decentralisation of production within a 'group' of enterprises subject to a unitary power of supervision and management. The second aim was to protect the firm of the assignee against the risk that the assignor, by retaining the firm, could continue to compete non-stop with the former. This competition was particularly insidious because of the goodwill retained by the firm itself, together with the specific skill in manufacturing the very products to which the assigned trademark related.

This principle, adopted by countries most faithful to the classic paradigm (but not France, which traditionally allowed trademarks to be freely assigned), had a number of important corollaries, the most important of which consisted of a prohibition against assigning the trademark outside the associated firm or business and a prohibition against granting non-exclusive licences to third parties (except for user licences granted in the context of decentralising production – typically within groups – in circumstances where the trademark owner exercised full powers of control and direction over the manufacturing entity).

3. The Pro-competitive Role of Protecting the Distinguishing Function

Unlike patent rights, which forbid unauthorised third parties from manufacturing and/or selling the industrial products/processes to which the invention relates, the right to a trademark used with a purely distinguishing function does not express any exclusivity over industrial or commercial activity, but merely reserves the right to use a tool that ensures distinction on the market, and which is *more fully (effectively) distinctive precisely because it is exclusive*. In the last analysis, this feature performs a genuine pro-competitive function.

Thus, insofar as protection of the sign is limited solely to its distinguishing function, the exclusive right to the sign constitutes a zero-cost monopoly, or rather – forgive the oxymoron – an essentially pro-competitive monopoly. In fact, by contributing to the transparency of the market, the trademark enables consumers to choose between different offers in the most efficient way: as Landes and Posner point out,⁶ it is faster and cheaper than other methods of obtaining information about the market. Not only this. As well as lowering the cost of searching for information, placing a trademark on a product also assures transparency in competition. Through the first purchase(s) and only in this way is the consumer able to appreciate qualities of the product that are not directly observable from the outside. It is precisely the trademark that allows

⁶ See W. LANDES and R.A. POSNER, *Trademark Law: An Economic Perspective*, in *J. of Law and Economics*, 1987, pp. 265 *et seq.*

the consumer to bridge the information gap and make an immediate connection between the (positive or negative) purchase experience and the characteristics of the product, including those that cannot be detected *a priori*.⁷ This is a strong additional reason why no *a priori* time limit is set on such a monopoly; the absence of monopolistic costs thus converges with the vital need to avoid confusion on the market and to protect the identifying function for as long as the firm's business continues.

However, the overall law on trademarks in some respects can result in the protection afforded giving rise to some anti-competitive effects. Let us consider the principal situations in which this can occur.

4. Some Critical Aspects of Trademark Protection from a Competition Standpoint

Shape marks (three-dimensional marks)

The first, particularly problematic, from an interpretative standpoint, relates to the possibility, recognised by the trademark law of many countries and expressly contemplated by both Directive 89/104/EEC of 1988 and Community Trademark Regulation (EC) No. 40/94 of 1993, to register and protect the shape of a product as a trademark. And indeed 'shape marks' – or to be more precise: certain *types* of shape mark – are among those intellectual property rights that raise most serious concerns regarding the negative impact that such rights and their exercise may have on the structural and/or functional features of competition in their respective markets. Indeed, the materialisation of this impact, and hence the conflict with the essentially pro-competitive vocation of the fundamental function of trademarks to distinguish goods and services from each other ('distinguishing function'),⁸ does not, however, relate to every shape, but just to three-dimensional ones. And even then, not all such shapes are problematic, but just the 'intrinsic' ones, that is to say, those that coincide with the natural shape of the finished product itself,⁹ or the form of its packaging – when the product itself does not have a three-dimensional

⁷ N.S. ECONOMIDES, *The Economics of Trademarks*, in *TMR*, 1988, 78, especially pp. 526–7.

⁸ Fundamental and paramount, as implied by the Trade Mark Directive 89/104/EC (now 2008/95). According to article 5(1), protection of the 'distinguishing function' is essential and mandatory, whereas according to article 5(2), the 'attractive' (advertising) function of a renowned mark in relation to goods or services which are 'not similar' to those for which the trademark is registered is envisaged as an additional but not mandatory option ('Any Member State *may also* provide that ...'; emphasis added).

⁹ The shape of vehicle spare parts is excluded from registration as trademarks under article 3(1)(e) of Directive 2008/95/EC (now 2008/95) and article 7(1)(e) of

shape as in the case of liquids¹⁰ – as the sometimes necessary presentation of the product in the marketplace.

This specification is not superfluous because, as a distinguished Italian scholar once stated over 40 years ago, the three-dimensional question ‘has been badly confused with the other question concerning the patentability of the shape of a product as a trademark’.¹¹ Hence, the competition-related concerns refer to the specific possibility that a three-dimensional shape, whose registration is sought, coincides with that of the finished product. It is essentially only this case – and not the one of a three-dimensional shape that includes an *additional* distinguishing element *extrinsic* to the finished product, for example, the statuette on the bonnet of a Rolls Royce¹² – that raises concerns of appreciable anti-competitive effects. Such concerns are, indeed, objectively warranted by the fact that the manufacture of ‘intrinsic’ three-dimensional shapes of products and containers on an industrial scale would effectively allow – for self-evident physical, functional and economic reasons

Regulation No. 40/94 (now 207/2009). This is to be explained by the fact that the shape of spare parts is defined by their replacement function and that their commercial value derives from perfect substitutability with the original part (see also Bundespatentgericht, 20 October 2004, *BMW-Motorhaube* (2005), *Markenrecht* 56, cited also by A. KUR, *Cumulation of IP Rights Pertaining to Product Shapes – An Illegitimate Offspring of IP Law?*, in L.M. GENOVESI and G. GHIDINI (eds), *Intellectual Property and Market Power*, ATRIP Papers 2006–2007, Buenos Aires, 2007, p. 613, at pp. 627 *et seq.* The exclusion is furthermore consistent, as concerns ‘internal’ spare parts, with the provisions of article 4(2) of the Community Designs Regulation No. 6/2002, according to which a design, including a component incorporated into the complex product, can only be registered if it remains visible during normal use of the latter. See also U. KOSCHTIAL, *Design Law: Individual Character, Visibility and Functionality*, IIC, 2005, 36, p. 297, at pp. 310 *et seq.*

¹⁰ See the decision of the House of Lords in *Coca-Cola TM* [1986] RPC 421; see further references in W. CORNISH, *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights*, London, 2003, p. 652. In that decision, it was persuasively stated, *inter alia*, that in the case of liquids, the form of the container must necessarily be deemed to be that of the product (*ibid.*, p. 425, and especially p. 449).

¹¹ M. ROTONDI, *Diritto industriale*, Padua, 1965, p. 117. (In said book’s times, Italian law spoke of ‘trademark patents’).

¹² Moreover, as G. SENA, *Il diritto dei marchi: Marchio nazionale e marchio comunitario*, Milan, 2007, pp. 80 *et seq.* points out, there may well be two-dimensional marks intrinsically connected to a product. A famous example in this regard, again from the United Kingdom (see the House of Lords judgment in *Smith, Kline and French Laboratories Ltd. v. Sterling-Winthrop Group Ltd* [1976] RPC 511), concerned a polychrome coating on the surface of a pill: a sign that was, in reality, two-dimensional and simply applied to the surface of the product. The coating was correctly held to qualify for registration. On the other hand, two-dimensional marks, and even just chromatic ones, at times, have been held to have a functional character (for example, orange as a sign of danger; Case T-234/01, *Stihl v. OHIM* [2003] ECR II-2867).

– a variety of alternatives that are *far more restricted* than those afforded by two-dimensional shapes, as well as ‘extrinsic/additional’¹³ three-dimensional shapes. In regard to these ‘extrinsic/additional’ three-dimensional shapes, the interest of society – competitors and consumers alike – in ‘keeping free’ the use of these shapes (*Freihaltebedürfnis*)¹⁴ is zero or almost negligible compared to the trademark holder’s interest in appropriating the sign as a means for distinguishing products, albeit a sign of ‘second rank’ (below, at 7).

It was precisely this type of competition-related concern which, up to virtually the end of the last century, led most countries to refrain from recognising shape marks – in the specific sense intended here – in order to prevent a situation whereby the shape of an industrial product could be exclusively appropriated in perpetuity by a single person – possibly also through the *subsequent* acquisition of a ‘distinctive character’.¹⁵ This was done, in the words of Tullio Ascarelli, to prevent ‘the scope of the protection of marks being confused with that of models [and ending up] being equivalent to a model for an indefinite period’.¹⁶ It was precisely this kind of risk – openly emphasised by the European Commission itself in the explanatory memorandum which accompanied the Proposal for an ‘harmonisation directive’ on marks¹⁷ – that induced

¹³ The term ‘extrinsic’ is used here in a concrete physical sense, not in abstract ideal terms – otherwise the separation between the trademark and the product would be circumvented. Here, recall the words of LORD ALDOUS in the *Philips* case; Court of Appeal, 5 May 1999, (2000) 31 *IIC* 452, at 454: ‘In my view a shape of an article cannot be registered in respect of goods of that shape unless it contains *some addition* to the shape of the article which [adds] trade mark significance’ (emphasis added).

¹⁴ See, even for further references, the Conclusions of Advocate General DÁMASO RUIZ-JARABO COLOMBER, Case C-102/07 B, *Adidas* [2008] ECR I-2439, paragraphs 33 *et seq.* On the doctrine of *Freihaltebedürfnis*, originally conceived for descriptive signs, see K.-H. FEZER, *Markenrecht*, München, 1999, pp. 308 *et seq.* See also J. PHILLIPS, *Trade Mark Law and the Need to Keep Free, IIC*, 2005, 36, p. 389.

¹⁵ The ‘question’ whether the distinctive character of the shape should exist as of its registration or could be acquired *ex post* through ‘secondary meaning’ seems to me to be dubious, at least in the European framework, since we apply the principle of ‘equal treatment’ of shape trademarks, which stands against assessing the qualification for trademark protection of the same kind of signs by means of ‘discriminating’ criteria (see, for example, Case C-144/06 P, *Henkel v OHIM* [2007] ECR I-8109). A different question, affirmatively answered by the ECJ in Case C-371/06, *Benetton Group* [2007] ECR I-7709, is whether the acquisition, prior to the application for registration, of a ‘power of (aesthetic) attraction’ of a product’s shape due to the notoriety acquired thanks to various advertising campaigns, may preclude valid registration, if such power ‘exclusively’ constitutes the ‘substantial value’ of the shape, according to article 3(1)(e) of the Trade Mark Directive.

¹⁶ T. ASCARELLI, *Teoria della concorrenza e dei beni immateriali*, Milan, 1960, p. 483.

¹⁷ Bull. EC, 1980, Suppl. 5, 57: ‘[T]he shape of goods will not be refused regis-

a long-lasting ostracism against trademark registration for three-dimensional shapes in legal systems that are traditionally sensitive to competition. In England, in particular, where ostracism lasted right up until the 1990s,¹⁸ and even beyond the Trade Mark Act 1994 (see the decision at first instance in *re Philips*, 1998, by Jacob J).¹⁹ Germany, too, shared the same reluctance, up to the replacement of the former *Warenzeichengesetz* by the *Markengesetz* in 1994.²⁰

Pressure from business interests that demanded – even in the framework of an ‘ongoing battle against look-a-likes’²¹ – a potentially perpetual protection for ‘original’ shapes of finished products, so as to overcome the limits of protecting the shape as an industrial design, was ‘bowed to’ for the first time in the early 1970s, namely when the Benelux uniform laws on trademarks entered into force in 1971.²² This principle, enshrined in article 1(2) thereof, was adopted by the European Community in article 3(e) of Directive 89/104/EEC and article 7(e) of Council Regulation (EC) No. 40/94. National laws thereafter followed suit.

As is well known, the Community Trade Mark Directive and Regulation enable the registration of three-dimensional product shapes, whilst excluding ‘signs which consist exclusively of the shape which results from the nature of the goods themselves’ or ‘the shape necessary to obtain a technical result’²³ or

tration unless the fact of registration would make it possible for an undertaking to monopolize that shape to the detriment of its competitors and of consumers’. See also A. FIRTH, E. GREDLEY and S. MANIATIS, *Shapes as Trademarks: Public Policy, Functional Considerations and Consumer Perceptions*, *EIPR*, 2001, 23.

¹⁸ See the 1986 landmark decision of the House of Lords on the shape of the Coca-Cola bottle, above note 10.

¹⁹ See the *Philips* decision at first instance by JACOB J [1998] RPC 283. Even in *Philips* at second instance, [1999] RPC 809, in *Procter and Gamble* [1999], RPC 673, and in the more recent *Whirlpool* decision, [2008] EWHC 1930 (Ch), UK courts seem to confirm their long-standing reluctance to admit that the mere three-dimensional presentation of a product can constitute a valid trademark.

²⁰ A. KUR, above note 9, at p. 619 and note 22.

²¹ J. BERGQUIST and D. CURLEY, *Shape Trade Marks and Fast-Moving Consumer Goods*, *EIPR*, 2008, 30, 17.

²² On the influence of this Benelux laws (notoriously a pioneer of protectionist bents), see R. ANNAND and H. NORMAN, *Blackstone’s Guide to the Trade Marks Act 1994*, London, 1994, p. 65; A. KUR, above note 9, at p. 619, note 20.

²³ In Case C-299/99, *Philips* [2002] ECR I-5475, paragraphs 78 *et seq.*, the ECJ identifies the rationale for European regulation as the need ‘to prevent trade mark protection from granting its proprietor a monopoly on technical solutions or functional characteristics of a product’ (see also Joined Cases C-53/01 to C-55/01, *Linde and Others* [2003] ECR I-3161, paragraph 72). For an in-depth comment on the ECJ jurisprudence in *Philips*, see D. SARTI, *I marchi di forma fra secondary meaning e funzionalità*, in *Studi in onore di A. Vanzetti*, II, Milan, 2004, p. 1411.

a shape which 'gives substantial value [primarily thanks to an aesthetic quality²⁴] to the goods'. Thus, the Directive reflects a compromise that allows registration, but only within certain limits, aimed at avoiding both the creation of 'natural monopolies' (first prohibition) and contradiction with the system of other exclusive rights of a fixed duration – in particular, designs granted with regard to shapes which have a technical or aesthetical value (second and third prohibitions).

The European approach represents an arduous interpretative slalom, based on the assumption that the *distinctive* character may not interfere or overlap with either the *functional* or the *ornamental*. I consider this assumption to be unfounded. The hypothesis – moderately accepted by both the Court of First Instance (CFI) and the European Court of Justice (ECJ)²⁵ – is that one can adopt and register a shape, whose functional and/or aesthetical features may attract customers, but not leave room for a specific, autonomous perception of a 'distinctive' character. This paves the way for a systemically improper solution, according to which the indefinite duration of trademark protection, allowed by appreciation of 'distinctive character', would necessarily absorb and attract even the functional and/or aesthetic features, since these are inseparably merged with the distinctive character in the one product. Currently, the IP law system affords exclusive protection to those kinds of features *only within specific statutory time limits*: hence the systemic contradiction. Thus, as one can also see, the normative reference to the registrability of shapes 'not exclusively' of functional and/or aesthetic value – a reference seemingly aimed at avoiding undue anti-competitive outcomes – could lead in fact to an overall monopolistic result. This is an expression of what psychologist Wilhelm Wundt once described by 'heterogenesis of ends' (*Heterogenie der Zwecke*), namely that intentions and motives may sometimes lead to unintended consequences.

Moreover, the assessment in practice of this provision of the Directive is somewhat arbitrary. Its formulation appears to encourage both misinterpretations (like the equating of 'non exclusively functional or aesthetical' with 'prevalingly distinctive')²⁶ which are fully subjective evaluations, thus implying a degree of legal uncertainty which seems excessive – even for the purpose of appealing decisions. This is obviously even more so in regard to the appreciation of 'aesthetic value' and its degree. Here, the wholly subjective character of the judgment, which even at mass level can vary dramatically as, over time,

²⁴ See FIRTH et al., above note 17, at p. 93.

²⁵ See, for example, Case C-144/06 P, *Henkel v. OHIM* [2007] ECR I-8109; Case C-24/05 P, *Storck v. OHIM* [2007] ECR I-5677; Case T-393/02, *Henkel v. OHIM* [2004] ECR II-4115; Case T-129/04, *Develey v. OHIM* [2006] ECR II-811.

²⁶ See, for example, Tribunal of Naples, 26 July 2001 (decree), *Riv. dir. ind.*, 2002, II, 153.

experience has shown,²⁷ can easily lead to totally contradictory, although completely 'legitimate', legal assessments, especially if one considers that both critics and the 'art market' nowadays currently assume *diversity* as an aesthetic *value*.

All this, I am afraid, might well encourage the courts to adopt an 'easy' straightforward solution in giving a green light to the trademark registration of 'intrinsic' three-dimensional shapes that are merely capable of capturing consumers' attention. A judicial solution, resulting in the creation of 'a model for an indefinite period' (Ascarelli) would thus be a clearly pro-monopolistic outcome, which might be even more intense given that the Directive and the Regulation would allow the extension of adding exclusivity to 'renowned' non-registered signs, that is, beyond the class of goods in respect of which confusion can exist. This would amount to a *leverage* of monopolistic power. Since firms can make *any* sign into a 'renowned' one simply by means of an intensive investment in advertising, every sign, in fact, is potentially a 'renowned sign'; thus, the leveraging of monopolistic power potentially concerns *all* marks.

To such an anti-competitive outcome, I would suggest the following interpretative solution. I believe that the very narrow, perhaps only semantic, legal corridor through which the Community Trademark Directive attempts to solve the conundrum by carving out an independent space for the distinctive character of product shapes, as opposed to their functional or ornamental value, has been effectively closed and has finally lost its *raison d'être* by virtue of the subsequent Community legislation on designs and models (Directive 98/71/EC on the legal protection of designs and the Community Design Regulation(EC) No. 6/2002).

In fact, this legislation, which suffers from additional competition-related concerns regarding the overlap between design protection and copyrights,²⁸ does not only substantially govern the form of industrial products, but also lays down the condition that the shape must possess 'individual character' as opposed to its 'ornamental character' which was previously required by national law, so as to differentiate it from others already known and according to the 'overall impression'²⁹ of an 'informed user', in order to be registered

²⁷ Think, for example, of the pioneer designers of the Berliner Bauhaus School of the 1920s, originally considered as *provocateurs* (when not 'subversives') and many years later rightly celebrated (an aesthetic 'secondary meaning'?).

²⁸ May I take the liberty here to refer to my earlier book (*Intellectual Property and Competition Law – The Innovation Nexus*, Cheltenham, 2006), pp. 67 *et seq.*

²⁹ In my view, 'overall' has two possible meanings. One refers to the irrelevance of minor differences (article 5(2) of Regulation No. 6/2006). The other refers to the general context of the market in which the risk of confusion must be judged (even more

and thereby benefit from an exclusive right for up to 25 years. This fundamental condition regulates not only the access to protection, but also the scope thereof, given that an infringement, according to article 9(1) of the Directive and article 10(1) of the Regulation, is linked to the corresponding impression of having the same ‘individual character’.

I submit that the ‘individual character’, apt to convey an impression of a difference in design, is essentially the same as the ‘distinctive character’ prescribed by a trademark law – which must also be appreciated on the basis of an ‘overall impression’³⁰ – in spite of the reference to an ‘informed’ user. I firmly believe that rather than differentiating between the criteria of ‘individual’ and ‘distinctive’ character – thus keeping the two sets of regulations on separate levels, hence, capable of cumulation – the adjective in question expresses a natural evolution of the legal concept of the ‘average consumer’ in a contemporary context of widespread market information. Yet, the traditional yardstick of the ‘average consumer of low awareness’ has *not* lost its protective justification – specifically as concerns information that objectively cannot be perceived, even by an attentive eye.³¹ However, as everyone knows, the ‘average consumer’ is a yardstick that the courts, in their assessment of the likelihood of confusion, have traditionally applied in an articulate manner, having regard also to the specific class of goods and, hence, to the buyers involved. There can surely be no doubt that the purchasers of design products are customers who actually *do* pay attention to trends in tastes and aesthetics. From yet another standpoint, raising the threshold to the ‘average consumer’ parameter seems reasonable. It fulfils the need to limit the granting of exclusivity to design products that are not banal and that, as such, are effectively capable of capturing, in a differentiated manner, the attention of a ‘discerning’ buyer.

In general terms, however, the fact is that the criterion of the ‘informed user’ is increasingly becoming the general yardstick for the legal protection of ‘commercial good faith’. This is confirmed by Directive 29/2005/EC on unfair commercial practices – a directive of key systemic importance aimed at ‘harmonising’ the qualification criteria in the field of consumer protection in *all* its aspects. It is enlightening here to see the concept embodied in recital 18,

so when reference is made to an ‘average consumer’ who is ‘reasonably observant, circumspect and informed’; see also below in this section).

³⁰ Case C-473/01 P and C-474/ 01 P, *Procter & Gamble v. OHIM* [2004] ECR I-5173, paragraph 44.

³¹ Thus, the traditional yardstick should continue to be used for information regarding, for example, the method of manufacture of a product or the degree of risk associated with a financial product incorporating ‘derivatives’.

previously expressed by the ECJ on several occasions,³² according to which the 'Directive takes as a benchmark the average consumer, who is reasonably well informed and reasonably observant and circumspect'. Still, according to the Directive, this benchmark can only be derogated from in special cases, where, for example, the business practice is directed toward 'weak' consumers, such as children.³³

If the foregoing is correct, we should then acknowledge that an overlap of conflicting Community regulations makes the application of both benchmarks reciprocally incompatible. Indeed, on the basis of the same fundamental requirement for the protection of the distinctive/individual character, trademark law grants exclusivity in perpetuity, and design law grants protection for a limited, fixed period only. Ignoring this contradiction would inevitably lead to the *cumulation* of protections,³⁴ in the sense that even where 'short' exclusive design protection had expired, thanks to the regulation of trademarks, exclusive protection would last for ever. This is tantamount to accepting that the fixed period of protection granted to a particular design can be made meaningless by the registration of finished product shapes as trademarks.

For two systemic reasons, this consequence is not acceptable. First, as already mentioned, it offends the principle that the legal system should be kept free of situations where one set of rules *circumvents* another, even though these two sets of rules regulate the same subject matter and adopt basically the same requirements for affording protection and defining the scope of that very protection. Second, in view of the constitutional objective of freedom of

³² As in particular in the three joined *Linde* cases, above note 23, paragraph 41. See also the decision issued in *Procter & Gamble*, above note 30, paragraph 33. See also CFI judgment in Case T-129/04, *Develey v. OHIM* [2006] ECR II-811, paragraph 46.

³³ One can furthermore observe that *ubi lex voluit, dixit*. When legislation wants to refer to a specific public, such as specialised businessmen as distinct from 'informed' users or consumers, it generally does so expressly. In particular, concerning the assessment of the disclosure of the design or model, article 6(1) of the Directive and article 7(1) of the Regulation provide that the design shall be deemed to have been made available to the public if it has been exhibited, used in trade or otherwise disclosed, except where these events could not reasonably have become known in 'the normal course of business to the circles specialised in the sector concerned, operating within the Community'.

³⁴ In favour of the cumulation, see A.H. KHOURY, *Three-dimensional Objects as Marks: Does a 'Dark Shadow' Loom over Trademark Theory?*, in *Cardozo Arts & Entertainment Law Journal*, 2009, II, p. 335; G. SENA, *La diversa funzione e i diversi modelli di tutela della forma del prodotto*, *Riv. dir. ind.* 2002, I, p. 577. P. TORREMANS, *Three Dimensional Trade Marks and Designs for Packaging*, in L.M. GENOVESI and G. GHIDINI (eds), *op. cit.*, p. 745, accepts cumulation *de lege lata*, but sharply criticises it for its monopolistic effects.

competition as an overarching principle, preference should be given to an interpretation of the law that avoids any negative impact on constitutionally protected interests, such as, in this case, on competitors and on consumers.

Here, one might be tempted to resolve this conflict on the basis of the principle of 'implicit abrogation', adopted in many legal systems with regard to the temporal succession of laws. According to this principle, the more recent regulation will prevail, if it applies to the same subject matter and is founded on the same basic criterion of access to legal protection, but adopts a normative solution and a justification that is acutely different from that expressed by the previous law. In our case, the more recent law grants exclusive rights for a moderately limited fixed term, rather than a potentially perpetual period.

However, even in the light of the *Silos* judgment,³⁵ one cannot say with certainty that Community law recognises the concept of implicit abrogation. Accordingly, it might be more prudent to argue that the conflict could be resolved, apart from a rather unlikely amendment to the Trade Mark Directive and Regulation, by a decision of the Court of Justice, directly ruling that the present regulation on shape trademarks is to be disapplied on the two systemic grounds mentioned above,³⁶ thus leaving room only for design protection.

I hasten to add that such a solution should be confined within the limits of that conflict, which certainly involves, in the normal course of events, neither two-dimensional trademarks, regardless of whether they cover the entire surface of the product,³⁷ nor three-dimensional trademarks of an 'extrinsic' – meaning, as stated above, *additional* – character for the finished product, which the trademark serves to distinguish. In this sense, the solution, which is advocated here, seems consistent with the terms of article 16 of Directive 98/71 on designs (and recital 7 thereof), replicated in article 96(1) of Regulation No. 6/2002 (and the recital 31 thereof), according to which the rules embodied in the such acts 'shall be without prejudice to any provisions

³⁵ Case C-228/99, *Silos* [2001] ECR I-8401.

³⁶ Prudence regarding the principle of implicit abrogation is perhaps strengthened, though on a merely formal level, by the adoption of the codified version of Directive 89/104/EC on trademarks contained in the very recent Directive 2008/95/EC of 22 October 2008. It could be observed that it is essentially a mere *restatement* that leaves the wording of the previous text substantially unaltered (certainly with regard to the matters under discussion here) and, hence, not really a new law in substantive terms (on the subject of formalism, however, the 'normative' texts, in a true sense, are the Regulations, compared to which the legacy of the rules on design protection is unquestionable). Yet, it is better to be cautious when evoking the principle of implicit abrogation in a technical sense. Moreover, and above all, the solution to the conflict proposed here can be independently based, as stated in the text, on the dual systemic rationale exposed herein.

³⁷ See above note 12.

of Community law or of the law of the Member States concerned, relating to trade marks'. It appears reasonable to interpret 'without prejudice' as implying 'in so far as is consistent' with the said Directive and Regulation on design protection, as well as the twofold systemic criterion, already proposed above. Thus, the Community Trade Mark Regulation would continue to apply, precisely because it is compatible with Community Design Regulation, to the *other* shape marks, including, and I repeat, three-dimensional ones that are 'extrinsic' to the finished product.

The legitimacy of this construction seems to be supported by at least three clues from Community law itself. First, it can be observed that the formulation of article 16 and recital 7 of the Design Directive, rather than reflecting a specific support for cumulation between trademark and design protection,³⁸ seems to express a generic intention on the part of the European lawmaker not to interfere, en bloc, with the several disciplines that apply to the subject matter of the forms of products. Such an assumption is strengthened by the comparison with the much more 'outspoken' and specific wording of articles 17 and recital 18 of the Design Regulation, regarding the possible cumulation of design and copyright protection.

Second, reference can be made to article 61 of Regulation (EC) No. 882/2004 (concerning official controls to ensure compliance with food and feed law), whose interpretative implications do not appear quite so 'exceptional'. This article, whilst recalling several other regulations, provides that 'the implementing rules adopted on the basis of those acts (...) shall remain in force in so far as they are not in contradiction with this Regulation' (emphasis added). Third, it should be noted that the 'list' of Community and national provisions state that the regulation is 'without prejudice' and opens with a reference to those 'relating to unregistered designs or models'. Since the Community Design Regulation (EC) No. 6/2002 also relates to that very subject matter, in laying down a three-year period of protection (article 11), it seems quite reasonable to infer that the above-mentioned article 61 of the Directive and article 96(1) of Community Design Regulation No. 6/2002 would not preclude the dis-application of national laws in excluding protection or in providing protection, although for a shorter term, for the said unregistered designs.

The alternative approach would, in fact, be to deny the conflict between the two sets of regulations, thus inevitably affording cumulative protection to three-dimensional shapes. As suggested, such 'cumulation' would adversely affect the systemic fabric of intellectual property law.³⁹ It would entail a total

³⁸ FIRTH et al., *supra* note 17, at pp. 88 *et seq.*, stress how the Directive is coy' on this point.

³⁹ To borrow the words of LORD TEMPLEMAN in the *Coca-Cola* decision, *supra*

departure from the principle of 'competitive balance' characteristic of all protection, patents and copyrights alike, aimed at promoting discoveries and useful arts, which, without reserve, assigns to the public domain the subject matter of the protection that has expired. In addition, unlike cumulation between design protection and copyright protection, both temporally limited although under different terms, cumulation with trademark protection would lead not just to a simple *postponement* of public domain but to its potentially unlimited *exclusion*.

Nor can it be accepted as an objection that, since the standard for obtaining protection has been 'reduced' from 'ornamental' to merely 'individual' character, the collective interest that the shape itself falls into the public domain is diminished and no longer sufficient to warrant the non-cumulativeness of trademark protection. Entry into the public domain and the free appropriation of what once benefited from exclusive patent, copyright or design protection remain, indeed, key tenets of the IP system, inseparably connected to the temporary nature of said IPRs and not influenced by how stringent the requirements for protection may or may not be. Moreover, the exclusivity enjoyed by the holder of a trademark for the intrinsic shape of a product would guarantee an exclusivity, fully equivalent in scope to the one offered by the registration as a design. For example, the trademark on the shape of a sofa or a lamp shade guarantees exactly the same potential for the exclusive manufacture and sale of the object as a corresponding design right, precisely because the trademark 'is' and 'coincides with' the product. Thus, to allow cumulation here would amount to cancelling the rule on the limited duration of design rights in favour of a protection potentially unlimited in time.

The solution advocated here must be understood from a systemic perspective, that is, beyond the scope of the merely individual conflict between the rightholder and the imitator. With such a perspective, the limited and fixed duration of an exclusive right – though individually perceived as 'punitive' by the rightholders – acts here as a positive pro-competitive and pro-innovative stimulus, even on the latter, who are, as a result, encouraged to further develop innovative products instead of resting on the laurels of their past achievements, that is, exploiting a rent-seeking situation.

Finally, I would like to anticipate another possible objection. The approach advocated here could be criticised for sacrificing the use of the distinctive character that an original shape might well present. I will not reply by simply invoking the primacy of the public interest in maintaining competition over

note 10, at 456, 'this is another attempt to expand the boundaries of intellectual property and to convert a protective law into a source of monopoly'. It is basically the same concern that A. KUR, above note 9, at p. 618, expresses with the question 'Eternal design protection through overlaps?'

the individual interests of the holders of trademarks – a primacy that even the Court of Justice has, to date, upheld, albeit to a limited extent, as in the *Dior/Evora* case.⁴⁰

I would rather observe that, in economic reality, in terms of what actually matters for the concrete interests at stake, such as the holders of trademarks and consumers and the need for a transparent market, the solution which is advocated here sacrifices very little of the distinguishing appeal as pursued *overall* and achieved by the trademark owner herself. First of all, the ‘shape mark’, which is by no coincidence of recent vintage yet unknown to the historical family of marks (not even mentioned in article 15 TRIPS⁴¹) substantially constitutes a typical ‘secondary’ mark, which, as Community case law and, before it, the US and the German Supreme Court⁴² confirmed, is not normally perceived by consumers as being a trademark, at least not as a ‘primary’ one,

⁴⁰ In Case C-337/95, *Parfum Christian Dior v. Evora* [1997] ECR I-6013, the ECJ accepts to sacrifice the ‘attractive’ (rather than the ‘distinguishing’) function linked to the commercial image of a famous trademark, where the protection of this function might irremediably clash with the free movement of goods and free intra-brand competition. In particular, according to the Court, ‘[o]n a proper interpretation of Articles 5 and 7 of Directive 89/10 (...) the proprietor of a trademark may not rely on Article 7(2) of Directive 89/104 to oppose the use of the trademark by a reseller who habitually markets articles of the same kind, but not necessarily of the same quality, as the trade-marked goods, in ways customary in the reseller’s sector of trade, for the purpose of bringing to the public’s attention the further commercialisation of those goods, unless it is established that, given the specific circumstances of the case, the use of the trademark for this purpose seriously damages the reputation of the trademark’.

⁴¹ As reminded above, Ch. 3, § 11 (on industrial design), art. 25.2 TRIPS admits in alternative (*not in cumulation*) copyright protection *only for bi-dimensional* textile designs: see also *supra* footnote 12 and accompanying text.

⁴² See Bundesgerichtshof, 5 December 2002, Case I ZR 91/00, *Abschlussstück (Parker case)*, cited and also approved by J. PAGENBERG, *Trade Dress and the Three-Dimensional Mark – The Neglected Children of Trademark Law?*, IIC, 2004, 35, p. 831, at p. 838 and note 17 therein. Community case law, too, has emphasised that although, as a matter of principle, the criteria for assessing the validity of three-dimensional trademarks are not any different from those applicable to other categories of marks (principle of *equal treatment*), nonetheless, the public concerned is not used to deducing the origin of products from the product shape or packaging without graphic elements or words. In this regard, see, *inter alia*, Joined Cases C-456/01 P and C-457/01 P, *Henkel v. OHIM* [2004] ECR I-5089, paragraphs 38, 39 and 53. See also Case C-24/05 P, *Storck v. OHIM* [2004] ECR I-5677; Case C-25/05 P, *Storck v. OHIM* [2004] ECR I-5719; Case T-129/04, *Develey v. OHIM* [2006] ECR II-611; Case T-88/00, *Mag Instrument v. OHIM* [2002] ECR II-467. In the US, in *Wal-Mart v. Samara*, 120 S. Ct 1339 (2000), the Supreme Court stressed that ‘consumers are aware of the reality that, almost invariably, *even the most unusual of products design* – such as a cocktail shaker shaped like a penguin – is intended not to identify the source, but to render the product itself as more useful or appealing’ (emphasis added).

so much so that its owners invariably attach to it the product's brand, whether nominal or figurative, or the producer's 'general' trademark. Has anyone ever seen a bottle of Coca-Cola on which the famous name was not clearly visible? It is written everywhere, even on the cap.⁴³

In this regard, the principle of 'fairness' in competition implies a specific obligation on whoever lawfully imitates a shape after the expiry of design protection to clearly place on the product or packaging her different 'general' trademark. This latter point introduces the second and perhaps the principal response to the objection mentioned above.

Denying trademark registration of 'intrinsic' three-dimensional shapes excludes the possibility that the same can be relied upon for distinguishing final products based on their *overall market appearance*. In other words, within the framework of a general assessment of unfair competition (including the tort of passing-off), the evidence of *other* clearly distinctive formal elements, and above all a radically different 'general' trademark, especially if 'reputed',⁴⁴ could perhaps persuade the courts that the reproduction of the shape does not entail any concrete risk of confusion for the consumer,⁴⁵ particularly where informed and circumspect, and, as such, entails no real risk of poaching customers.

⁴³ Applying the views expounded here to a practical hypothesis, let us suppose that in 25 years' time, an equally famous company, for example, Perrier, adopts a very similar shape for the containers of its mineral water, bearing the name Perrier in a quite clearly visible fashion. Would consumers be confused as to the origin of the product? I believe not. Possibly, they will have the impression that its shape has been licensed for use. But that impression (a) could not obviously be labelled as 'confusing' in a proper sense, because it would not cause any mistake as to the identity of the original producer; and (b) it would be, in any case, destined to rapidly fade away with a social awareness of the legal regulation according to which the protection of the shape of industrial products cannot be the subject of a perpetual exclusive right. Just think how commonly well known the (legal) fact is that one can imitate an expired patent (and hence reproduce the invention's conceptual content), allowing the coexistence of the various manufacturers (if) well distinguished by their respective 'general' trademarks, as is the case, *inter alia*, with generic drugs. Why should an analogous knowledge not take root, with a consequent absence of any relevant risk of confusion, in the face of a clear legal framework, allowing the coexistence after expiration of the design protection for the shape for products (if) well distinguished by their respective 'origin' trademarks?

⁴⁴ As such – as a reminder – that they are much more distinctive than the shape of the product itself.

⁴⁵ See, *inter alia*, Munich Court of Appeal, 23 June 2000, Case 29 U 5077/99, *Schokoladenverpackung*, <http://www.urteile.net/Y2/13646.html> (also comment by J. HAGER, *Infringement of Shape Trademarks*, *IIC*, 2003, 34, p. 403, at pp. 408 *et seq.*); confirmed by the Federal Supreme Court (Bundesgerichtshof), 28 November 2002, Case I ZR 204/00 (2003) GRUR 712. For the Italian case law, see Tribunal of Torino, 28 June 2004, in *Giurisprudenza annotata di diritto industriale*, 2005, 406, at 415 (n. 4823).

While ignoring, thus, the red herring of an allegedly inherent risk of confusion in the marketplace, I firmly believe that the overall Community legal framework leaves us with one alternative: either accepting the peaceful coexistence of the two regulations, which entails a cumulative protection resulting in a pro-monopolistic solution and a systemic conflict as described above *or* acknowledging an open conflict, which has to be resolved through the exclusion of ‘intrinsic’ three-dimensional shapes of industrial products from trademark protection, with the objective of restoring coherence with the regulation of industrial designs and the guiding principle of freedom of competition.

Tertium non datur. Of course, there is still the hope that the ECJ and/or, less likely, the Community legislature will intervene in the sense suggested here.

Until then, the application of the two legal regimes for trademarks and designs will remain the prisoner of the contradictions pointed out above and will continue to be exposed to the protectionist consequences that were long ago detected and denounced by both the courts and many scholars who privilege the primacy of the principle of freedom of competition.

5. Limitations to the Principle of Exhaustion at European Community Level

The second monopolistic aspect which – in the classical distinguishing function framework – can apply to trademark rights is the fact that as the exclusive protection conferred by these rights covers the whole of the country in which the trademark is registered, it may enable the owner to isolate that territory (market), in particular by preventing the entry of original products marketed by the owner itself or its licensees in other countries. This may allow the trademark owner to hinder free international circulation of goods, usually with the goal of exploiting the price differences which can arise on isolated national markets.

However, this risk should be avoided at European level by the principle of ‘exhaustion’ of trademark rights, repeatedly confirmed by the European Court of Justice and incorporated into article 7 of Directive 89/104/EEC (now 2008/95) and article 13 of Regulation (EC) No. 40/94 (now 207/2009). According to this principle, the owner of a registered trademark cannot, unless there are particular justifying grounds,⁴⁶ ‘prohibit its use in relation to goods

⁴⁶ Such as the need to distribute modified versions of the product on the market of a given country, either to adapt it to particular local customs or for climatic reasons. As for the parallel importer’s repackaging right, see the Court of Justice’s two decisions in two *Glaxo* cases (23 April 2002, C-143/00, and 26 April 2007, C-348/04), to the effect that a parallel importer – subject to notifying the trademark owner – may repackaging medicines. Nevertheless the trademark owner can oppose the repackaging if it is based *solely* on the parallel importer’s attempt to secure a commercial advantage.

which have been put on the market in the European Economic Community or the European Economic Area under that trademark by the proprietor or with her consent' (that is, through licensees or distributors in general). In practice, therefore, from the time when the product is put on the market, even in other EU or EEA countries, the owner of a national registration can no longer control or influence its movement even in such (different) national markets. (She might do so on the basis of specific agreements with resellers, but such agreements are obviously only effective *inter partes*, and also subject, in principle, to antitrust prohibitions, as possibly in restraint of trade for limiting intra-brand competition, that is, between distributors of the same branded product.)

Consequently, recognition of the Community exhaustion principle substantially eliminates that particular risk of monopolistic use of trademarks. But this happens so far *only* in the European Union and the European Economic Area.

This territorial limitation is open to criticism, as an objective expression of geopolitical protectionism.⁴⁷ But I believe that in the not too distant future,

More recently, the European Courts ruled on cases concerning commercial strategies aimed at limiting parallel imports either by delivering to national distributors (as distinguished from hospitals and other entities of the national health system, which buy at regulated prices) limited quantities of drugs, just sufficient to serve the national market, or by charging same distributors high prices that pre-empted the economic convenience of parallel exports.

The Court of First Instance (decision of 27 September 2006, T-168/01, *Glaxo*, in OJ, 2.12.2006) rejected the Commission's assumption (2001/791/EC, 8 May 2001) that agreements enacting such strategies should be forbidden due to their anticompetitive *object*, asserting that parallel trade must be given a certain protection in so far as it may give final consumers the advantages of effective competition in terms of supply or price. Consequently, while accepting that an agreement intended to limit parallel trade must in principle be considered in restraint of competition, this applies in so far as the agreement's effect may presumably deprive final consumers of such advantages. The Court of Justice (decision of 6 October 2009, joined cases C-501/06 P, C-513/06 P, C-515/06 P and C-519/06 P) on one hand (read: art.81.1) found this assertion to be 'an error of law', while on the other (read: art.81.3) upheld the Tribunal's position on the possibility that even agreements aimed at restricting parallel imports be authorised on 'efficiency' grounds. For a recent in-depth analysis of European jurisprudence on parallel trade in the pharmaceutical sector see J. DREXL, *Healing with bananas – How should Community competition law deal with restraints on parallel trade in pharmaceuticals*, in *Technology and Competition – Technologie et concurrence, Contributions in Honour of Hanns Ullrich – Mélanges en l'honneur de Hanns Ullrich*, 2009, 571.

⁴⁷ On the one hand, this discrimination serves to hinder imports by major international competitors of European firms, of agribusiness and industrial products which are competitive in terms of quality and price (by forcing non-European manufacturers to add an additional distribution stage, thereby increasing their costs). On the other hand, though less evidently, it prevents the 'embarrassing' re-import into Europe, obviously at very low prices, of products of lower-quality manufacture and therefore a

such Community discrimination is destined to be dissolved into the broader ambit of Member States of the World Trade Organization (WTO). In other words, it will be overridden by the historical perspective of the actual globalisation of world trade, which calls for circulation of goods without any geographical discrimination. In this case, I also believe that the only sanctions for conscious unauthorised imports of original goods into an exclusive licensee's territory should involve the application – for a limited time, to prevent 'rent-seeking' effects – of private law remedies based (not on cease-and-desist orders, but rather) on liability for damages, to compensate licensees for loss of earnings. The contractual terms entered into by authorised licensees and importers to ensure a return on the investments made to build up the local market for the product would thus be upheld – an outcome supported by commentators like Herman Cohen Jehoram, which would avoid the present unjustified tendency to equate original, although unauthorised products to counterfeited ones, with all the consequences that involves, including criminal sanctions.

Interpretative consistency would require – alongside well-established Community case law that the function of the trademark expresses its key rationale – that the principle of so-called 'international exhaustion' be recognised, given that the question of whether the goods are of EU or non-EU origin would be irrelevant.

Moreover, within the Community itself the application of the principle of exhaustion risks being *diluted* to the advantage of trademark holders, in particular high-end ones. This is thanks to the progressive benevolence of antitrust law (culminating in Regulation (EC) No. 2790/1999) on vertical agreements between producers and distributors aimed at delimiting the form and scope of distribution. This benevolence is the product of a rule of reason guided by economic analysis that has become established in Community case law in the wake of US case law.⁴⁸ It is founded on two pillars: (a) recognition of the needs of *selective distribution* capable of guaranteeing both a commercial environment in keeping with the prestige of the branded products and levels of customer care, warranties, after-sale repair/replacement, etc. higher than the norm: a guarantee which usually entails the charging of *appropriate* prices and the exclusion of mass distribution; (b) the notion (not always explicit) that the competition which needs to be defended is between different brands/

lower cost of production, not infrequently exported by trademark owners from Europe, under the *same* trademark, to developing countries.

⁴⁸ See the leading case *Continental TV, Inc. v. GTE Sylvania Inc.*, 433 US 36, 1977. See also the more recent cases *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 127 S. Ct., 2007, and *Texaco Inc. v. Dagher*, 547 US Dagher, 547 US 2006. In this regard, see RUDOLPH J. R. PERITZ, *The Roberts Court after Two Years: Antitrust, Intellectual Property Rights, and Competition Policy*, in *Antitrust Bulletin*, Symposium on 'Antitrust and the Roberts Court', 2007, 53, p. 153.

producers (*inter-brand*) as opposed to between distributors of the same brands (*intra-brand*). This view is founded on the conviction that the greater commercial valuing of single brands (through selective distribution) heightens and increases competition between various products. Therefore, in the final analysis, a greater tolerance of vertical restrictions is just a small sacrifice for the sake of more dynamic competition in the relevant market.

It is my view that this approach makes sense solely if and to the extent that it generates effective and concrete advantages for consumers: a precise benefit that is rationally appreciable in terms of service (warranties, repair, replacement) at an appropriate but not exorbitant price. Were such a condition or proportion not to be satisfied, the whole façade would collapse and reveal just a pro-monopolistic structure aimed at protecting high pricing policies.

6. Beyond the Distinctive Function: Protection of the Trademarks' Suggestive Value ('Selling Power')

The points made thus far concern trademarks only viewed from the standpoint of their distinguishing function and do not cover all of the competition-related aspects of trademark law. It is time to reflect on a different profile, which leads to the heart of the Community's reform of trademark law based on the aforementioned Directive and Regulation. This profile reflects a wider socio-economic appreciation of trademarks' value in contemporary industrially developed societies.

The advent and consolidation, after World War II, of the mass consumption era, powerfully boosted by the refinement and intensification of advertising and marketing techniques, highlighted an unquestionable fact: that, in addition to information about the source of manufacturing and trading, the trademark is a modern form of communication incorporating a 'message' designed to appeal to consumers,⁴⁹ thanks to the substantial reputation of the product and/or the advertising campaigns supporting it, which obviously focus on the sign.⁵⁰

⁴⁹ The 'message' may exceptionally turn out to be a negative one, causing a drawback effect. This may happen if the product has gone through a bad patch (an example being the Contergan brand, which suffered as a result of the thalidomide tragedy). As mentioned, this is a very unusual situation, as it is normally followed by abandonment of the loss-making sign. However, experience shows that such a negative effect is not normally generated by a mere reduction in the quality of the product, which can usually be offset by suitable advertising campaigns.

⁵⁰ Modern information technologies contribute to engendering customer loyalty. Just think of the way that companies use newsletters, mailing lists, fora and online communities to reach new customers and maintain contact with existing ones. These methods, at times intrusive into one's personal/domestic sphere (which law and the data protection authority can remedy in the name of the right to privacy), are very

This promotional message tends to generate consumer attraction and loyalty and, therefore, in the final analysis, commercial lock-in (think of the many young and even older people who buy clothes or shoes of a particular brand in order to feel they belong to a certain social circle).

This is to say that that promotional value (that is, selling power) translates into a tool of competitive advantage, which may even lead to the trademark owner enjoying a *dominant position*^{51,52,53} (below, Chapter 5 on the ‘intersection’ between IP and competition law). It should be stressed that the exploitation of this promotional value accrues to the owner first of all in the sector for which the mark is registered and traditionally used, and similar sectors. This is just stating the obvious: the ‘reputation’ of a trademark first of all develops and grows ‘around’ the sign, as known by the public, hence in its distinguishing function. Within such a framework, the promotional value of the trademark fosters an increase in sales and hence the owner’s market share first of all in her traditional area of business.⁵⁴

A particular, but not at all marginal, case of enhancement of the trademark’s ‘selling power’ – first of all, once again, in the sector of registration – can occur where the trademark owner also holds an invention patent. The hypothesis can easily give rise to a form of *cross-fertilisation* of the exclusionary power of the two IPRs, which could contribute to creating, and *prolonging*, a position of market power for the trademark owner. On the one hand, the sales monopoly most likely strengthens the image of ‘uniqueness’ of the branded product, which in turn increases the mark’s renown. On the

effective tools that also subtly build brand loyalty up to achieve unconditional loyalty to a brand, thereby strengthening its monopolistic potential (see further Chapter 5, section 6).

⁵¹ Which may also be found in *vertical* relations, that is, in agreements between the manufacturer/owner and distributors which, having regard to the type and segment of consumers served, ‘cannot afford not to stock’ certain branded products. Said distributors therefore become ‘captive customers’.

⁵² On more than one occasion the competition authorities have considered the *brand concentration* effect that happens following a merger or takeover and that notably reinforces market power (below, Chapter 5).

⁵³ See, for historical examples, the German Supreme Court in the 1976 *Rossignol* case, and the Italian Competition Authority in *Pepsico Foods v. Coca-Cola* (case no. 7804/1999, paragraphs 74 *et seq.* and 88 *et seq.*) and *Telecom Italia v. Tiscali and Albacom* (case no. 8481/2000, paragraph 104), involving ownership of trademarks with a widespread commercial reputation and considered as a factor that could create a dominant position.

⁵⁴ Thus, the issue of ‘market power’ related to trademarks’ renown is not to be confused with, nor reduced to, the question of the expanded protection of renowned trademarks in commercial sectors ‘not similar’ to that of registration (below, sections 8 *et seq.*).

other, that increased renown translates into a deeper customer loyalty, thanks to which the trademark, even after the expiry of the patent, permits its owner to take over the baton of market power accumulated by the product for all the years it was under patent. Just think of how much market power and market share the patent on Aspirin granted to the corresponding trademark well beyond the expiry of the former, allowing Bayer to remain in a dominant position *vis-à-vis* the producers of generic drugs based on the same formula (see further Chapter 5, end of section 5, subsection (c)).

The emergence of this socio-economic reality is, as hinted, at the roots of the crisis of the traditional legal paradigm, which has focused only on the distinguishing function of the mark, and consequently is grounded on a strict mark-to-firm connection ('one mark-one firm'). Designed to protect the identifying function of the sign and expression of a traditional long-term and individual product-oriented type of industrial planning, that link emerged as a constraint on the increasingly evident potential of well-known trademarks to express *an independent*, and independently measurable and exploitable, *promotional/selling power*. That power translated (both in the area of registration and even in other 'not similar' areas: below, sections 8 *et seq.*) into a trademark's *own* commercial and financial value, which became increasingly significant by comparison with the firm's material assets. How can one deny, for example, that the greatest asset of the Coca-Cola Company is its trademark?

Now, under the classic paradigm, focused on mere protection of the distinguishing function, this value had no recognition and thus, in the trademark holders' view, was largely 'wasted'. Partly wasted in the business area of registration and traditional operation, since the 'one mark-one firm' principle, and its corollaries, on one side forbade increasing the number of licensees, hence the overall amount of royalties, and on the other impaired the actual realisation of the trademark's full 'market value' *vis-à-vis* its sale, whose negotiations were often burdened by the legal condition of simultaneous acquisition of the firm – or at least the branch concerned. And wholly wasted, moreover, *vis-à-vis* possible profitable uses of the trademark in business areas dissimilar from that/those of registration – hence 'non-confusing' uses beyond reach of the exclusive right as granted by the classical paradigm.⁵⁵ Thus, for said rightsholders – especially of famous

⁵⁵ Until the EU reform, the courts in various countries granted protection within the limits defined by a possible, though broad, *association*, that is, always within the limits of the distinguishing function, although broadly interpreted. Thus, even before the reform, products that belonged to very different goods classes such as clothing and perfumes were grouped together in a single large category of articles intended for personal care.

signs – that paradigm eventually became an outdated strait-jacket. Court law, and some national legislation reacted accordingly, accelerating the crisis of the ‘one mark–one firm’ principle. While free assignment of trademarks was openly allowed in countries like France, in others the classic principle was increasingly watered down, for example, through dematerialisation of the legal requirement: transfer (sometime even fictitious) of mere productive know-how could substitute for the actual transfer of the firm or a specific branch. And legal theories were put forward, grounded on concepts of ‘dilution’ and/or ‘tarnishing’, in order to prevent third parties from unauthorised uses of the mark even in distant, ‘not similar’ fields of business.

That crisis came to its conclusion, at European level, through the regulatory reform chiefly based on the above-mentioned Directive 89/104/EEC and Regulation (EC) No. 40/94 (to be systemically interpreted as a set of principles that complete and confirm one another, even in relation to their harmonising effect on national legislation). As I will articulate shortly below, said reform modified the classic paradigm mainly by expressly allowing free assignment and non-exclusive licences and expressly stretching legal protection to renowned trademarks beyond the areas of registration. Both facets indeed highlight the new normative concept of the sign as *an asset in itself*.

Recital 10 of Regulation (EC) No. 40/94 (now Recital 11 of Regulation 207/2009) contains a very strong statement of principle which applies beyond the strict discipline of the Community trademark (as demonstrated by the harmonisation of national legislation). It states that the trademark ‘is to be regarded as an object of property which exists separately from the undertakings whose goods or services are designated by it’. Accordingly, subject to the overriding need to prevent the public being misled as a result of the transfer’ (see section 14 *below*), ‘it must be capable of being transferred’ and ‘must also be capable of being charged as security in favour of a third party and of being the subject matter of licences [read: including non-exclusive, pursuant to article 22.1 of the Regulation and article 8.1 of the Directive]’.

Let us now take a closer look at the reformed EC regulation, which has ‘harmonised’ national legislation in relation to the legal profiles we are dealing with.⁵⁶

⁵⁶ The harmonisation is not ‘full-scale’: see Recitals 4–6 to the Directive.

PART II

THE REFORM: THE BUSINESS INTERESTS PROTECTED

7. The Cornerstones of the Reform

The cornerstones of the European reform, which were fundamentally confirmed by the TRIPs Agreement,⁵⁷ essentially consist of two logically and teleologically linked departures from the classic model. First, as mentioned above, the trademark–firm knot has been loosened and with it, the principle of the classic paradigm whereby solely the distinguishing function of the trademark is protected (below, section 8). Trademark law has come to protect also the ‘advertising’ function of the (renowned) signs independently from their distinguishing function.

The cornerstones of the reform are evident from various perspectives. For example, the trademark must no longer be tied to a firm. It can validly belong to a private individual (‘any natural person’: art. 5 Reg. 207/2009). Also, since the trademark can circulate as an independent asset, the validity of licenses no longer requires, as mentioned, the exclusivity clause (art. 8.1 Dir.; art. 22.1 Reg.). In addition, licenses (as well as transfers) can be stipulated ‘in respect of *some* or all of the goods or services’ (emphasis added) for which the trademark is registered and even as concerns licenses⁵⁸ ‘for *part of the territory* (emphasis added) of a Member State’ (art. 8.1. Dir.; art. 22.1 Reg.). Now it is sufficient (article 19.1 of the IPC) for the trademark to be used directly by third parties with the owner’s consent (licence). The trademark can therefore belong to and be enforced by a party who has never owned any firm, and never will.

⁵⁷ TRIPs strengthens the judicial protection of trademarks (as of intellectual property rights in general): see section 2, articles 42 *et seq.*, with special reference to the powers of the courts to obtain evidence (article 43), and to restitutional remedies, such as the order to withdraw products constituting a breach of those rights from the market (article 46). In substantive terms, however, TRIPs sometimes reduces the protective scope of the rights granted by earlier national and international legislation, including the European legislation we are discussing. This applies, in particular, to the case of renowned trademarks which, in the case specified in article 6-*bis* of the Paris Convention (1967 version), are only protected on condition that a possible *prejudice to the owner* exists, and not also (as stated in Regulation (EC) No. 40/94, now 207/2009, article 9.1(c), not amended on this point by Regulation (EC) No. 3288/94, which harmonises the trademark Regulation with the TRIPs Agreement) if just a third party gains unfair advantage from using a renowned trademark for non-similar products.

⁵⁸ Not so for transfers. The rationale for the difference lies in the need to avoid the risk of an intrinsically confusing joint use of the same trademark by independent manufacturers of similar goods or services in the same territory/market.

Conversely, and symmetrically, a permanent end to the firm's business does not represent grounds for revocation of the trademark as it did under several prior national laws.

As the trademark can circulate as an independent asset, the validity of licences is no longer dependent, as mentioned, on an exclusivity clause. In addition, licences (as well as assignments) can relate not only to 'some of the products or services' for which the trademark was registered, but also (unlike assignments) to 'part of the country's territory'.

8. The Expanded Protection of Trademarks with 'Reputation'

As regards the extension of the protection beyond the limits of the distinguishing function of a renown sign that 'has a reputation in the Member State' (article 5(2) of the Directive), the owner's exclusivity reaches industrial sectors which are not only dissimilar in the strict sense from that of registration and use by the owner, but even *so dissimilar* as to rule out all risk of confusion.

These concepts are expressed in article 5 of the Directive 89/104/EEC, now Directive 2008/95/CE⁵⁹ (codified version): 'Any Member State may also provide that the proprietor be entitled to prevent all third parties not having his consent from using in the course of trade any sign which is identical with, or similar to the trade mark in relation to goods or services which are not similar to those for which the trade mark is registered, where the latter has a reputation in the Member State and where use of that sign without due cause takes unfair advantage of, or is detrimental to, the distinctive character or the repute of the trade mark' (i.e. may cause *dilution* or *tarnishing*: the two main grounds on which, before the reform, holders of famous marks had traditionally sought 'extramural' protection).

Now, as concerns this 'extramural' protection, it should first of all be noted that the occurrence of the pre-condition ('reputation' in Member States) laid down for access thereto is far from exceptional. There is wide, almost unanimous consensus on the principle that 'reputation' need not necessarily correspond to the high renown (*haute renommée*) which the owners of famous trademarks long had to show, before the reform, to claim protection unrelated to the sector of registration.⁶⁰

⁵⁹ In the classical perspective, the reputation of a trademark is taken into consideration only in terms of its ability to invalidate the subsequent registration of a trademark intended for identical or similar goods or services, with express reference to the risk of confusion (article 6-*bis* of the Paris Convention).

⁶⁰ See more amply M. RICOLFI, *I segni distintivi di impresa: Marchio Ditta Insegna*, in P. AUTERI, G. FLORIDIA, V. MANGINI, G. OLIVIERI, M. RICOLFI and P. SPADA (eds), *Diritto industriale-proprietà intellettuale e concorrenza*, Turin, 2007, pp. 126–8.

That threshold, then, in the ultimate analysis, only excludes trademarks of mere local renown and is sufficiently low to allow protection to be extended to any trademark known to 'a significant portion of the public'.⁶¹ But as even these can become known at national level simply through a strong injection of advertising, it is quite easy to transform an ugly duckling into a swan. In this respect, *every trademark is potentially 'renowned'*.

Second, the specific conditions laid down for such extended protection are not very restrictive on the whole. If one condition is not fulfilled, another will usually allow the extension. In particular, although uses of the trademark that can cause dilution of its distinctiveness or tarnishing of its reputation may rarely occur, the existence of an 'unfair advantage' or the absence of 'due cause' will normally be affirmed unless the distance between the fields of use is *so* huge as to *a priori* exclude any possible transfer of promotional value from one field to the other.⁶²

As for 'tarnishing' of a trademark's reputation, it postulates the association of the trademark with poor quality or 'disreputable' products; however, such associations are merely hypothetical (and consequently entail no solid, permanent reason for protection), and the more the use of another party's sign takes place in distant sectors, the more improbable they are, thus ruling out a reasonable risk of negative image transfer to the renowned trademark.

But even if one were to exclude the existence of any prejudice, one would easily be able to show – backed up by the absence of a due cause for using the other's renowned trademark – some element of an unfair advantage gained by the third party (as prejudice to the owner and undue advantage for the third party are not cumulative conditions).⁶³

As for gaining an 'unfair advantage' ('unfair' serves to stress *unauthorised and without due cause*), that condition will generally be met where the selling power of the trademark can be transferred to the new though distant (or better, unconfusable) sector, for which a clever advertising campaign might suffice.

⁶¹ See the *General Motors* decision, C-375/97.

⁶² In fact, to paraphrase LANDES and POSNER (above, note 6), if I wished to use, in a very distant field, another party's renowned trademark evoking luxury, it would make little difference whether I chose, for example, 'Rolls Royce', if others had already adopted 'Tiffany'. Suppose a lounge in Boston calls itself 'Tiffany's' or a peanut vendor in the Bowery calls himself 'Rolls Royce Ltd'. There is no danger that consumers will think that they are dealing with Tiffany's or Rolls Royce if they patronise these sellers, so it might seem that there would be no case for thinking them guilty of trademark infringement.

⁶³ As for 'due cause', the room for manoeuvre by a third party would seem limited to an objective need for public information such as that underlying the provisions of article 6(1) of the Directive.

Finally, it is worth noting that the EU reform and the national legislation into which it has been transposed protect renowned trademarks (considering their promotional value in itself) to a *greater* extent than does the common denominator established in international law. If we compare the conditions laid down in the last part of article 16.3 of the TRIPs Agreement with those of article 6(2) of Directive 89/104/EEC and article 9(1)(c) of Regulation (EC) No. 40/94 (now 207/2009), the EU legislation will be seen to be far more generous. On the one hand, as we have seen, the extended protection it provides can be based merely on the second user's unfair advantage and not *solely* on the prejudice(s) to the first user, as in the TRIPs Agreement, even though such prejudice may rarely occur. Above all, the EU legislation does not further require, as does the TRIPs Agreement, evidence of a connection between the owner's products and those of the third party. Thus the TRIPs Agreement also provides extended protection, but mainly against a 'risk of association' essentially *within* the boundaries of the distinguishing function. This is as it should be!⁶⁴

9. Greater Protection also in *Similar* Sectors?

Furthermore, it seems from EC jurisprudence that the greater protection for renowned trademarks has reached the stage – with further questionable effects for competition – where it also covers 'similar' products. I refer to the decisions in the *Davidoff*⁶⁵ and *Adidas*⁶⁶ cases, according to which the special protection does not only apply to dissimilar products but also to 'similar' ones, regardless of the likelihood of confusion. In the Court's view, this was justified by the need for 'systemic consistency', the argument being that if renowned trademarks are afforded strong protection for distant goods sectors then *a fortiori* protection must be afforded to the same trademark for similar products if the rival trademark, mirroring some formal elements of the renowned one, creates an association with the latter, including one that is not likely to generate confusion.

This position can be criticised on two basic grounds.

First, I see no 'systemic' reason – in fact, I see a contradiction – in evoking the concept of 'association', which the Directive expressly defines as a *species*

⁶⁴ Note the difference with Benelux case law, whose admirers view the risk of association not as a specific case of the risk of confusion but as a mere *psychological nexus*. In some cases (*Davidoff* and *Adidas*: see section 9) the European Court of Justice seems to have moved in this debatable direction, away from its traditional stance (*Puma/Sabel* case, C-251/95, 11 November 1997).

⁶⁵ See cases C-414/99 and C-416/99, 20 November 2001.

⁶⁶ See case C-408/01, 23 October 2003.

of confusion (article 5.1(b)), in order to justify a broadening of the protection in the absence of such confusion. The quoted decisions themselves clarify the rationale of this seemingly illogical argument. By enforcing non-confusing 'associations', the Court implicitly accepted the request, long advanced by many business circles, for exclusive protection against so-called 'look-alikes', that is, non-confusing imitations of products' 'dress' – a protection that neither trademark law nor unfair competition rules on passing-off would allow. In other words, what this jurisprudence objectively aims at is granting a legal protection to the *suggestive* value of the trademark, even in the area of registration. Additionally, the more renowned a trademark is, the more clearly and 'exactly' it is fixed in consumers' memory, so that a simple imitation will be perceived as just an imitation, and not be confused with the original product (teenagers know perfectly well that two, instead of three, stripes on the side of a gym shoe 'cannot' mean Adidas).

Second, and more substantially, even apart from the synergy with a patent on the same product (above, section 6), the trademark owner normally enjoys, as hinted above, the sign's attractive/suggestive value, primarily in the business area of registration. Now, once licences can be granted on a non-exclusive basis, the mark can be traded as an independent asset. Thanks to other parts of the reform, a well-known mark will attract, in its 'own' sector, many requests for a licence, and the offer of high fees, and high sale price. Thus there is no need to envisage a specific legal protection of a value that anyway and 'naturally' accrues to the rightsholder in the very area of registration.⁶⁷

10. Expanded Protection of 'Renown' to *De Facto* Trademarks?

The framework of the 'ongoing battle against look-alikes'⁶⁸ raises other issues. The extension of protection, including extramural protection for renowned trademarks, and its relatively lax conditions,⁶⁹ have led some scholars to

⁶⁷ Protection of renowned trademarks which have benefited from 'retroactive rehabilitation' by virtue of *secondary meaning* should not enable the owner – in the absence of any risk of confusion and as a result of the renown subsequently obtained by her mark – to prohibit competitors from continuing to use formal elements used by those competitors before the owner's own sign became distinctive. This outcome should however be avoided, at least as concerns marks used by competitors before the national law enacting the Directive had come into force (see article 5(4) Directive).

⁶⁸ J. BERGQUIST and D. CURLEY, *Shape Trade Marks and Fast-moving Consumer Goods*, in *EIPR*, 2008, 17.

⁶⁹ A pro-competitive interpretation of the rules on renowned trademarks would require that 'unfair advantage' or 'prejudice' be interpreted in a strictly objective sense as gains and losses that can be verified *on the market*.

interpret the law even more broadly,⁷⁰ above all in a way that would also include *de facto* trademarks. The normative support for that view is apparently article 4.2(d) Directive 89/104/EEC, whereby refusal of registration or invalidity can occur in case an ‘earlier trademark’ is ‘well known’ in the sense of article 6-*bis* of the Paris Union Convention (PUC). I consider this view not only overprotectionist but above all view it to be entirely improper, even from a systemic perspective, for the following reasons:

- First of all, the reference made by article 4.2(d) to the invalidating effects of ‘well-known’ marks, within the meaning of article 6-*bis* of the Paris Union Convention, is by no means conclusive. On the contrary, PUC’s system suggests that those marks must in fact belong to ‘a person entitled to the benefits of this Convention’, hence a registered owner. Article 6-*bis* thus relates to the case of a trademark registered in country X and well-known also in country Y. It establishes that such renown, also in the absence of registration covering country Y, can preclude, or invalidate, registration in that country of a trademark likely to cause confusion.
- However, the proposal to extend ‘reputed’ *de facto* marks’ protection to conflicts in ‘not similar’ areas of business seems utterly baseless. On the one hand, even admitting that a prior *de facto* trademark might invalidate a subsequent registered trademark would simply mean that the subsequent one cannot be considered (‘novel’ hence potentially) ‘distinctive’: but this has nothing to do with defining the *scope* of protection. On the other hand – and this settles the question – the provision of article 4.2(d) specifies the general principles expressed in the preceding article 4.1(a) and (b), which *only* refer to conflicts grounded on marks’ identity or similarity *and* identity or similarity of ‘goods or services’.

The criticised proposals are broadly linked to those interpretative trends that, as hinted above, evoke the tautological pseudo-concept of ‘parasitism’ in order to fight ‘look-alikes’ even in the absence of any confusion. In the specific case we are discussing, the link is built on the assumption that the imitated formal features of a product and/or its packaging are to be considered *de facto* trademarks, hence their imitation constitutes or anyway can be equated to a form of infringement (a ‘new infringement’). True, today’s supporters of that line of thought, originally arising in the French case law of

⁷⁰ See, for example, C. GALLI, *Rinomanza del marchio e tutela oltre il limite del pericolo di confusione*, *Dir. ind.*, 2007, pp. 83 and 88.

the 19th century, can refer to the legislative extension of protection for renowned trademarks against uses that, in so much as they are extramural and involve no risk of confusion, could be termed parasitic but that extension is a new normative *exception* granted by the aforesaid Directive and Regulation to registered trademarks. As such, it cannot be extended to other formal elements, including unregistered trademarks or components thereof. Therefore, the unlawfulness of imitation of said elements must remain conditional on the materialisation of a concrete risk of confusion. Accepting the criticised proposals therefore would transform the already weak conditions (above, section 8) designed to ensure that protection of renowned trademarks does not excessively impair competition into tools for expanding that protection to the maximum. In other words, a *limit* on protection would become a principle that *expands* that very protection!

11. Conclusion: The Systemic Meaning of the Special Protection of Renowned Trademarks

An in-depth consideration of the privileged legal status granted to 'reputed' (registered) trademarks, reaching out beyond the area of confusion, confirms that it basically amounts to protecting commercial goodwill as such with absolute exclusive rights. Moreover, there is no time limit, taking (unfair!) advantage of a rule which is *only* justified by protection of the distinguishing function. Here one can point to a break with the system of intellectual property and not only with its classical paradigm. Goodwill ultimately reflects a communication (advertising) ability, whereas the IP system grants exclusive protection (in the form of a patent or copyright) only to tangible new technological or aesthetic *results* of intellectual effort. Neither patents nor copyrights are there to protect the authors' ability to communicate, or their commercial reputation!

Thus, as a result of the reform, mere commercial value, usually increased and often created by advertising, receives the same protection (in fact, *more* protection, as it has no time limit) as objective expressions of human creativity. At the same time, by substantially creating a *new form of exclusive right*, the reform eludes the principle (which reflects the primacy of the principle of freedom of competition) of *numerus clausus* of exclusive rights and its corollary: namely that goodwill (and the values that determine it) can only be defended against unfair methods of appropriation. It also means, from a competition standpoint, that a new and strong entry barrier has been erected.

12. A Further Aspect of the Reform with Competition Implications: Revocation for Becoming Generic

The strongly protectionist inspiration of the reform is also evidenced by some other of its significant, but less central, features. I refer, for example, to revocation of a trademark for having become generic, that is, the common name in the trade to designate a certain type of product. In some countries, including Italy, that objective fact was enough to constitute grounds for revocation, whereas the EU reform further requires a causal connection between such fact and ‘the acts or inactivity of the proprietor’ (see article 12(12)(a) of Directive 89/104/EEC, article 50(1)(b) of Regulation (EC) No. 40/94). Thus, for example, revocation may occur only if the owner used her trademark to describe the type of product sold, or did not promptly sue unauthorised third parties for infringement, thus allowing the sign to become a descriptive term. Now, as the US Judge Learned Hand said, ‘What do the buyers understand by the word for whose use the parties are contending? If they understand by it only the kind of goods sold, then, I take it, it makes no difference whatever what efforts the plaintiff has made to get them to understand more’.

This solution clearly rewards the interests of the trademark owners, reluctant to accept that simple vulgarisation may lead to revocation and thus destroy the investments made in the trademark and the goodwill it incorporates. It offers less reward to consumers, interested in fully and easily comparing the same kind of products offered by different firms. This informative interest, converging with the pro-competitive interest of the trademark owners’ rivals to supply products clearly recognisable as of the same kind, is also typically associated with that of a reduction in price levels. If demand by the public for a given commodity focuses on a descriptive term, it will spread to a variety of brands, not on a single one: if the name cellophane were a valid trademark, I could only ask for a given product by that name, and not for many corresponding (substitute) products, with the result that I would probably pay more.

13. Whom Does the Reform Benefit?

What concrete interests are served by such a reform? This question, essential to understanding the true reasons behind the reform itself, may appear premature at this stage of our reconstruction of the law, as we have not yet examined the (rather sober) system for the protection of consumer interests that Community law has introduced to compensate for the risk of deception as to the origin of the trademarked goods that the reform has undoubtedly heightened. Precisely because it is a question of compensation, it is legitimate to pose the question at this juncture, with the caveat however that for the time

being we are seeking to identify the interests of the holders – private individuals or firms, original owners or assignees – of registered trademarks.

The pillars of the reform, described above, indicate a clear emphasis on a multifaceted *exploitation of the selling power* of trademarks in order to turn them into a tool for obtaining greater economic benefits (for owners, assignees and licensees) than would have been possible within the previous system. For example:

- Free circulation intrinsically increases the commercial value of the trademark as an asset in itself. Hence it also allows a specific asset valuation of a trademark purchased from third parties, which might enter in the accounts not merely at the historical purchase cost. In this perspective, inaugurated by the *International Accounting Standards* (see in particular IAS 38), which encourage a more realistic search for the ‘fair value’ of a firm’s assets, the valuation might also concern not only trademarks purchased from third parties, but also the ones created by the firm and grown in reputation as a result of the firm’s own internal development.⁷¹
- The possibility of ‘splitting’ the assignment to include only some of the products, or also, in the case of licences, only parts of the country of registration, as well as of granting non-exclusive licences, typically leads to *growth of income flows*, especially royalties, which the earlier system, based on the principle ‘one mark–one firm’, allowed only to a much lesser extent. A number of licensees, each of whom makes his best efforts in his area, may often achieve a higher sales volume than a single operator. In addition, this expansion of sources of revenue is typically accompanied by another significant advantage for the owner: a reduction in advertising costs, due to the transfer of significant proportions of such costs to licensees pursuant to typical terms of contract – with a consequent tendency for the overall volume of advertising investments to increase too.
- The extramural protection of the renowned trademark translates (also) into the consolidation of the competitive (image-related) advantage that assignees and licensees acquire over competitors who do not benefit from equally well-known trademarks.

⁷¹ However, international harmonisation of such standards, even at EU level, seems rather complicated, also as concerns trademarks: see H. STOLOWY, A. HALLER, V. KLOCKHOUS, *Accounting for brands in France and Germany compared with IAS 38 (Intangible Assets): An illustration of the difficulty of international harmonization in International Journal of Accounting*, 2001, 147.

- The concrete possibility, offered by protection stretching beyond the risk of confusion, of benefiting from an advertising value which the owner of the trademark would not have enjoyed had the protection been confined to the distinguishing function, that is, to the field of registration. Experience shows that, beyond a certain limit, the power of attraction of a trademark, even if boosted by advertising, no longer increases sales in a given field of use. The possibility of granting multiple licences, offered by the reform, moves this limit forward to the owner's advantage, but does not eliminate it. Thus, were trademark rights to be restrained in the fields of registration and similar, much of that promotional power would remain unused by the owner *and* freely available for appropriation by third parties operating in distant sectors. As hinted above (section 6) to the owner, this effect would represent both a waste and a hostile parasitic appropriation of a value she had created. Now, extramural protection of the renowned trademark precisely prevents this waste and those appropriations by bringing home that surplus of promotional value. The owner will be able to collect royalties from third parties who, under the classic system, enjoyed in principle free use of the sign as non-confusing.

Thus, for all these reasons, extramural protection of renowned trademarks, coupled with the possibility of granting multiple licences, gives a stronger boost to the practice of *merchandising*, which in several sectors of consumer goods generates a flourishing market for licences: a practice which, before the reform, enjoyed no legal protection in a number of Member States, including Italy.

- Finally, the extramural protection of renowned trademarks can provide a further type of financial benefit for the owners. A direct effect of such protection is obviously that third parties must keep their hands off the famous trademark even in distant fields of use. This amounts to allowing owners the right to reserve the right to exploit, by direct entry and/or by licensing, the trademark's inherent promotional power in distant sectors in which their firm is not presently operating. In other words, they can book now the right to enter new distant markets tomorrow – and to enter these with a considerable start-up advantage over competitors, since the adoption of an already famous trademark obviously tends to increase purchasing propensity. This aspect of exploitation of the renowned trademark – which in antitrust terms might be viewed as a form of leveraging of market power – is apt specifically to benefit groups, especially *conglomerates*, with a multi-business financial investment capacity.

It is clear that such an advantage, too, could not be obtained under the

previous system. Without a risk of confusion, the subsequent registration could not have invalidated or precluded the use of identical or similar trademarks that third parties in the meantime had registered and/or used in dissimilar, even quite 'distant' sectors.⁷²

PART III

THE REFORM, AND THE RISKS OF CONSUMER DECEPTION

14. Fragmented Identity, and *Informative Compensation*

Loosening purchase and circulation of a trademark from a strict connection with the firm entails a high risk that the consumer public will be misled as to the source of production, thereby defeating the primary function of trademarks. Especially because, unlike protection that is all concentrated on the distinguishing function and thus intrinsically tends to focus on identity, protection of the commercial value across the board of a trademark is a centrifugal force, so to speak, since it pushes for horizontal (through protection of the renowned trademark in many goods classes) and vertical (above all through non-exclusive licences for different goods and geographical areas) multiplication of the trademark owners' control power.

Further confirmation of the system's lower level of interest in the certainty of information (on identity) is the possibility that through the holder's consent (see article 5(1) Directive 89/104/EEC), coexistence agreements can be reached and therefore generate confusion (a development that testifies to the essentially private as opposed to public ethos of the law in this regard).

There is thus a risk (against which the EU reform does not introduce any specific remedy) that the distinguishing function might be *emptied of its fundamental raison d'être*. One can criticise the 1992 reform not so much for having enhanced the protection given to the selling power of trademarks but for having done so without taking steps to adequately safeguard the distinguishing function.

⁷² One could reasonably observe that it would be fairer to grant that competitive advantage to the holder, whose activity and advertising have built the reputation of the sign, rather than allow a third party to enjoy it in the new market. This view can be shared from the standpoint of inter-individual fairness; less so when one considers the effects of such 'advantage' on the market and consumer welfare (on this point, see Part IV of this chapter).

How can one tackle the risk of compromising the distinguishing function? The most convincing proposal is that advanced by Adriano Vanzetti, who pointed out that prior to the EU reform the link between the trademark and the firm ensured the continuity of the entity (firm) identified by the sign, namely 'the factor which remained constant over time, without which ... it would have been impossible to speak of identification'.⁷³ 'Recognition (from *recognoscere*) means knowing again, that is, associating a present reality with a past experience'. That being the case, the original function seems to be reduced to a 'self-certification' that the product originates from a firm which lawfully owns the sign.⁷⁴ Therefore, free transfer 'leads to a breach in this continuity, and has the effect that consumers are misled during the period after the assignment, because they rely on continuity of origin, but receive products originating from a different firm without their knowledge'.

To eliminate, or at least reduce the risk to the distinguishing function, Vanzetti suggests interpreting the rules designed to avoid the risk of confusion as involving *an obligation to inform the public* about the transfer that has taken place. In the case of the most renowned trademarks as well as of general trademarks (that is, those coinciding with the firm's name, such as Gucci, Burberry, Peugeot, Volkswagen, etc.), this obligation could be fulfilled through the mass media where branded products are usually advertised. In the case of other, less well-known trademarks, the information should be written on the labels of each product.

It is worth noting that the logic underlying this solution (that is, combating the risk of deception through more information) is the same as that which conditions the indisputable right that trademark holders (assignees and licensees) enjoy to *vary the quality and/or characteristics* of their products over time. That power stems from an undeniable freedom to shape one's own business policy, but its rightful exercise requires that consumers should be

⁷³ A. VANZETTI, *La funzione del marchio in un regime di libera cessione*, *Riv. Dir. Ind.*, 1998, I, p. 81. The author adds that 'in relation to a product, that is, a specimen of a series which the public is enabled by the distinctive sign to associate with that series, which originates from the same firm, the very concept of identification implies a time dimension, as the concept makes no sense in an instantaneous perspective'.

⁷⁴ As A. VANZETTI further remarks, this 'self-certification' indeed performs a modest, almost formal informational function in the interests of consumers, 'which merely enables them to identify the party responsible for the quality of the product. This is very different from, and in substantial terms far less significant than the guarantee of constant product quality which the traditional function of origin, based on a close connection between trademark and firm offered consumers, at least in the intention of the legislator, and which guaranteed that the product would always originate from a clearly determined, concrete business entity capable in itself of characterising the product'.

adequately informed. If this is not done, the trademark holders may be held guilty of a deceptive use of the sign, which may lead to revocation of the exclusive right. See article 12(2)(b) of Directive (89/104/EEC and 2008/95/EEC) and article 50(1)(c) of Regulation (EC) No. 40/94 (article 51.1(c) Regulation 207/2009).

The same logic – by the way, quite similar to that followed, as hinted above, by the European Commission in the well-known *Persil* (1976), *Bayer-Tanabe* (1978) and *Syntex-Synthelabo* (1989) cases – can prevent the risk of the public's being misled by the so-called 'coexistence agreements' allowed by the reform (which can accompany and be a harbinger for keen antitrust eyes of wider production and/or distribution agreements). This grants the trademark owner the option of consenting to the use of identical or similar signs by a third party even in the same or similar fields of business – articles 4(5) and 5(1) of Directive 89/104/EEC and article 9(1) of Regulation (EC) No. 40/94 – thereby accepting the inherent risk of confusion. To prevent full privatisation of this risk to the detriment of consumers, those provisions should be interpreted in association with those already mentioned which punish misleading use of a trademark by revocation.⁷⁵

Articles 5(1) and 9(1) should therefore be interpreted as meaning that coexistence agreements, though a possible source of confusion in theory, will be deemed lawful (obviously without prejudice to any antitrust aspects: see Chapter 5) *if* the specific informational context of the coexistence, namely mutually distinguishing additional information steadily supplied by the parties, actually eliminates the risk. In that way, the additional information can serve to dilute the risk of misunderstandings as to the effective origin in the face of the multiplication and fragmentation of the use of trademarks.

15. *Qualitative Compensation?*

To compensate the public for the inherent risk of diluting the distinguishing function of trademarks as a result of a deliberately fragmented, dispersed circulation thereof, the reform expresses concern about consumer protection by introducing a direct guarantee of substantially constant quality of the branded goods. This is achieved by some provisions such as articles 8(2) and 12(12)(b) of the Directive and articles 22 and 50(1)(c) of Regulation (EC) No.

⁷⁵ It might be objected that the European rules on revocation for deceptive use of the trademark (article 12.2.b Directive, article 51(1)(c) Regulation 207/2009, article (50(1)(c) Regulation 40/94) do not expressly mention deception about the industrial origin, that is, the manufacturing firm. The answer to this is that the list of sources of deception is not exhaustive, as suggested by the rationale and confirmed by the adverb 'particularly' which precedes said list.

40/94 (51.1(c) Regulation 207/2009), designed to discourage the use of the trademark (including the grant of licences) from causing deception as to the essential characteristics that the public is used to associating with the branded product.

Worthy of note are the provisions (article 8 of Directive(s) and article 22 of the Regulation(s)) which allow licensors to enforce their trademark rights against licensees who contravene a term of the licence relating, for example, to the quality of products or services. However, the EU legislation does not make the validity of a non-exclusive licence conditional on an undertaking of this kind. The provision thereof is optional, as is its enforcement ('may'). In any event, the sanction of revocation for deceptive use of a sign (art. 12.2 letter b) Dir., art. 50.1 letter c) Reg. 40/94 and art. 51.1 letter c) Reg. 207/2009) also relates to its use by the licensee(s), whose conduct in this respect the owner has therefore a strong interest in supervising (although with a difficulty proportionate to the number of licensees). Misleading uses can include significant variations on essential characteristics that consumers were used to associating with the branded product, which are not clearly announced to the public.

The revocation of trademark rights for a misleading use of the sign is certainly a severe sanction, so severe that – as far as I know – it has never been imposed. The absence of case law suggests that it is just a big stick that might well be waved but never used, owing to the drastic consequences. It is thus unlikely to effectively advance consumer interests.

The ineffectiveness in concrete terms of the sanction of revocation could be overcome by relying on the rules governing misleading advertising as a functional substitute. What revocation for deception could punish would be failure to inform consumers of a change of quality: in essence, a question of information rightly included within the framework of advertising law. By prohibiting the misleading use of a trademark, that law does not deprive the holder of its rights but merely obliges the latter to exercise them within the bounds of propriety, both where the advertising of the trademark is designed to convey a misleading impression and where essential information is omitted.

The revocation of trademark rights for a misleading use of the sign is certainly a severe sanction. However, the prohibition of deceptive use of the sign seems to be necessarily restricted to licences granted in the field of business in which the owner operates or operated, or neighbouring ones. The same prohibition would seem to be substantially unusable in the case of licences in distant fields of use, where the very idea that the licensor should impose and enforce manufacturing standards does not seem to make sense. That duty postulates the possession of specific know-how in the industry to which the licence relates.

But what can the owner of a trademark renowned in the clothing industry teach a confectionery manufacturer, for example? What supervision can it ever perform in an industry which, by definition, she is unfamiliar with? Conversely, what expect-

tation of 'steady quality' can a consumer who was encouraged to buy confectionery by a trademark that became famous in the clothing industry ever realistically have? Thus, it might be argued that in these cases there is no possible room for deception of the public: there is simply a no-man's land in which the value conveyed may be certainly evocative, but in such broad, vague terms, lacking any specific informational content, that it cannot generate any possible misunderstanding by consumers.

This is a sensible, but not fully convincing argument. Frequently, in the reality of business communications, owners and licensees convey *the same basic type of promotional message* for the renowned trademark in the new field of use by harmonising their advertising campaigns. This enables the owner to maintain a consistent brand image in its licensing policies, and thus exploit a specific selling power, from which the licensees also benefit in that they obtain a greater competitive advantage over their competitors. For example, the message conveyed by the Ferrari brand, namely the idea of cutting-edge technology combined with modern design, could be conveyed in very distant fields, like that of wristwatches, as a result of a skilful fine-tuning of the advertising campaigns for the two fields so that they convey the dual message that: the technical quality and attractive design of those watches are at 'Ferrari level', and this is guaranteed/supervised by Ferrari as licensor.

So, how can one deal, in such cases, with possible disappointment of consumers' expectations? How can one avoid an irresponsible deceptive effect and thus a 'liability vacuum' *vis-à-vis* the apparent impossibility that car manufacturers possess and enforce watchmaking know-how? The EU reform does not suggest a solution, but we might try a systemic approach in line with the fundamental trade-off set by the EU reform, i.e. free and plural circulation and use of trademarks vs. consumer protection against deception. This approach does not view as conclusive the undeniable fact that in the type of cases considered here, the licensor does not possess (and therefore cannot transmit, still less enforce) any own know-how relating to the so distant sector for which she has licensed the trademark.

As is well known, the development of stringent EU and national mandatory regulations of industrial standards has stimulated the growth of independent institutes that specialise in conducting quality controls on industrial products/plants/systems, and produce and constantly update and enhance a wealth of specific, diversified manufacturing and experimental know-how related to almost all industrial sectors. These institutes, external to individual firms, normally collaborate with the firms themselves to perform tests designed to certify not a generic good quality but that the products meet given quality standards, ranging from those sufficient to meet fundamental safety requirements to those which fulfil the highest quality criteria according to the state of the art.

This evolution suggests a reasonable, economically viable, way out for preventing the liability vacuum and the irresponsible deceptive effects alluded to above. Accordingly, the owner of the renowned trademark, who licenses it in a distant field of use, can be asked to ensure, by means of recourse to external technical skills, that the licensee's manufactured goods are of a quality consistent with the type/content of the advertising message that the famous brand may convey to consumers even in the distant field. In the last analysis, *it is only a question of costs* (of the technical-professional expertise): costs that can be deducted from the licensor's royalties and the licensee's revenues earned as a result of the competitive advantage generated by the renown of the trademark.

It will thus be possible, obviously within the limits allowed by the distance

between the different sectors (limits that also reduce the reasonable expectations of consumers) to devise a merchandising policy for renowned trademarks that effectively fulfil the expectations raised by the message expressed by the sign. And accordingly it will be possible to reconstruct, also in the hypotheses considered (no longer a free zone), the virtuous circle of accountability of the protagonists/beneficiaries of the exploitation of the selling power of trademarks, including extramurally.

PART IV

WEIGHING UP THE REFORM

16. The Effects on Competition and the Market

That said, even if bolstered by serious ‘well meaning’ interpretations one cannot but recognise that the rules aimed at protecting the public’s good faith do *not* constitute the reform’s ‘trademark’. On the basis of the analysis developed above (Parts II and III), it must be acknowledged that the reform aims primarily and fundamentally to ensure the widest possible economic and financial exploitation of the trademark as an asset in itself, in consideration of its intrinsic selling power. The list of rights conferred by a trademark (article 5 of Directive(s), article 9 of the Regulation(s)) represents a *crescendo* designed to ensure that not a jot of that power might be lost, thus enabling the owner to acquire the entire profit (advantage) obtainable from the distinguishing value *and* the renown of the sign. This being the fundamental purpose of the reform, the anti-deception rules represent the necessary damper provided for counteracting the risks of confusion which the reform itself has increased and would actually make physiological were it not for laudable interpretative efforts (which remain just that – efforts – despite being well reasoned).

I wish to dispel a possible misunderstanding about my criticism of the reform just commented on. There is no doubt that from a purely inter-individual perspective (microeconomic, if you will), the goal of enhancing the protection of a trademark’s selling power, even beyond the distinguishing function, does not in itself attract any significant criticism, including in policy terms. Maximising the value of a trademark generates an efficient financial return on investments – including those related to advertising. And once the public is protected against deceptive uses of the sign, full appropriation by the owner of all that value does not seem to have any contra-indications, since it concerns a value stemming from the owner’s business and investments. In fact, the behaviour of one who appropriates, even in a distant field, the promotional power of a sign made famous by the owner (even if it happened just through money spent on advertising and sponsorship), is far more parasitic than the

owner's position of rent-seeking: after all, as mentioned, it is the latter who has worked and invested, if only in advertising, to build up the renown of her sign. The grounds for criticism therefore relate to a different aspect which a purely microeconomic analysis cannot detect.

The first and basic criticism – which encompasses the others – is that raised years ago by Giovanni Cavani⁷⁶ to the effect that the reform certainly encourages a competition model – famously criticised by Edward H. Chamberlin⁷⁷ – based more on advertising and 'brand differentiation' than objective performance, be this related to quality, price, innovation or a combination of such factors. Don't get me wrong here. I am not banally decrying the 'triumph of the consumption society'.⁷⁸ My concern is that that model is liable to lead to inflationist trends and possible adverse restrictive effects on the competitive fabric of the markets concerned and even on the dynamics of innovation.

One must consider that (a) the multiplication of licences in the sector of registration and similar fields, (b) the expansion of merchandising (that is, licensing renowned trademarks in distant fields) and (c) the reservation of a pre-eminent position (in terms of commercial image) in a new distant field – and hence the possible leverage in antitrust terms – are all factors that act as shortcuts to acquiring a competitive advantage tools such as quality, variety and price: more slowly and painfully, for sure, but much more usefully for the market in terms of competitive pluralism (which is reduced when licensees exploit the renowned trademark instead of imposing their own identity) and in terms of emphasis on innovation and quality as competitive tools.

17. Prices and Propensity to Innovate

More specifically (and taking account of the critical aspects discussed above), the costs to the structure of markets associated with the legislative reforms in question can be summarised as follows.

(A) First and foremost, the trend towards an increase in the market prices of goods branded via a licence by renowned trademarks. This can happen in several ways:

⁷⁶ G. CAVANI, *Commento generale*, in G. GHIDINI (ed.), *La riforma della legge marchi*, Padua, 1005, pp. 5 *et seq.*

⁷⁷ *The Theory of Monopolistic Competition*, London, 1937; see in particular Appendix II.

⁷⁸ This, also because the complexity of the reasons – some worthy of particular consideration, such as creating employment in various industries – underlying the advent of competition models that to a large degree hinge on 'image'-related factors.

- if a number of operators – in the same or related sectors or even in distant fields – cannot obtain, as they could not in the classic system, a licence for a famous trademark, a greater number of entrepreneurs would be forced to rely on other competitive tools, especially quality and price (or better, the price/quality ratio);
- the costs of the licence (which often are partially sunk costs) will be passed on to the end user, and the licensee's mark-up usually exceeds the actual cost of the licence, as the former obviously tends to take advantage of consumers' willingness to pay a premium price for products of a well-known brand;
- the entry into a licence system usually involves the acceptance of prices (or at least price ranges) similar for all the various licensees (and the owner) and also, depending on the fame of the brand, above the average market level. Now such fixings are particularly difficult to combat with antitrust weapons because they are often spontaneously supported by licensees, who also have an interest both in keeping prices high and in avoiding price wars.

This latter point brings to mind other criticisms of the legislative framework that the reform has introduced.

(B) The reinforcement of intangible barriers to the entry of competitors which may perform very well in terms of quality but are not strong enough in financial terms to keep up with the field. As stated by the Italian Competition Authority in the *Pepsico v. Coca Cola* case (no. 7804/99), the large amount of sunk costs involved in advertising investments in support of a brand image represents a significant obstacle to the entry of new competitors. These competitors consequently opt not to enter the market (at a comparable level), or seek admission to the network of licensees of the known trademark; in either case, the competitive fabric of the market suffers. This is especially so in the first case, obviously, but also in the second, and here with a further important knock-on effect on the dynamics of innovation, which I will now briefly describe.

(C) Technological dependence. It is self-evident that an entrepreneur who enters into a system of licences (merchandising included) falls into line with the licensor's production and technology models: he follows – must follow – the licensor, thereby foregoing his own, different and independent productive identity. And it often happens that once the licence ceases, the licensee will become a competitor of the former licensor and his competitiveness will generally rely on price or at best on some improvement made to that same technology that he took on and which was responsible for establishing himself commercially. There is thus both a financial and commercial pressure (amortisation of the investments in a certain technological direction allied to the

commercial success associated therewith, etc.) encouraging path-dependence to continue even after the expiry of the licence.

18. Possible Repercussions on Denominations of Origin

Finally, I wish to address a further possible adverse effect on competition of the focus by the reform on the value of advertising and communication at the expense of performance (or competition on the merits) linked to objectively important factors of quality. This general negative approach contradicts the institutionally recognised need to defend and promote production with those trademarks that express a specific reference to particular production qualities and features linked to certain know-how and territorial identity (*terroir et territoire*, as Paolo Spada has said).

I am referring to the much-debated question of the protection of 'collective trademarks' that incorporate geographical designations,⁷⁹ a theme that one must reflect on, above all from the perspective of international competition: specifically between agro-food economies of scale (the Americas and Asia) and niche products or at any event those oriented towards quality rather than quantity (various European countries). Just think of the 'wealth of nations', embodied by the array of French, Italian and Spanish denominations. Wealth, that is, competitive advantage, that obviously the other agro-food economies try to erode, devalue or in any case detach from geographic location by making the latter aspect irrelevant or at least secondary compared to respect for objective production standards that can easily be delocalised such that they can, for example, deceitfully label any yellowish bit of cheese made in Missouri or Argentina as *parmesan*.⁸⁰

⁷⁹ Reinforcement of protection for geographic indications (strongly advocated by the EU in the Doha round, with a proposal to amend articles 22 and 23 of the TRIPs Agreement, which Council Regulation (EC) No. 510/2006 is an expression of) is intended not only to suppress passing-off, but also any deceitful 'misappropriation' of third parties' products' qualities – a form of deceitful advertising. For a detailed analysis of the subject, see G.E. EVANS and M. BLAKENEY, *The Protection of Geographical Indications after Doha: Quo Vadis?*, in *Journal of International Economic Law*, 2006, 9, pp. 575–614.

⁸⁰ The term 'Parmesan' was at the centre of a dispute before the European Court of Justice (C-135/05, *Commission of the European Communities v. Federal Republic of Germany*), which concluded with a judgment of 26 February 2008 establishing that the use of the name 'Parmesan' must be regarded, in the sense of article 13(1)(b) of Regulation (EC) No. 2081/92, as an evocation of the PDO 'Parmigiano Reggiano'. It is estimated that in the US market alone this agropiracy business based on deceitful use of 'Italian sounding' (sic!) is worth 18 billion dollars.

Now, the only way to effectively and credibly defend these geographical denominations is clearly to maintain a strong link between the (collective) trademark that protects them and physical elements and production recipes that are an expression of traditional knowledge associated with a given geographic area. This in turn presupposes that the defining characteristics of that knowledge, often laid down by law, are effectively respected.⁸¹ At a substantive level, *mixed* solutions would appear to be more effective, whereby the adequacy and observance of the rules of consortia of private producers are subject to public scrutiny, including internationally, especially by the WTO and, as regards food safety aspects in Europe, by the European Food Safety Agency (EFSA) based in Parma.

However, the keynote of the reform expresses a culture that is the antithesis of the ‘anchorage’ to *terroir et territoire*, in that it extols the enhancement of the trademark in itself and its advertising value, irrespective of its link with even the very goods class it was registered for, thereby showing scant regard for competition based on performance. And the results have been evident for some time now, commencing from an increasing suggestive-type promotion of products under denominations of origin, lacking any real objective information and built on an act of faith in a quality whose distinguishing constituent elements the consumer is not informed of. It is no coincidence that the market power of distributors has grown compared to that of producers, with the former being more interested in competition founded on price rather than quality. A trend which, if not combated, will end up allowing large international distributors and the production network that they control to progressively suppress – using their commercial and advertising resources – the very idea of a link between a denomination and its associated geographic area and traditions as a guarantee of a special quality. With the consequence – as per Gresham’s law – of isolating local quality producers by slowly but surely inducing them, in a battle for economic survival, to abdicate their commitment to their traditional cultures in favour of globalised standards, standards that will eventually preserve solely the ‘advertising’ value of those cultures.

⁸¹ The European Court of Justice has been particularly attentive in protecting the relationship between quality and reputation and in assessing cases where a geographic indication has become generic or can be freely used as a trademark (see the *Prosciutto di Parma* case, C-108/01 of 20 May 2003, the *Feta* case, C-465/02 of 25 October 2005, the *Grano Padano* case, C-469/00 of 20 May 2003, and the *Gerolsteiner* case, C-100/02 of 27 January 2004). The Italian Competition Authority has tolerated quantitative restrictions on production where such has positive effects on quality. See V. FALCE, *Denominazioni di origine protetta e limitazioni della produzione: i profili antitrust*, in *Giur. comm.* 2005, pp. 45 *et seq.* (in particular, for the analysis of the *Grano Padano* case (Authority decision no. 1569, in *Bulletin*, 26/2004).

19. Normative Room and Interpretative Tools to Balance out the Protectionist Effects of the Reform

I. From inside trademark law

Underlining all these costs of the reform does not necessarily mean longing for a return to the past. It is merely a way to voice support from a positive law standpoint, for the use of two convergent interpretative needs: first, maximising from the inside all and any pro-competitive aspects that trademark law (still) has within it and, second, mobilising from the outside all the legislative tools at the service of competition on the merits. The purpose of this approach is to counteract the protectionist bias of the reform in favour of interests connected to the advertising value of trademarks and more generally the ongoing tendency to expand trademark protection in contrast with the need to contain the scope of protection in order to satisfy also social interests other than those of the holder of the rights.

I shall now briefly examine how, on which level and to what extent the dual needs may *de lege lata* be fulfilled. There are, it must be remembered, pro-competition aspects within trademark law itself. In this regard, bearing in mind the observations made earlier regarding shape trademarks, renowned trademarks (in particular on the extramural protection to registered trademarks), the unfounded theories on parasitism etc., which will not be repeated here, three main paths could be followed.

1. Reaffirmation of the central nature of the distinguishing function of trademarks. This is not merely a hope but a call for renewed rigour, for example, in ruling that trademarks 'devoid of any distinctive character' (article 3.1(b) Directive(s)) (a category which extends well beyond those that consist *exclusively* of general/descriptive indications) are null. An equally strict approach should be adopted in relation to the rules on (the registrability of) *new* trademarks⁸² and the revocation of existing ones (especially

⁸² On the issue of non-conventional (or *non-traditional* or *new*) trademarks, that is, colour, olfactory or acoustic trademarks, of particular practical importance is the capacity 'of being represented graphically' (article 2 Directive(s) and article 4 Regulation(s)). This requirement is in essence a pro-competitive bulwark against the temptation to nonchalantly appropriate sounds, forms, colours and combinations of colours. In requiring that a trademark be 'clear, precise, self-contained, easily accessible, intelligible, durable and objective' (Case C-273/00, *Siekman*, 12 December 2002), European jurisprudence makes it more difficult to monopolise those segments of language favoured by modern technology that allow forms that it was previously not thought possible to reproduce. What it is openly sought by such jurisprudence (see also Case C-104/01, *Libertel*, 6 May 2002) is to protect the general interest of not unduly limiting the availability of aesthetic motives (a colour in the case in point) for other undertakings. (See also note 86.)

for non-use). The rationale is clear: keep free or release for use essential segments of language and communication when the monopoly thereon does not correspond or no longer corresponds to making a distinction and fostering transparency in the market.⁸³ I wish to underline that such an approach reflects legal and political views shared by the most forward-thinking elements of the business world, especially in Anglo-American circles. There, as already mentioned in the context of patents and copyright, academics and businessmen are increasingly distancing themselves from overprotectionist models, in that there is no desire to use the fight against piracy as an alibi for shielding the owners of trademarks from competition.⁸⁴

2. The possibility, however limited it may be, mentioned above to rigorously apply the conditions that the law prescribes for the extramural protection of renowned trademarks (unfair advantage of another or prejudice to the holder). With rigour, that is, placing the onus on the holder to provide direct evidence of and precise economic figures on the prejudice or the undue advantage. In the latter case, the holder would also have to demonstrate (*prima facie*) specifically why the advantage is an *unfair* one. This would attenuate the strength of the potential leverage of the renowned trademark's market power in other markets of dissimilar goods and services and act as a brake on the inflationary effects that such an extension to such other markets would entail.
3. Reducing the tendency to strengthen the protection of renowned trademarks also in *similar* sectors. I will not repeat the points made above (section 9), but will draw on them to make a further criticism. In my view, more weight should be given to a line of case law – echoed in a recent decision of the European Court of Justice⁸⁵ – according to which the more

⁸³ 'The need to keep free is a technique for preventing a trader from obtaining control of a term or indication that is needed by the others, while the essential facilities doctrine is a means of breaking his power in relation to something over which he has already obtained control': J. PHILLIPS, *Trademark Law and the Need to Keep Free*, in *IIC*, 2005, pp. 389 *et seq.* (See also note 86.)

⁸⁴ 'The good argument that the interests of the public and honest traders require vigorous public action against deceptive products is often conflated with the bad argument that the maintenance of product quality requires that established producers should be insulated from competition': J. KAY, *Apple versus Apple (and Other Fruitless Trademark Disputes)*, in *The Financial Times*, 13 February 2008, p. 11.

⁸⁵ See the *Picasso/Picaro* case decided by the Court of First Instance (T-185/02 of 22 June 2004) and upheld by the Court of Justice (C-361/04 of 12 January 2006). The Court of First Instance had ruled that the prior Community registration of the word mark *Picasso* regarding automobiles could not be used to prevent the registration, again for automobiles, of the word mark *Picaro*, given that, although the two signs were visually and phonetically similar, from the conceptual point of view the word sign

renowned a trademark is, the more immune it is from association any confusing with other signs: precisely because its notoriety imprints it in the minds of consumers in a sharper and surer way. To repeat the example: young fans of sports footwear know full well that two or four lateral stripes is not Adidas. Therefore it makes no sense, unless one wants to favour the dominant firm, to prevent competitors from using stripes, which are a very common graphic element. And such an approach would seem even more arbitrary if one wanted to *retroactively* protect a trademark that has since become renowned against variations, made by competitors before the trademark became famous.⁸⁶

Picasso was particularly well known to the relevant public as being the name of the famous painter Pablo Picasso. The Court of Justice upheld the Court of First Instance's judgment and dismissed the appeal brought by the Picasso estate, owners of the Picasso word mark, who had cited the case law of the Court itself, according to which the greater its distinctive character, either per se or because of the reputation it possesses on the market, the broader the protection that a mark enjoys. The judgment is important because, as C. GALLI, *Rinomanza del marchio e tutela oltre il limite del pericolo di confusione*, in *Dir. ind.*, 2007, p. 84 remarks, 'it dispels a veritable myth that the greater notoriety of a mark necessarily translates into a higher risk of confusion', given that 'it has often been stated that more famous a mark is, the greater the risk of confusion', whereas in reality, 'the more famous a mark is the less likely it is that the public will mistake it for another sign that is not identical, but only similar unless the latter can somehow be perceived as a variant of the former made or in any event authorised by the proprietor'.

⁸⁶ For some time now (see also the *Libertel* decision, above, note 82) European Community case law has debated the existence and relevance of a 'requirement of availability' – equivalent to the German doctrine of *Freihaltebeduerfnis* (see above, section 4, text at note 14) – in Community trademark law. The matter was addressed by Advocate General Damaso Ruiz-Jarabo Colomer in his opinion of 16 January 2008 in the *Adidas AG* case (C-102/07). The Advocate General was inclined towards a solution that varied according to whether article 3(1)(b) ('marks which are devoid of any distinctive character') or article 3(1)(c) ('general and descriptive signs', they are called for the sake of simplicity) were involved. In the latter case (see paragraph 85), 'to determine the scope of protection of a trademark consisting of a sign which corresponds to one of the indications referred to in article 3(1)(c) of First Council Directive 89/104/EEC of 21 December 1988 to approximate the laws of the Member States relating to trademarks, but which has acquired distinctive character through use and has been registered, it is necessary to take account of the general interest in ensuring that the availability of certain signs is not unduly restricted for other traders offering similar goods or services', whereas in the former case, 'where the same sign lacked distinctive character in itself but subsequently acquired such character through use, the rights of the trademark proprietor must not be examined in the light of the requirement of availability'.

Those cases involve trademarks which, without being descriptive, are for other reasons devoid of any specific distinctive character. Hence, in the Advocate General's reasoning, it would be illogical to keep them available for the public, whereas the trader who, thanks to use and advertising, has made those signs distinctive (see paragraph 56)

II. From the ‘outside’

Nonetheless, as is evident and has been mentioned before, striving to stress the pro-competitive aspects inside trademark law itself is not enough to significantly neutralise the protectionist aspects that the reform embodies. It is necessary to supplement internal interpretative efforts with recourse to other legislative tools capable of ensuring that the overall application of trademark law takes account also of interests other than those of the owners and equally deserving of protection: in short, those pertaining to the protection of consumers and competition.

In particular, a more stringent application of the laws on misleading advertising would be an efficient tool (far more effective than revocation: above § 15), as would a broader application of the rules on comparative advertising based on objective performance data. And also the rules on vendors’ warranties, product liability, and unfair business practices, which stem from well-known EU Directives (see below, Chapter 5, section 11), would provide a valid framework for enhancing ‘competition on merits’, hence protecting both consumers and competition.

Finally, it is obvious that antitrust law can be used to counteract the risks to competition created by the reform. Indeed, such law could be invoked as a white knight where the use of trademarks might lead to significant negative effects on the make-up of competition either in the market for registration or related market. This might occur, for example, with respect to coexistence agreements, market-sharing arrangements, retail price maintenance agreements, concentrations that, thanks to various renowned trademarks ending up in the same hands, ‘create or strengthen dominant positions’, and discriminatory/exclusionary conducts realised by abusing the dominant position achieved thanks to the ownership of trademarks with strong ‘lock in’ power.

Bibliographical Notes

A reconstruction of the history of trademarks, and the early debates on the legally protected function of the sign in the legislation that followed the first industrial revolution might well begin with such classic authors as E. POUILLET, *Traité des marques de fabrique*, Paris, 1912; J. KOHLER, *Warenzeichenrecht*, Leipzig, 1910; E. BOSIO, *Trattato dei marchi e dei segni distintivi di fabbrica*, Turin, 1904; F.I. SCHECHTER, *The*

should be rewarded. In the decision that followed (C-102/07 of 10 April 2008), the Court of Justice, remitting the question to the national courts for concrete assessment, seems to limit the general interest in availability in paragraph 49: ‘Having regard to all of the foregoing considerations, the answer to the question referred for a preliminary ruling must be that the Directive must be interpreted as meaning that the requirement of availability cannot be taken into account in the assessment of the scope of the exclusive rights of the proprietor of a trademark, except in so far as the limitation of the effects of the trademark defined in article 691(b) of the Directive applies’.

Historical Foundations of the Law Relating to Trade-Marks, New York, 1925; E.S. ROGERS, *Some Historical Matter Concerning Trade-marks*, in *Michigan L. Rev.*, 1910, 29 (reprinted in *TMR (Trademark Reporter)*, 1972, 239). For a more recent historical overview, especially for the common law tradition and the British school, see N. DAWSON and A. FIRTH (eds), *Trade Marks Retrospective*, London, 2000; B. SHERMAN and L. BENTLY, *The Making of Modern Intellectual Property Law*, Cambridge, 1999; S.A. DIAMOND, *The Historical Development of Trademarks*, in *TMR*, 1983, 222.

Turning now to modern law, of key importance are the writings of ADRIANO VANZETTI, *Funzione e natura giuridica del marchio*, in *Riv. dir. comm.*, 1961, I, 16; *Equilibrio d'interessi e diritto al marchio*, *ivi*, 1960, I, 254; *Cessione del marchio*, *ivi*, 1959, I, 385. In those articles, the author developed the thesis – which would be adopted by the courts and other writers until European reform – of the function of indication of origin as the sole legally protected right and hence the limits, including as to sectors, within which a sign can perform that function and thus be afforded protection.

The pro-competitive aspects of trademarks' distinguishing function have been explored in-depth by, among others, W. LANDES and R.A. POSNER, *Trademark Law: An Economic Perspective*, *J. of Law and Economics*, 1987, 265 *et seq.*; N.S. ECONOMIDES, *The Economics of Trademarks*, in *TMR*, 1988, 523; R.H. FOLSOM and L.L. TEPLY, *Trademarked Generic Words*, in *Yale L. J.*, 1980, 1323.

For a reconstruction of the international scope of the debate relating to the legal protection of the distinguishing function and other functions of the trademark (especially those of quality guarantee and promotion/advertising, already emphasised by F.I. SCHECHTER, *The Rational Basis of Trademark Protection*, *Harvard L. Rev.*, 1927, 813), see the contributions (some of which also focus on an economic analysis of the 'monopolistic' effects of signs) by W. CORNISH, *Intellectual Property – Patents, Copyright, Trademarks and Allied Rights*, London, 2007; J.C. GINSBURG, J. LITMAN and M.L. KEVLIN, *Trademark and Unfair Competition Law: Cases and Materials*, New York, 2007; G. DINWOODIE (with M. JANIS), *Contextualism in Trademark Law*, in *Iowa L. Rev.*, 2007, 92, 1597; M. SHILLITO and D. MEALE, *Trade Marks – Look Alike, Smell-Alike Perfumes – Unfair Advantage and Unfair Competition*, in *EIPR*, 2007, 29(1), 3. See also N. MOHAMMAD AMIN, *Re-examining the functions of trademark law*, in *Chicago-Kent J. Intell. Prop.*, 2008, 99 *et seq.*; D.W. BARNES, *Misappropriation of Trademark*, in *North Carolina Journal of Law and Technology*, II, 2008, 171 *et seq.*; D.W. BARNES, *Trademark Externalities*, 10 *Yale Journal of Law & Technology*, 1, 2007; PHILLIPS, *Trademark Law: A Practical Anatomy*, Oxford, 2003; J. DAVIS, *To Protect or Serve? European Trade Mark Law and the Decline of the Public Interest*, in *EIPR* 2003, 25, 180–87; R.S. NELSON, *Unraveling The Trademark Rope: Tarnishment and its Proper Place in the Laws of Unfair Competition*, in *IDEA*, 2002, 133; T.B. LEARY, *The Significance of Variety in Antitrust Analysis*, 2001, at <http://www.ftc.gov/speeches/leavy>; M. LEMLEY, *The Modern Lanham Act and the Death of Common Sense*, in *Yale L. J.*, 1999, 1687; J. LITMAN, *Breakfast with Batman: The Public Interest in the Advertising Age*, *ivi*, 1999, 1717; D.L. BURK, *Trademark Doctrines for Global Electronic Commerce*, in *S. Carolina L. Rev.*, 1998, 695; G. PICKERING, *Trade Marks in Theory and Practice*, Oxford, 1998; G. SENA, *Il nuovo diritto dei marchi-marchio nazionale e marchio comunitario*, Milan, 1998; C. GALLI, *Funzione del marchio e ampiezza della tutela*, Milan, 1996; W.P. KRATZKE, *Normative Economic Analysis of Trademark Law*, *Memphis St. U. L. Rev.*, 1991, 199; F.K. BEIER, *Markenrechtliche Abhandlungen*, Cologne, Berlin, Bonn and Munich, 1986, 28; W.R. CORNISH and J. PHILLIPS, *The Economic Function of Trade Marks: An Analysis with Special Reference to Developing Countries*, IIC, 1982, 41.

Specific attention should be devoted to the legislative development that redesigned trademark law in Europe, beginning with Directive 89/104 to Approximate the Laws of the Member States relating to Trademarks, mainly aimed at protecting the trademark as an asset per se, even beyond its link to the firm, thereby allowing much wider exploitation of its inherent selling power, typically enhanced by the synergy between trademarks and advertising. See A. BERCOVITZ, *Community Trademark Regulation (CTMR): Incentives to the Extension of Market Power*, in G. GHIDINI and M. GENOVESI (eds), *Intellectual Property and Market Power*, ATRIP Papers 2006–2007, 75; F.W. MOSTERT, *Famous and Well Known Marks: An International Analysis*, New York, 2004; K.M. SAUNDERS, *Confusion is the Key: A Trademark Law Analysis of Keyword Banner Advertising*, in *Fordham Law Rev.*, 2002, 71, 543; F. DE BENEDETTI, *Marchi notori nella nuova proposta dell'OMPI*, in *Proceedings of the Conference on 'Il diritto dei marchi-novità legislative di fine millennio'*, Rome, 20–21 January 2000, available at: http://www.ordine-brevetti.it/pdf/Consulenti_Notiziario_2-2000.pdf, 145; P. PRESCOTT, *Has the Benelux Trade Mark Law been Written into the Directive?*, *ivi*, 1997, 99; M. BLAKENEY, *Well-known Marks*, in *EIPR*, 1994, 481; A. BERTRAND, *French Trademark Law: From the Well-known Brand to the Famous Brand*, in *EIPR*, 1993, 142; T.D. DRESCHER, *The Transformation and Evolution of Trademarks – From Signals to Symbols to Myth*, in *TMR*, 1992, 301. On that evolution, see also D. TATHAM and W. RICHARDS, *ECTA Guide to EU Trade Mark Legislation*, London, 1997; A. KAMPERMAN SANDERS, *The Return to Wagamama*, in *EIPR*, 1996, 521; F.M. MOSTERT, *Well-Known and Famous Marks: Is Harmony Possible in the Global Village?*, in *TMR*, 1996, 86, 103. Worthy of note too are A. BERTRAND, *French Trademark Law: From the Well-known Brand to the Famous Brand*, in *EIPR*, 1993, 142; C. GIELEN, *Harmonization of Trademark Law in Europe: The First Trademark Harmonization Directive of the European Council*, in *EIPR*, 1992, 262; G. SCHRICKER, *La tutela della Ausstattung e del marchio celebre nella Germania federale*, in *Riv. dir. ind.*, 1980, I, 254.

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In this context, worth reading, even apart from their historical interest, are some writings on the common law doctrine of *dilution*, the earlier traditional basis for the protection of well-known trademarks (as confirmed by the US Federal Trademark Dilution Act 1995). On such doctrine (which includes *confusing association*, *blurring* and *tarnishing dilution*), see J.J. GUNNEL, *Evaluation of the Dilution-parody Paradox in the Wake of the Trademark Dilution Revision Act of 2006*, in *Cardozo Arts & Entertainment Law Journal*, 2009, II, 442 *et seq.*; K.B. McCABE, *Dilution by Blurring: A Theory Caught in the Shadow of Trademark Infringement*, *Fordham L. Rev.*, 2000, 1827; T.R. MARTINO, *Trademark Dilution*, Oxford, 1997; R.D. LITOWITZ and D.A. RETTEW, *What is 'Dilution' under the New US Federal Trademark Dilution Act?*, *EIPR*, 1996, 618; M.J. KAPLAN, *Antidilution Statutes and the First Amendment*, in *Southwestern Univ. L. Rev.*, 1992, 1139; M.B. HANSON and W.C. WALLS, *Protecting Trademark Good Will: The Case for a Federal Standard of Misappropriation*, in *TMLR*, 1991, 480; B.W. PATTSALL, *The Dilution Rationale for Trademark – Trade Identity Protection, its Progress and Prospects*, in *TMLR*, 1977, 607. See also B.A. JACOBS, *Trademark Dilution on the Constitutional Edge*, in *Columbia Law Review*, 2004, 104, 161; I. SIMON, *Dilutive Trade Mark Applications: Trading on Reputation or Just Playing Games?*, in *EIPR*, 2004, 67; D.J. FRANKLYN, *Debunking Dilution Doctrine: Toward a Coherent Theory of the Anti-free-rider Principle in American*

Trademark Law, in Hastings L. J., 2004, 56, 117; J.T. MCCARTHY, *Dilution of a Trademark: European and United States Law compared*, in *Trademark Rep.*, 2004, 94, 1163; L.J. OSWALD, *Tarnishment and Blurring under the Federal Trademark Dilution Act of 1995*, in 36 *Am. Bus. L. J.*, 1999, 255.

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Let us move on now to the protection of the expectations of the public that the reform has introduced in relation to both the origin and essential features of a product, in the wake of the abandonment of the principle that a trademark has to be tied to a particular firm, attention should be paid here to the doctrine of ‘distinguishing additions’, adopted as its own by the European Commission in the *Persil* case (in 7th Report on Competition Policy, April 1978, 125–7), which combats the risk of confusion through additional information considered suitable to dispelling the risk (which is certainly to be preferred to the US practice of using disclaimers).

The question of the truthfulness of products’ origin interacts with that of the international circulation of branded goods, characterised by the immanent tension between *free trade* and the *territoriality* of trademark law (I refer here to *physical* circulation: for the separate subject of trademark circulation over *digital* networks, see the excellent specific articles by D. BURK, *Trademark Doctrines for Global Electronic Commerce*, *op. cit.*; T. BETTINGER and D. THUM, *Territorial Trademark Rights in the Global Village – International Jurisdiction, Choice of Law and Substantive Law for Trademark Disputes on the Internet*, in *IIC*, 2000, 162 and 285).

In particular, as hinted in the main text, products sold outside the European Economic Area will not be considered as original according to the *exhaustion principle* reiterated by the Directive (article 7.1) and consistently upheld by the Court of Justice, from *Centrafarm* (case C-15/74, 31 October 1974, *Centrafarm BV and others/Sterling Drug*, in *Rec.* 1974, 1147) to *Silhouette* (case C-355/96, 16 July 1998, in *Rec.* 1998, I-4799). On this issue, see also W.R. CORNISH, *Trade Marks Portcullis for the EEA?*, in *EIPR*, 1998, 172; C. HEATH, *Parallel Imports and International Trade*, in *IIC*, 1997. The approach upheld in the *Silhouette* case was confirmed by the Court of Justice in the subsequent *Sebago* case (case C-173/98, 1 July 1999, *Sebago Inc. and Ancienne Maison Dubois et Fils SA / G-B Unic SA*, in *Rec.*, 1999, I-4103). See further R. GAVIN and S. RIDLEY, *Parallel Trade in the Pharmaceutical Industry: Scourge or Benefit?*, in *ECLR*, 2006, 27, 91; N. GROSS, *Trade Mark Exhaustion: The UK Perspective*, in *EIPR*, 2001, 224; H. NORMAN, *Parallel Imports from Non-EEA Member States: The Vision Remains Unclear*, in *EIPR*, 2000, 159; J. JONES, *Does an Opportunity Still Exist for the Development of a Doctrine of International Exhaustion at a Community Level under Articles 28 and 30?*, *ivi*, 2000, 171; V. CHIAPPETTA, *The Desirability of Agreeing to Disagree: The WTD, TRIPS, International IPR Exhaustion and a Few Other Things*, in *Michigan J. of Int’l L.*, 2000, 333; H.J. COHEN, *Prohibition of Parallel Imports through Intellectual Property Rights*, in *IIC*, 1999, 495; P. AUTERI, *Territorialità del diritto di marchio e circolazione di prodotti ‘originali’*, Milan, 1973.

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Strauss (UK) Ltd v. Tesco Stores, Tesco plc and Costco Wholesale UK Ltd (C-414/99, C-415/99 and C-416/99), as well as the *Peak Holding AB/Axolin-Elinor AB* case (C-16/03, 30 November 2004). Finally, some doubts have been aroused in the Commission itself. Upholding an application by the Swedish government, it commissioned a study of the effects of a possible extension of the principle of exhaustion of trademarks to parallel imports from third countries (NERA, *The Economic Consequences of the Choice of Regime of Exhaustion in the Area of Trademarks*, London, February 1999). This study was followed by a consultation stage, which involved the European Parliament, interested parties, chiefly organisations representing rightsholders, consumers and parallel traders, and by the preparation of a working paper in which the Commission examined the possible abuses of trademark rights within the EU in the context of Community exhaustion (21 May 2003, available at web site http://www.europa.eu.int/comm/internal_market/en/indprop/tm/docs/sec-2003-575/sec-2003-75_en.pdf). On this point, see T. HEIDE, *Trade Marks and Competition Law after Davidoff*, in *EIPR*, 2003, 25, 163; C.R. MANDLY Jr, *Article 82 of the E.C. Treaty and Trademark Rights*, in *TMR*, 2003, 93, 1314.

For the issue – linked to parallel imports – of restrictive agreements (especially selective distribution systems), see some key decisions of the European Court of Justice, such as *Nungesser v. Commission* (C-258/78), *Pronuptia* (C-161/84), *Metro SB Groosmarkte v. Commission* (C-26/76) and (C-75/84), also known as ‘Metro I’ ‘Metro II’. See also the European Commission decisions in *Campari* (of 23 December 1977, in O. J. L 70) and *Moosehead/Whitbread* (of 23 March 1990, in O. J. L 100). More on parallel imports, with reference to the various Glaxo cases, in note 46, above.

In concluding this survey of contributions on general aspects of the reform, I believe that the focus on the selling power of a trademark must not cause one to lose sight of the fact – emphasised also by ECJ case law, above all paragraph 7 of the *Hoffmann La Roche* judgment, C-102/77 – that the *essential function of trademarks is to indicate origin*. This point has been stressed in numerous judgments (in particular, *Canon*, C-39/97, 29/9/1998; *Lloyd*, C-342/97, 22/6/1999; *Philips and Linde*, *op. cit.* in relation to shape marks). On this issue and the tension between reasserting the distinguishing function and the expansion of the promotional function, see again A. VANZETTI, *Capacità distintiva e confondibilità: segni registrati e non registrati*, in *Dir. ind.*, 2007, 1, 7; W. CORNISH, *Intellectual Property: Omnipresent, Distracting, Irrelevant?*, Oxford, 2004. See also I. SIMON, *How Does ‘Essential Function’ Doctrine Drive European Trade Mark Law?*, in *IIC*, 2005, 401 *et seq.*

As concerns *non-traditional* or *new marks* that is, colour, olfactory or acoustic ones, see J.C. GINSBURG *See Me, Feel Me, Touch Me, Hear Me (and Maybe Smell and Taste Me Too): I Am a Trademark – A US Perspective*, in L. BENTLY, J. DAVIS and J. GINSBURG (eds), *Trade Marks and Brands – An Interdisciplinary Critique*, Cambridge, 2008, 92 *et seq.*

As for geographical indications of origin, see D. SNYDER, *Enhanced Protections for Geographical Indications under TRIPs: Potential Conflicts under the U.S. Constitutional and Statutory Regimes*, in *Fordham Intellectual Property, Media and Entertainment Law Journal*, 2008, 1297 *et seq.*; M. BLAKENEY and G.E. EVANS, *The Protection of Geographical Indications after Doha: Quo Vadis?*, *op. cit.* in G. GHIDINI and M. GENOVESI (eds), *Intellectual Property and Market Power*, ATRIP Papers 2006–2007, 83; C. GALLI and V. FALCE, *Globalisation of the Economy: Protection of Designations of Origin and Limits to Production*, in G. GHIDINI and M. GENOVESI (eds), *Intellectual Property and Market Power*, ATRIP Papers 2006–2007, 189.

5. Intellectual property and regulation(s) of competition

1. Foreword

The analysis thus far developed refers to the frequent interactions, *within* the paradigms of the various intellectual property rights, between the normative exclusionary features – expression of the protection of human innovation (utilitarian or intellectual) or the instruments evocative of a firm’s identity and image – and other aspects which are designed, even indirectly, to promote competitive dynamics, whether in terms of stimulating further and subsequent innovation or in terms of expanding the liberty of citizens to enjoy information (in a broad sense). Let me just recall the requirement for an adequate description and publicity for the invention for which a patent is filed; the limits of trademark registration as concerns descriptive expressions; the freedom to reverse engineer copyrighted software in order to allow interoperability with other programs, and so on.

As argued above about said interactions (Ch. 1 § 6 and 7), systemic coherence requires that the exclusionary profiles of IPRs regime be interpreted consistently with the overarching principle of free competition – the latter to be construed in tune with other ‘social welfare’ objectives, also of constitutional rank, such as, for example, the promotion of science, research, culture. In this perspective, as we have seen, it seems too obvious, for example, that the scope of the patent should be strictly circumscribed (‘equivalents’ aside, of course) to what the inventor has effectively and specifically claimed and described.

A similar need – and constitutional basis – affects the reconstruction of the relationship between IP law and the rules that directly govern competitive behaviours and relationships, in particular antitrust law and the rules on unfair competition. However, even as far as the relation/interface with IP is concerned, the rules on unfair competition, although often and increasingly intertwined with antitrust (Eleanor Fox once referred to ‘unfair methods of competition’ under section 5 of the Federal Trade Commission (FTC) Act as ‘incipient Sherman Act violations’) require distinct consideration. While antitrust law focuses on risks and damages to *competition* as such, that is, the competitive structure and/or functionality of the market(s) concerned, the

rules on unfair competition focus on the risks and damages to *competitors*, that is, their individual position on same market(s).

Now, and apart from possible convergences of goals and interpretative patterns, this basic distinction also influences, as hinted, the way each of the disciplines interplays with IPRs. Just to take one example: an agreement between two or more important holders of similar patented products aimed at refusing to deal with third parties in default of the acceptance of a minimum resale price would easily be declared illicit under antitrust rules.¹ It is quite unlikely that this would happen – unless the ‘locked’ patents represent a dominant standard (below, section 6) – under unfair competition rules, since third competitors would not be damaged, but would rather benefit from an artificially high level of competing products’ prices – a level that would allow them to practise efficacious price competition.

Let us now attempt to construe the ‘IP/competition law intersection’, starting from the relation with antitrust – the most significant and troubled profile of this intersection – even in the light of a long and complex evolution that is still under way. Before entering it, though, two preliminary caveats seem opportune.

First of all, let me define precisely what I mean by the ‘Intellectual Property/Antitrust (IP/AT) intersection’. I refer strictly to situations where (a) a restriction of competition is or may be caused by the exercise – be it contractual or unilateral – of IPRs’ inherent exclusionary powers; (b) conversely, AT ‘interference’ aims at opening a breach, so to say, in same powers. Thus, I will not deal with other hypotheses, even those frequently associated with our general theme, where the existence and exercise of IPRs are just factual conditions or circumstances that facilitate the success of an anti-competitive practice based on different ‘own’ illicit traits. Take, for example, the so-called ‘reverse payment’ that holders of shortly expiring patents sometimes grant – not infrequently in the pharmaceutical field – to prospective new entrants (producers of generics, typically) in order to delay their entrance into the market. What has this practice to do, in a proper sense, with the exploitation of patent rights? Is it not a straight horizontal agreement in restraint of competition, which would be equally illicit even if no patent existed or if the patent had expired, or even, in the opposite case, if both parties held valid patents? Would not that ‘pay for delay’ violate antitrust rules even if the agreement took place between two producers of generics, or between two holders of patents of identical therapeutic purpose? As Abbott and Michel have convincingly argued,² ‘The payment and not the patent provides exclusion resulting from

¹ At least in Europe: I would not bet on the US after *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 127 S. Ct. 2705 (2007).

² A.F. ABBOT and S.T. MICHEL, *The Right Balance of Competition Policy and*

the agreement'. Or take another example, also often ascribed to our theme: the so-called 'patent ambush'. The developer of a certain technology does not disclose her IPR at the time of the standard-setting negotiations, thus more easily achieves the adoption of such technology as standard ('as all non-IPR holders would prefer an IPR-free standard')³. Then, after that standard has been adopted and diffused, the developer asserts her IPR right. Now this practice may well be considered (as the FTC did in the *Rambus* case⁴) a type of competition abuse: a competitor corners other competitors 'after they have incurred the sunk costs they would have to write off if they refused the licensing offer',⁵ thus also possibly forcing same to pay higher 'unreasonable' royalties (see the EC 'Statement of Objections' issued against *Rambus* in 2007, cited in note 4) than they might have legitimately expected. But again – and apart from contractual, pre-contractual, and unfair competition aspects – doesn't the real core of the antitrust violation lie, rather than in an undue exercise of patent rights as such, in a fraudulent – hence 'unjustified' – pricing practice in violation of article 82(a) EC Treaty (now, article 102(a) TFEU)? In other words, in a misconduct that would lead to the very same conclusion had it been referred to *any other factual circumstance* (e.g. technological qualities) relevant for determining/manipulating the consent of the contracting party/competitor – as well of the standard-setting organisation?

Intellectual Property Law: A Perspective on Settlement of Pharmaceutical Patent Litigation, in *IDEA – The Intellectual Property Law Review*, 2006, 46(1). Mr Abbott was Associate Director and Ms Michel Chief Counsel, at the Federal Trade Commission.

³ D. GUELLEC and B. VAN POTTELSBERGHE DE LA POTTERIE, *The Economics of the European Patent System: IP Policy for Innovation and Competition*, Oxford, 2007, p. 106.

⁴ The Federal Trade Commission in May 2009 dropped its charge against *Rambus Inc.* (*Rambus Inc. v. F.T.C.* 522 F.3d 456, 469 – D.C. Cir. 2008) after in February 2009 the Supreme Court refused to reverse the April 2008 decision of the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Cir.) to dismiss the charge (U.S., 77 U.S.L.W.3346 – 2009. The pendulum swung, though, as hinted in the text above: as of 30 July 2007, the EC Commission's 'Statement of Objections' accused *Rambus* of charging 'unreasonably royalties' thanks to a patent ambush (see K. FIVEASH, *EC Accuses Rambus of 'Patent Ambush' – Chip Maker Slapped with Statement of Objections*, posted in *PC&Chips*, 23 August 2007). The claim was subsequently dropped (but) after *Rambus* pledged to cap the royalty fees (see *Antitrust: Commission accepts commitments from Rambus lowering memory chip royalty rates*, IP/09/1897, available at: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/09/1897&format=HTML&aged=0&language=EN&guiLanguage=en>). For a (sceptical) academic discussion of the patent ambush as competitive tort in the US and EU framework, see E. PETRITSI, *The Case of Unilateral Patent Ambush under EC Competition Rules*, in *World Comp.*, 2005, 28(1), 25.

⁵ GUELLEC and DE LA POTTERIE, *op. cit.*, note 2.

I believe that the foregoing point is not merely formalistic. It may help to keep the focus on the real McCoy of antitrust violation, hence also eliminating possible defences instrumentally built on 'strictly IP' questions, such as patent validity, patent scope and the like.

The second caveat refers to the systemic perspective of the intersection. As the analysis that follows will show, it would be over-simplistic to construe the relationship between IP and competition law either as a clash between the exclusivity features of IPRs and the principle of freedom governing antitrust, or as a reassuring substantial convergence of goals.

As hinted in Chapter 1, each of these disciplines has indeed a *direct* specific goal which cannot be assimilated to that of the other. Thus, to give just one example, the defence of competition against agreements in restraint of trade requires the general prohibition of such cartels (except within the strict limits of article 81(3) of the EC Treaty, now article 101(3) TFEU), even if they might help to promote technical innovation. Conversely, the patent paradigm as applied in Europe, even in the light of article 31(1) TRIPs, *only* grants access to technologically and economically high-profile derivative innovators, thus to a *more limited* range of innovations than would be postulated by the prospect of full and complete promotion of subsequent competition – which would include even incremental improvements.

In other words, a reconstruction of the 'interface' between IP and antitrust would lead to a false trail if it attributed to competition law a *direct* role in promoting innovation and to intellectual property a *direct* role in promoting competition. Nevertheless, as we shall see, one should recognise a *frequent dialectical interplay* between the two disciplines that helps to eliminate situations which would obstruct both innovation and competitive dynamics. Thus, through such dialectical exchange, each discipline, by fulfilling its function, can also *indirectly* serve the aims of the other.⁶ In this specific, and well-defined sense, we can willingly agree with Mario Monti's famous exhortation to understand 'how to marry the innovation bride and the competition groom'.⁷

⁶ One could perhaps speak of a direct convergence of aims in a wide historical perspective of industrial policy focused on promoting European competitiveness. A perspective, therefore, which serves to understand the rationale of legislative developments rather than to interpret and apply positive rules of law.

⁷ Commissioner M. Monti, 'The New EU Policy on Technology Transfer Agreements', SPEECH/04/19, Ecole des Mines, Paris, 16 January 2004.

PART I

INTELLECTUAL PROPERTY AND ANTITRUST

2. The Earlier Perspective: Checking the Contractual Exercise of IPRs

It is common knowledge that the intersection between IP law and antitrust first came to the attention of the EU Commission and Court of Justice in relation to the contractual relationship between IPR holders and third-party operators such as distributors, licensees and co-venturers. Through such relationships, IPR can be used, for example, to extend and articulate the rightholder's own industrial and/or commercial and/or R&D capacity, and thus protect the firm's decentralised organisation (built upon exclusive or non-exclusive dealers) against free riders or strengthen and enlarge the firm's overall IP portfolio by pooling its own patents with those of other owners, or acquire joint patent-rights ownership over the future results of R&D joint-venture agreements, etc.

The main tool for creating such relationships is the licence agreement, in its various forms. Here the *intersection* with antitrust law operates systemically in terms of *economic public order limitations* not on the across-the-board exclusionary power of the private holders of IPRs but rather on their dispositive power and those of their counterparties.

This aspect, whose economic significance is self-evident (as is the wealth of negotiating forms and legal rules it evokes) was developed in the early days of the European Community in the light of the objective of combating all possible forms of *market partitioning* which hinder the free movement of goods. It of course reflected an industrial policy of progressive standardisation/harmonisation of the several national markets into a single European market. Thus, the various contractual expressions of industrial and commercial expansion and decentralisation strategies that inspired the first stage of post-war economic reconstruction in Europe were analysed in the light of the harmonising objective. This led, first and foremost, to endorsing the principle that the excluding powers exercisable on the basis of exclusive trademark and patent licences are *exhausted* at the first stage of distribution, thus combating the *isolation* of national markets and encouraging intra-brand price competition.

The result was the gradual 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 which often failed to take account both of the need to 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, above all, of the *intrinsically pro-competitive nature* of transfer/diffusion of important technological know-how

to independent partners. Experience confirms that today's licensee can be tomorrow's competitor.

Often, therefore, that orientation revealed itself not to be suited to fostering the intrinsically innovation-enhancing effect deriving from the continuous two-way exchange of technological and manufacturing know-how during the contractual relationship between licensor and licensees.

Finally, I would add the doubt, already expressed more than 30 years ago,⁸ that such a strict *per se* approach objectively amounted to a paradoxical *pro-oligopolistic antitrust*, 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.⁹

It is equally well known – and I will limit myself here to a passing mention – that this original approach slowly evolved in the direction of a different assessment, influenced by the Chicago School of economic analysis, of the various contractual practices and their competition-related effects, including, in the long term, on market relations as a whole and on the dynamics of innovation. Thus it eventually came to be acknowledged that what at one time appeared to be solely a tool to impose and/or expand market dominion might be actually a necessary expression of cooperation that could increase efficiency, act as an incentive and actually propagate innovation.

This development is still continuing, and took a further step forward with the Technology Transfer Block Exemption Regulation (TTBER) No. 772/2004,¹⁰ relating to the licensing of technologies protected by IPRs or industrial secrets. The TTBER develops and emphasises an approach designed to adopt more flexible and pragmatic qualification criteria governing IP-

⁸ G. GHIDINI, *Il regime comunitario delle esclusive di vendita: anti-trust per oligopolisti?*, in *Riv. dir. Comm.*, 1973, p. 1.

⁹ It is open to speculation, however, that 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. See also note 6 above.

¹⁰ Commission Regulation (EC) No. 772/2004 of 27 April 2004 on the application of article 81(3) of the Treaty (now article 101(3) TFEU) to categories of technology transfer agreements, published in Official Journal L 123/11 of 27 April 2004.

related contractual relationships, and their application to the actual market context.

This new approach, which reflected the growing influence of the *rule of reason*, legitimised 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.¹¹ 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 emphasising 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 new TTBER¹² favourably evaluate the efficiencies inherent in technology pools, which reduce transaction costs that would hinder technological progress,¹³ especially in cases of incremental innovation.¹⁴

¹¹ Compare Regulations 2659/2000 and 2658/2000 relating to vertical agreements with the different approach of Regulation 2790/1999.

¹² Commission Notice – Guidelines on the application of article 81 of the EC Treaty to technology transfer agreements, published in Official Journal C 101 of 27 April 2004, § 214.

¹³ 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 *Expanding the Boundaries of Intellectual Property*, New York, 2001, p. 123. Again, R.P. MERGES, *Of Property Rules, Coase, and Intellectual Property*, in *Colum. L. Rev.*, 1994, p. 2655.

¹⁴ Economic literature uses the term *incremental* or *cumulative* to address in contemporary times the new nature of innovation whose development 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*, in *Journal of Economic Perspective*, 1991, p. 29, whose title plays on Newton's famous expression).

The incremental nature of innovation carries within itself the need for innovators to have free 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'), inventors need to negotiate several licences to get *feu vert* to 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*, in *Harv. L. Rev.*, 1998, p. 621. Similarly, with reference to the problem of *research tools*, see R. S. EISENBERG, *Bargaining over the Transfer of Proprietary Research Tools: Is this Market Failing or Emerging?*, in R. DREYFUSS,

However, this trend, which also marks EU¹⁵ (as well as US¹⁶) case law, may underestimate the risk – which the above-mentioned Guidelines¹⁷ recognise – that the pool could 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-ventures, thereby foreclosing competitors from the markets of reference.¹⁸

The same reservation, subject to making the necessary adjustments, applies to the more benevolent treatment of vertical agreements. Agreed in principle, but let's not exaggerate, otherwise one might end up also condoning agreements aimed at restricting the freedom of parallel imports (the risk possibly incurred by the European courts in the *Glaxo* cases: see above, Ch. 4, § 2) .

3. Phase Two: Storming the Sanctuary Commencing from Telecommunications Standards

The perspective briefly described above is that in which the issue of the inter-

D.L. ZIMMERMAN and H. FIRST (eds), *Expanding the Boundaries of Intellectual Property*, New York, 2001.

¹⁵ 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.

¹⁶ US case law subjects the approval of pools to 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 the following 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), and DVD-6 (www.usdoj.gov/atr/public/busreview/2485.htm).

¹⁷ Note, indeed, that paragraph 152 of the very 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. This does not imply that the creation of a *de facto* industry standard always eliminates competition within the meaning of the last condition of Article 81(3)'. See also paragraph 213.

¹⁸ 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*, in *Journal of International Economic Law*, 2004, p. 401.

section between intellectual property and antitrust – in relation to article 30 of the EC Treaty (now 36 TFEU) – was traditionally viewed, which did not question the exercise of IPRs' holders' power to exclude third parties trying to access the protected innovation/creation. This reflected both the earlier interpretation, which denied the possible interference of competition law with the terms of grant of IPRs as established by national legislation, as well as the subsequent approach, which rejected such interference in relation to the *normal exercise* of IPRs themselves (a concept, and a boundary, restated in article 30 of the TRIPs Agreement), according to their *own* (or *specific*) power content, equated with their essential anti-free-riding function.¹⁹

It is clear also that in this second perspective the exercise of the power to exclude unauthorised third parties, even if implemented in contractual forms, reflected the essential function of IPRs and hence also that untouchable *normal exercise* of the rights themselves as distinct from *other* anti-competitive behaviour by IPRs holders aimed at exploiting their position of strength on the market in their dealings with third parties, and the consequent generation of *further* anti-competitive effects. Thus, only those further *contractual exercises* whereby IPRs are used as a *lever* to expand market power beyond their (*normal*) anti-free-riding function would be restricted by antitrust law.

In other words, that perspective did not challenge the sanctuary of IPRs owners' absolute power to exclude unauthorised third parties seeking access to the use of the IPR-protected innovation/creation.

Now, it is precisely this sanctuary that the guns of Valmy of today's European antitrust are aiming at (within the limits we shall recall in a while), and have begun writing a new history about the relationship between IP and antitrust. A history still in progress, diversified, troubled and that still deeply differs to date, as hinted, on the two sides of the Atlantic (Valmy, not by chance, is in the heart of Europe). The heart of the matter, we all know, is the question of whether, and to what extent, a right of access (typically in the form of a non-voluntary licence) over innovative creations typically protected by copyright or patents can be granted to third parties if the exercise of the excluding powers typically associated with IPRs would foreclose such parties from operating as competitors on a related downstream market or – even more

¹⁹ As Professor Steve Anderman has pointed out, the distinction between *existence* and *permitted exercise* of IPRs, reaffirmed in *Parke Davis v. Probel* (1968), gradually became blurred when the former concept was broadened to cover also that of the 'essential function' of IPRs and that of their 'specific subject matter'. This expansion caused some interpretative confusion, with negative repercussions on the application of the law of competition. See S.D. ANDERMAN, *EC Competition Law and Intellectual Property Rights: The Regulation of Innovation*, Oxford, 2000, pp. 12 *et seq.*

controversially – on the same market as the technology (product) protected by the IPR.²⁰

If I remember rightly, the first ‘pro-access’ stance – as an expression of general policy – was assumed by the European Commission, when progressively drafting the guidelines for the industrial policy aimed at liberalising telecommunications. Here the Commission first expressly 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 Commission, *years before the courts*, stated that the use of common standards represents ‘an enabling element for effective free-market competition’.²¹

This conviction was again firmly stated, as an expression of policy, in the Commission’s Guidelines on Intellectual Property and Standardisation (COM 892), 1992, 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 finally, with an even more general scope, in the 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 standards are as open as possible and applied in a clear non-discriminatory manner. To avoid elimination of competition in the relevant market(s), access to the standard must be possible for third parties on fair, reasonable and non-discriminatory terms’.²²

4. The Door is Open – But Not Wide Open; from *Magill* to *Microsoft*

The pro-openness approach adopted by the Commission in formulating policy lines is also reflected in its work as an adjudicating body (from *Magill* to *IMS Health* and *Microsoft*, to mention the best-known cases), leading to the substantial application of the doctrine of *essential facilities* to dominant standards protected by IPRs, with the result that refusal to give access on fair, non-discriminatory (and obviously non-exclusive) terms to third parties which

²⁰ Especially, but not only, in the IT sector: below, paragraphs 6–7.

²¹ See recital 7 of Directive 92/38/EC, published in Official Journal L 137 of 20 May 1992.

²² Commission Notice of 6 January 2001: *Guidelines on the applicability of article 81 of the EC Treaty to horizontal cooperation agreements*, in Official Journal C 3/02 of 6 January 2001. See section 6.4.3, 174.

would otherwise be bottlenecked might constitute an abuse of a dominant position.

This approach has been basically followed by the courts, although, as it seems, with a significant restriction. In the *IMS Health* case, the Commission condemned IMS' refusal to grant a copyright licence over a modular structure used as a data-classifying criterion which had become the dominant standard on the market, thereby facilitating the provision of competing information services and avoiding the foreclosure of competition on the owner's market – that is, the *primary* market – which would have resulted from refusal.²³ However, the European Court of Justice, answering the preliminary ruling requested by the *Landgericht* of Frankfurt am Main, explained that in order for an abuse to exist, it is necessary, *inter alia*, that 'the undertaking which requested the licence does not intend to limit itself essentially to duplicating the goods or services already offered on the secondary market by the owner of the copyright, but intends to produce new goods or services not offered by the owner of the right and for which there is a potential consumer demand'.²⁴

In other words, it seems from such decision that the finding of an abuse is strictly dependent on the fact that the incumbent, by its behaviour, prevents access to the market to a new product/service, different from the one that it produces, but whose development requires the use of the protected standard. Thus, it seems, the unlawful restrictions on competition are limited to those forms of behaviour that impede, by means of the refusal to license, the development of *derivative* (related) products/markets.²⁵ This seems to signal a questionable bent towards the dominant American approach, which holds firm to the basic intangibility of the IPR-related power to exclude, thus limiting possible antitrust interference with the exercise of IPRs to cases involving *leveraging* of such power on different, related markets.

However, as we know, the Commission did not back off. In the most significant part of the *Microsoft* judgment of 24 March 2004, Commissioner Monti ordered Redmond to disclose the specifications of the interfaces (note: not the

²³ The Commission came to that conclusion interpreting the exceptional circumstances of *Magill* as a mere list of examples of factors, each of which, considered individually or in conjunction with other special factors, could have determined the existence of an abuse: *NDC Health v. IMS Health* (2001) Case COMP D3/38.044, paragraph 80.

²⁴ European Court of Justice judgment of 29 April 2004, Case C-418/01, *IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG*.

²⁵ Moreover, and with a dexterity that dilutes (if not actually cancels) the breadth of that affirmation, the Court said that the requisite of a double market may be satisfied also in cases of a tangible input that is, absolutely necessary for the production of a given product. *Id.* paragraph 45. In reality, the *IMS* case clearly concerned a competitive conflict on the same (horizontal) market: that of databases on pharmaceutical sales.

source code) of the Windows work group server operating system to competitors (especially Sun Microsystems) to enable them to achieve full interoperability of their server operating systems with Microsoft's, and in particular to ensure the same degree of compatibility as exists between the latter and Windows operating systems for personal computers which are designed to operate within a single network of computers.²⁶

In essence (and even apart from the reasoning that relies on a questionable and unnecessary alleged leveraging of market power from the upstream market for operating systems for PC clients to the downstream market for operating systems for work group servers), the Competition Directorate General, later backed by the Court of First Instance (CFI),²⁷ imposed a *duty to disclose* in order to allow competition on the same market, that is, the market for operating systems for work group servers.

This is not all. The CFI decision, confirming in substance the legal and economic assessment performed by the Commission, seems to have brought the *Magill* test a step further by specifically classifying (as suggested by the Commission) Microsoft's refusal to deal as a violation of article 82, 2nd prong, letter B): hence, as conduct damaging consumer welfare by limiting technological development.²⁸

However, it must be emphasised that even the EU bodies' broader pro-competitive approach views antitrust interference on IPR-related excluding

²⁶ In the words of the Commission, the functioning of a (Windows) work group network 'relies on an *architecture* of client-to-server and server-to-server interconnections and interactions, which ensures a transparent access to the core work group server services' where 'the common ability to be part of that architecture is an *element of compatibility* between Windows client PCs and Windows work group servers'. Commission decision of 24 March 2004 relating to a proceeding under article 82 of the EC Treaty, Case COMP/C-3/37.792 *Microsoft*, section 182. According to the Commission, in order to directly and more quickly deliver their services to the client PC user, Windows work group servers use the presence of specific pieces of software code in the Windows client PC operating system, which are processed and inserted in the operating system for Windows 2000 for work groups. This operation made for a more effective and quicker interoperability within computer systems comprising PC client and Windows server. *Ibid.*, sections 177–8.

²⁷ Judgment of the Court of First Instance (Grand Chamber) of 17 September 2007 – *Microsoft v. Commission* (Case T-201/04), G.U. del 10-11-2007, C 269/80.

²⁸ See *Microsoft v. Commission* (Case T-201/04), above note 27, sections 647–8. In particular, see section 647 where the CFI expressly holds that: 'The circumstance relating to the appearance of a new product, as envisaged in *Magill* and *IMS Health*, paragraph 107 above, *cannot be the only parameter* which determines whether a refusal to license an intellectual property right is capable of causing prejudice to consumers within the meaning of Article 82(b)EC. As that provision states, such prejudice may arise where there is a limitation not only of production or markets, but also of *technical development*' (emphasis added).

faculties as exceptional. In particular, even according to the Court of First Instance's analysis, the doctrine of essential facilities which legitimises this interference requires, in addition to the obvious finding of a dominant position, the abusive behaviour to take place under *exceptional circumstances*, represented either by foreclosure of a new product for which significant demand exists or the presence of economic phenomena that strengthen the barrier to entry constituted by IPRs and this, in turn, can result in a lessening of technological development to the detriment of consumer welfare.²⁹

In other words, the essential facility doctrine does not provide easy access to IPR-protected technologies; in fact, it embodies *the most restrictive form* in which a right of access might be affirmed, under an antitrust rationale, in the issue at stake. This also applies, as hinted, to the Commission's jurisprudence, which reflects the severe approach displayed in cases regarding material facilities (see, for example, *Sealink Harbours*, 1992 and *Stena Sealink*, 1994).³⁰

Thus, any danger deriving from a *loose* approach to the duty to grant access, i.e. (a) *taxing* technological improvements (see Advocate Jacobs' opinion in the *Bronner* case³¹) and (b) encouraging a path-dependent attitude by competitors, would be avoided. Conversely, such a specific condition of antitrust interference impedes the IPR entitlement to develop into a rent-seeking position: which further exerts a pressure on the rightholder itself to keep competing by innovation instead of resting on her laurels.³²

5. Does the Exercise of IPRs Confer Market Power? Checking Each Basic Paradigm

The discussion must be developed and above all clarified (at least regarding

²⁹ Apparently, according to the Commission and CFI assessment in *Microsoft*, the 'new product test' would be satisfied even when the product in question was not an entirely new one (that is, one that did not exist before on the market), but the refusal to license would kill a competing product with technologically enhanced features which consumers perceive to improve on the dominant firm's. See *Microsoft v. Commission* (Case T-201/04), above note 27, sections 650–58.

³⁰ The statements by the Commission in the guidelines and notices relating to telecommunications certainly used less restrictive language, but this is justified by the type of document in question, dedicated to announcing *industrial policy* lines designed to promote the liberalisation in an entire macro-sector.

³¹ See *Oscar Bronner GmbH & Co. v. Mediaprint*, C-7/97, paragraph 57.

³² In fact, as the CFI explains: 'if the mere fact of holding intellectual property rights could in itself constitute objective justification for the refusal to grant a license, the exception established by the case law could never apply'. See *Microsoft v. Commission* (Case T-201/04), above note 27, section 690.

terminology) in relation to the exceptional nature of the antitrust interference in the context of the European Community approach described above.

This exceptional nature cannot obviously be likened to an *intrusion* by antitrust law in situations of market foreclosure, given that the latter is precisely the typical function of such law. Instead, 'exceptional' must be understood in the sense of a denial in principle that the power to exclude unauthorised third-party access (a power *normally* associated with IPR ownership and distinct from the exercise of contractual powers of disposition that can have anti-competitive effects) can per se confer (a degree of) market power that warrants antitrust interference and hence the imposition of an obligation to grant (paid) access to the IPR-protected rights. Only where special circumstances render the exercise of those exclusionary powers a barrier capable of foreclosing access to one or more markets (and not simply access to just one product among the many available on the market) is such interference warranted.

That said, identifying such circumstances (as opposed to contractual restrictions in connection with exclusionary powers) cannot be done in relation to intellectual property rights *en bloc*. We have already noted that for many aspects – of which the present one is among the more testing – the study of intellectual property rights calls for a highly differentiated analysis, without of course losing sight of the fact that IPRs rights are part of an overall system. A common factor among the various paradigms is solely the indisputable power of IPR holders to combat free riders and infringers in the proper sense of the word. In short, antitrust never 'helps' free riders, no matter what type of IPR is involved.

Let's now proceed to the analysis of the basic IP paradigms (as concerns 'secrets', which are not properly the subject matter of IPRs, see below, at the end of subsection (b)) in order to check if, when and how, each entitlement might correspond to a situation of market power in a proper antitrust sense.

(a) Patents

In a correct systemic perspective, patents' institutional mission is to grant inventors a *micro*-monopoly (that is, on the given specific technological solution they have developed), not a *macro*-monopoly (on the industrial sector or niche to which that solution belongs). This assumption is supported by the indisputable principle that patents cannot prevent competitors from developing and marketing (and indeed patenting, if novel and inventive) any different competitive solution aimed at the same function, even if the first patented solution had happened to be, at the date of filing, the first and only to satisfy that specific function/usefulness. More than that: subsequent competitive innovation is indeed fostered by several built-in mechanisms of the patent paradigm itself, in particular the public disclosure of a full and exact description of the invention.

The denial that ownership per se of a patent can be tantamount – even presumptively³³ – to market power that is relevant for antitrust purposes holds true also in cases where the patented invention happens to be quite superior to the prior art and hence becomes *de facto* dominant (think of a new drug dramatically improving the cure of perilous diseases). Should we in such case – in the absence of further circumstances that multiply the force of the patent's exclusionary power to the point of hindering competition by others or making it more arduous – compel the patentee to waive its exclusive right solely because it invented too well and too successfully? Remember that brilliant innovation does not *per se* impede entrance in the market for other competitors. These will try to produce a better cure for the same disease, based on the application of other molecules and if they eventually come up with it, they will break into the market with their more advanced product. Moreover, as far as meeting consumer interests and incentivising subsequent innovation are concerned, there is always the rule on cross-licence in favour of highly valuable dependent inventions. A rule that resides within the patent system itself and whose application is totally independent of any antitrust considerations and in particular the holding of market power by the persons involved.

Thus, and conclusively, we limit the assessment of 'antitrust-relevant' market power to the two following hypotheses, expressing absolute foreclosure of competition:

- The patented innovation has been formally selected by law or *ad hoc* bodies as 'the' productive industrial standard. Think, for example, of the single vaccine that health authorities have approved (in Italian law, this amounts to a case of 'legal monopoly', regulated by a duty to deal on a non-discriminatory basis; article 2597 of the Italian Civil Code). Or, of the choice, by the European Telecommunication Standards Institute (ETSI), of a certain technology as the industrial standard.
- A patented technology has become the *de facto* dominant standard (*and*) in a sector characterised by factors such as network effects which, locking in consumers and users, may easily alter the balance between realised and subsequent innovation, making it actually impossible for competitors to enter and compete. In such cases – typically related to IT – even if third parties invent something better, it is quite likely that they will not be able to bring such a product into the market.³⁴

³³ This also seems to be the view of the US Supreme Court, which denied any foundation to a (general) assumption that mere ownership of a patent entails per se market power (*Illinois Tool Works Inc v. Independent Ink Inc.*, 126 S. Ct. 1281 [2006]).

³⁴ Thus, market power is *certain* when a given technology is the only one that

Finally, it should be emphasised that the situations referred to above – very close to the case of ‘unique works’ illustrated by Rochelle C. Dreyfuss³⁵ – should also concern competition on the primary market, hence at a horizontal level. We should bear in mind that the often recalled non-voluntary (cross-) licence mechanism, provided by article 31(1) of the TRIPs Agreement in favour of derivative inventions of high technical and economic value, applies to derivative innovation realised at any market level, thus: typically, in the same (primary) market as the prior invention. Indeed, improvements normally relate to an identical market. Now, it would be inconsistent for competition law’s anti-foreclosure mission to operate at *fewer* market levels than the pro-competitive antibodies built into the very IPR paradigm. And it is well known that the same essential facility doctrine (in the US), which originally applied to physical infrastructure, concerned competition on the same markets (for example, transportation services). And doesn’t *IMS* itself relate, as a matter of fact, to a horizontal competitive relationship, that is, on the market for commercial databases for pharmacists and hospitals?

(b) Copyright

As already mentioned in Chapter 3, copyright, in the original classical paradigm – protecting only expression and not underlying ideas, and referring to non-utilitarian creations of purely intellectual/spiritual enjoyment (*‘oeuvres littéraires et artistiques’*, the original subject matter of the Berne Convention) – carries no risk of market power in the proper sense. This is because *that kind* of protection, as applied to *that kind* of creation allows an infinite degree of substitutability, unlike in the field of utilitarian innovation. Thus, there is no reasonable room for antitrust interference. In this ‘classical’ domain of copyrighted works, the problem of third parties’ access is not essentially of a competitive nature. It relates to the diffusion of culture and information, hence must be approached all within the copyright paradigm, and solved, as argued above, Chapter 3, by a substantial rebalancing of interests enhancing the rights of citizens-users’ – first and foremost researchers and providers of information (at large) of public interest.

Quite a different scenario occurs 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 liter-

can be adopted, whereas when it is included in a standard that, albeit dominant, has alternatives, the occurrence of market power is most *likely* (see in this sense the American case *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, (3d Cir. 2007)).

³⁵ R.C. DREYFUSS, *Unique Works/Unique Challenges at the Intellectual Property/Competition Law Interface*, in K. D. EHLERMANN and I. ATANASIU (eds), *European Competition Law Annual, 2005 – The Interaction between Competition Law and Intellectual Property Law*, Oxford, 2007.

ary work – represents in truth (as already pointed out in Chapter 3) ‘expressed ideas not expressions’ and where the form is always somehow driven by the functional goal. Here and only here should one allow for antitrust interference under the same rationale, and in the same basic legal framework as we have referred to vis-à-vis patents (see above). This, indeed, with even stronger justification, since copyright protection is unselective on the merits and thus can cover even very ‘weak’ innovation (for example, the data-ordering criterion protected in *IMS*, whose low level of creativity attracted much criticism, unwarranted in light of the meaning of ‘original’ in copyright law). Moreover, again unlike in the field of patents, the copyright owner is under no obligation to grant any licence whatsoever to the author of a derivative work, even if the latter is of high cultural importance: for example, the translation of poem made by a Nobel prize author. Indeed, unlike in the general copyright model, the rules governing technology copyright do not grant any freedom to third parties to devise, let alone implement, a derivative innovation. As known, the field of computer programs, reverse engineering is allowed just for purposes of ‘interoperability’ with other programs, that is, not also to allow the development of improved software.

One more comment. The need to invoke antitrust law might often be avoided (thus drastically reducing the costs of litigation) if the paradigm of IPRs – especially copyright – were structured, or applied, so as to reconcile in a more balanced way the interests of the first and subsequent innovators, who are often respectively incumbents and new or existing rivals. This seems most urgent in the IT field, which is more intensely characterised by network effects, and extensively dominated by the copyright paradigm, and less friendly to derivative innovation. To quote Hanns Ullrich, ‘because legislators often fail to properly define the limits of exclusive property rights, the exercise of these rights in new situations, and especially with regard to new technologies, attracts scrutiny under competition law, with a view to preventing anticompetitive market foreclosure’.³⁶

In this respect, an example of more competition- (and innovation-) oriented regulation of intellectual property can be found in the now defunct proposed Directive³⁷ on the patentability of computer-related inventions, which sought

³⁶ H. ULLRICH, *Expansionist Intellectual Property Protection and Reductionist Competition Rules: A TRIPs Perspective*, in *Journal of International Economic Law*, 2004, p. 401.

³⁷ Proposal for a directive of the European Parliament and of the Council on the patentability of computer-implemented inventions (COM(2002)92–C5-0082/2002-2002/0047). As is well-known, in July 2005, the European Parliament rejected the Council common position on the Proposal for a directive of the European Parliament and of the Council on the patentability of computer-implemented inventions. See the

to transpose to the new patent framework the pro-interoperability rules of article 6 of Directive 2009/24/CE providing for copyright protection over computer programs. Now, in coherence with that pro-competitive approach, a symmetrical 'gene transplant' from the patent to the copyright paradigm could profitably be proposed, inserting into the latter the principle protecting derivative innovations set by article 31(1) of the TRIPs Agreement and various national European legislation.

The basic arguments and considerations just applied to patents and copyrights also apply to industrial and trade secrets. *A fortiori*, in fact, since these are not, and should not be, protected as IPRs in proper sense (see above, Chapter 2). This conclusion gives systemic support, *inter alia*, to the EC Commission's position in the *Microsoft* saga, regarding the refusal to give access to Windows' source code of communication interfaces.

(c) Trademarks

The general issue we are discussing affects *all* IPRs, including trademarks, which at first sight it seems illogical to associate with the prospect of access, that is, *sharing* by third parties. One might indeed intuitively assume that except for the special, atypical case of *geographical* trademarks (which do not reflect origin in a particular firm but characteristics that are associated with a particular territory and the related traditional knowledge and can therefore legitimately be used by a number of qualified parties), imposing shared use of a trademark would amount to accepting, indeed encouraging, confusion about the industrial source of products. Hence the need, one might argue, to keep, without exceptions, the trademark's use in the sole hands of the registered owner and/or her licensees. However, this argument – while neglecting the fact that European trademark law allows *coexistence agreements* between the holder and third parties (see Chapter 4) – fails to address the case of a trademark's selling power far exceeding its merely distinguishing effect and function. This power can grow out of the celebrity of the sign, in its turn the effect of the product's high reputation and/or of strong advertising investments. Such selling power can well entail strong 'lock-in' effects for consumers, also in sectors other than those that the trademark is registered for, and thus translate into market power in an antitrust sense.

When that occurs, which is possible solely for highly renowned trademarks (*haute renommée*), the trademark owner's exclusionary power can be subject

recommendation for the second reading of the Council common position in view of the adoption of the Directive of the European Parliament and of the Council on the patentability of computer-implemented inventions, A6-0207/2005, of 21 May 2005, available at <http://www.europarl.eu.int/omk/sipade3?PUBREF=-//EP//NONSGML+REPORT+A6-2005-207+0+DOC+PDF+V0//IT&L=IT&LEVEL=2&NAV=S&LSTDOC=Y>.

to antitrust scrutiny in relation to the assessment of a dominant position created, or at least reinforced, by the control of trademarks with strong selling power.³⁸ There have been some important cases, decided by the European Commission and national antitrust authorities,³⁹ whereby an ‘antitrust storm’, to quote Francesco Denozza, undermined the excluding paradigm of the registered trademark. For example, a merger consolidating famous trademarks in a single ownership may 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 where an abuse of dominant positions was found under article 82(a) of the EC Treaty (now article 102(a) TFEU) for an anti-competitive implementation of a trademark licensing scheme, the Commission has consequently imposed as a remedy that the company license the trademark free of charge.⁴⁰

Finally, reference can be made to the *synergies* between the trademark’s appeal and the exploitation of other IPRs (above, Chapter 4, section 6). I refer, for example, to the case of a patented product, marketed under a certain trademark, whose commercial success and appeal is obviously enhanced by the exclusive presence of the product on the market for 20 years. Now the appeal acquired by such a trademark can *prolong the ‘monopolistic’ effect of the patent*, or rather the owner’s dominant position, beyond the patent’s expiration (save for cases of vulgarisation, about which see section 6 of Chapter 4 above). Legally opening the market to competitors does not prevent consumers, attached to the trademark which has accompanied the product for 20 years, from preferring to remain loyal to it, and thus *locked in*, even after the patent expires. (This factor, rooted in experience, should perhaps be taken into consideration in judging the behaviour of holders of soon-to-expire patents vis-à-vis prospective new entrants – like producers of ‘generics’.)

6. Intermezzo: In Search of the Historical Roots of the European Approach

Here, as in other areas of IP law, Europe offers a perceptible contrast with the other side of the Atlantic. In the US, as hinted, the dominant opinion (boosted, albeit not specifically in an IP-related case, by the Supreme Court in the 2004

³⁸ See the Italian case of *Pepsico Food and Beverages International v. IBG Sud v. Coca Cola Italia*, Italian Competition Authority decision no. 7804 A224. The same rationale would also hold true to authorise an agreement between holders of renowned trademarks, provided that licences in relation thereto were given at least in part to third parties.

³⁹ In particular, see *Kimberly-Clark v. Scott*, Case no. IV/M 623. See also the Italian case *Henkel v. Loctite*, decisions nos. 4993 C 2641, 9795 C 2641 and 10718 C.

⁴⁰ The decision has been upheld by the Court of First Instance; see *Duales System Deutschland AG v. Commission*, Case T-151/01 R.

Trinko case⁴¹) is traditionally reluctant to allow any breaches in the excluding faculties of IPRs, viewed as (a) indispensable incentives to innovation, and (b) already subject to (sufficient) built-in limitations of time and scope. The *Trinko* ideology, so to say, seems coherent with other major jurisprudential and normative drifts in IP regulation across the two shores of the Atlantic. We are not only referring to the *Microsoft* case. That drift encompasses the whole area of IP regimes, and their relation with competition-protecting principles, whether provided by competition law or built into specific IP paradigms. In the area of patents, for example, we can see how in the *Amgen* case, the scope of the patent was interpreted in the US as including possible alternatives to obtain the same end-product, whereas in Europe (in this case, the UK) the approach is stricter and the monopoly was acknowledged only on the elements that were specifically claimed.⁴² Or, take the role assigned in European patent law to compulsory licences, especially *cross* licences (consistent with the TRIPs Agreement), to foster derivative high profile competitive innovation. This is a tool that in US IP law enjoys a residual role, being basically restricted to federally funded inventions.⁴³

In respect of such differences ('deep cultural and historical differences' to quote Giuliano Amato) I venture the hypothesis, however theoretical the exercise, that the multifaceted 'reasonably' pro-access approach prevailing in Europe has its roots deep in the continental European theory of property.

From early Roman times, according to the doctrine of servitudes (the substantive ancestor, in my opinion, of the essential facilities doctrine as originally applied to physical infrastructures),⁴⁴ the theory of property law included a duty by landowners to grant access to landlocked⁴⁵ neighbours in the specific cases where foreclosure of the latter would, for example, have

⁴¹ *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko LLP*, 124 S. Ct. 872, 2004.

⁴² Compare the following two cases: a) United States District Court, D. Massachusetts, *Amgen Inc. v. Hoechst Marion Roussel, Inc. and Transkaryotic Therapies, Inc.*, 339 F. Supp. 2d 202, 2004, upheld on this point by the US Ct. of App. for the Fed. Circ., 457 F. 3d 1293, 2006; b) UK House of Lords, *Kirin-Amgen v. Hoechst Marion Roussel Limited*, session 2003–2004, available at <http://www.publications.parliament.uk/pa/ldjudgmt/jd0410221/kin-1.htm>.

⁴³ See 35 USC Sec 202(c) of the Bayh-Dole Act.

⁴⁴ I stress the economic substance of such a duty, aside from legal technicalities such as its *in rem* (instead of *in personam*) nature and its *internal* inherence in the theory of property paradigm recalled in the text.

⁴⁵ 'Foreclosed', one would say today. In the final analysis, from an economic standpoint, access in favour of the neighbouring farms is to the advantage of competitors both in the primary market for agricultural commodities and cattle and in the downstream market for finished food products.

jeopardised the efficiency of their farming/breeding activity and consequently the overall productivity/welfare of the Latian economy. In other words, land property *was born limited by duties grounded in social welfare*. Thus, precisely because of its inherence in the theory of property, the weight of servitude could not by any means be viewed as an *expropriation*.

In essence, the application of the doctrine of essential facility to IP rights achieves from the outside – through antitrust interference – that result which the specific paradigms of intellectual property (more closed compared to the model for tangible property, especially real estate) do not allow to be achieved from the inside. On this last point, it is no coincidence that this interference generally targets technology copyright, the paradigm ‘without windows’ in favour of derivative innovation.⁴⁶

Whoever wishes to explore in more depth the hypotheses that the transatlantic difference on the applicability of the essential facility doctrine to intellectual property can be traced back to a different theory (and social conception) of property would do well to read the enlightening foreword by Learned Hand to volume 50 (1936) of the *Harvard Law Review*, on the Anglo-Saxon idea of property. Well aware that contemporary industrial development requires collaborative relationships (‘Every smallest step of modern industry depends upon a co-operation whose maintenance and regulation is the very stuff of law’), the great federal judge recalled that the Anglo-Saxon theory of property did not include any significant social duties (as had persisted under feudal law): ‘while the Tudors were forging the English commonwealth, legal theory created no new nexus of property and duties’. While as regards the American tradition, ‘it was impossible that the American colonists of the seventeenth century should have maintained, even if they had inherited it, a tradition of communal servitudes [...] The individual asked little of society, and himself created whatever value his meagre possessions acquired. On the contrary he established, and handed on, a notion of society as an aggregation of monads, legally bound together as lightly as possible and for few common purposes’ (emphasis added).

7. The Technological and Economic Rationale of the European Approach

Let us return to the main issue now and examine more closely the technological and economic factors underlying the European legal framework that I sought to reconstruct above from an evolutionary perspective.

⁴⁶ May I refer to my *Patent and Copyright Paradigms vis-à-vis Derivative Innovation: The Case of Computer Programs* (written with E. AREZZO), in *IIC*, 2005, vol. 2, p. 259? Likewise on the point, see V. FALCE, *Diritto d'autore e innovazione derivata nelle Information Technologies*, in *Riv. Dir. Ind.*, no. 1, 2003, p. 74.

The point of departure, as one could already guess from the original reference to the telecommunications sector, is the modern industrial trend towards standardisation, that is, the development of products and processes capable of *working together* with other products and processes and therefore of providing interoperability through compatibility.

As everybody knows, various beneficial economic effects are associated with this trend, such as the production of compatible products and services, and therefore the creation of markets separate from that of the first, standardised product. However, in addition to these favourable effects, economic analysis has identified the risk of adverse impacts of standardisation on competition and consumer welfare as well as on the dynamics of innovation.

This is particularly so when together: (a) standardised technology also becomes the dominant pattern on the market, thereby meaning that consumers tend to become increasingly reluctant to switch to different products, and hence suppliers, who must follow consumers' preferences, are also compelled to follow the path of the standardised product;⁴⁷ (b) the *de facto* dominant standard is protected by IPRs, be they patents or copyrights. It is self-evident that in the absence of IP protection, any standardised product or technology can be appropriated and adopted by competitors, who are free to improve them and thus put improved versions on the market.⁴⁸

There is more. The risk of adverse effects on competition is further intensified if the market scenario is that of information technologies, often characterised 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 standardised 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

⁴⁷ The same phenomenon can occur, though not as intensely, for non-standardised products when a certain item within a wide range of substitutes becomes the most widespread and requested by consumers. Just think of Coca-Cola. In such cases, the consumers' liking for the product indirectly conditions retailers, who find themselves obliged to stock the *must carry product* or risk losing customers. In this sense, I agree with George Priest that network effects are not totally new: *Id.*, *Rethinking Antitrust in an Age of Network Industries*, available at <http://ssrn.com/abstract=1031166>. See again note 50 and the accompanying text, *below*.

⁴⁸ Conversely, if the *de facto* dominant standard is protected by intellectual property rights, the owner can leverage that dominance over an entire range of products compatible with those protected by intellectual property rights. Therefore, whoever controls such a standard can deliberately eliminate all competing products in the primary market as well as gradually eliminating competition in neighbouring markets.

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.

In the presence of this type of competition, the effects of the self-perpetuating *success* induced by consumers' preferences, which has already been mentioned when discussing the effects of standardisation in general, tend to be strongly emphasised; this is due to what are generally called 'network effects' in economic jargon (otherwise defined as economies of scale in consumption).⁴⁹ The term describes the phenomenon whereby 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).

In other words, unlike what happens in the sectors of the '*old economy*', where consumers' preference for a product which has become the most popular on the market does not in fact prevent – in the absence of specific foreclosing manoeuvres – other competing products from entering or remaining on the market, 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'.⁵⁰ This tangle of direct and indirect network effects leads straight to the *de facto* dominance of a

⁴⁹ M.L. KATZ and C. SHAPIRO, *Network Externalities, Competition, and Compatibility*, in *Am. Econ. Rev.* 1985, p. 424. Again, according to wider definition, one can talk of network effects when the value that a consumer attributes to a given product increases if another person has a compatible product (J. FARREL and G. SALONER, *Standardization, Compatibility and Innovation*, in *Rand J. Econ.*, 1985, p. 70). Consequently, the more consumers opt for a given product or subscribe to a given service, the more valuable this becomes in the eyes of potential purchasers, who will be induced to purchase the same product.

⁵⁰ C. SHAPIRO and M. L. KATZ, *Antitrust in Software Markets*, in EISENACH and LENARD (eds) *Competition, Innovation and the Microsoft Monopoly: Antitrust in the Digital Market Place*, Boston, MA, 1999, p. 30.

single standard, marginalising standards based on alternative technologies: 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 standardised '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 hinder such compatibility in order to prevent her 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. 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 [...]'.⁵¹

8. Further Points and a Note about the Effects on the Dynamics of Innovation

From another standpoint, the approach advocated here does not appear to be really punitive for the owner of the IPR-protected standard who is subject to an obligation to grant access on the basis of the essential facility doctrine.

First of all, in purely financial terms, the perception of adequate licence royalties could well maintain, or even increase (depending on the business skills of the licensees, which *might well be superior* to the inventor's), the owner's expectations of profit, and therefore its propensity to innovate. At the same time, the burden of paying royalties, if these – as they should – are really

⁵¹ R. PITOFSKY, *Antitrust and Intellectual Property: Unresolved Issues at the Heart of the New Economy*, in *Berkeley Tech. L. J.*, 2001, p. 535.

fair, could maintain a significant competitive advantage for the owner (though in a different form) through a significant increase in rivals' costs.⁵²

Moreover, in terms of technological development, the IPR holder could in her turn take advantage of the derivative innovation developed by (otherwise bottlenecked) competitors as a result of the right to access. This is legally possible, as we know, in the case of patents, on the basis of the cross-licence mechanism established by article 31(1) of the TRIPs Agreement and widely adopted in Europe.⁵³ It could also occur in the case of copyright (here, only though an antitrust interference), since the acquisition of a non-exclusive cross-licence over derivative innovations developed by competitors granted access can certainly be treated as a *fair condition* (a concept not necessarily limited to a purely monetary profile) for granting access.⁵⁴

⁵² As Baumol observes, the receipt of royalties can be a profitable instrument for recovering investments, so much so that in some cases it is more lucrative than exercising exclusionary rights (remember *eBay*). 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 W. BAUMOL, *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism*, Princeton, 2002.

⁵³ Various scholars have gone further than merely advocating a compulsory licence to the point of proposing a change to the current patent system so as to convert, at least for some subject matters, the exclusionary right from a propriety one to a liability rule. Apart from an early article by W. KINGSTON, *Compulsory Licensing with Capital Payments as an Alternative to Monopoly Grants for Intellectual Property*, in *Res. Pol.*, 1994, p. 661, see above all J.H. REICHMAN, *Of Green Tulips and Legal Kudzu: Repackaging Rights in Subpatentable Innovation*, in *Vand. L. Rev.*, 2000, p. 1743 and again by the same author, *Saving the Patent System from Itself: Informal Remarks Concerning the Systemic Problems Afflicting Developed Intellectual Property Regimes*, in F.S. KIEFF (ed.), *Perspectives on Properties of the Human Genome Project*, Oxford, 2003, p. 289. Essentially along the same lines is the article by the economist C. ANTONELLI, *La politica economica della conoscenza: università, ricerca e diritti della proprietà intellettuale*, in A. SPAZIANTE (ed.) *La conoscenza come bene pubblico comune: software, dati, saperi*, Turin, 2003. As reminded in Ch. 3, a model reminiscent of this approach has historically existed in Italian copyright law (article 99 of Law No. 633 of 21 April 1941) in connection with 'engineering projects and similar works which constitute original solutions to technical problems', regarding which provision is made for the 'right to fair remuneration from any person who, with gainful intent and without the consent of the author, carries out the technical project concerned'.

⁵⁴ Incidentally, mutual technological enrichment appears to be the logic underlying *open source* licence mechanisms, whose rapid spread seems to be attributable precisely to the principle of *make-and-share* further innovation.

The above considerations regarding the pro-competition and pro-innovation advantages stemming from the application of the essential facility doctrine to dominant standards protected through IPRs lead us to support the European attitude towards *openness* and especially the Commission's approach with regard to foreclosure of access even in the very same (primary) markets where the IPRs do operate.

Here, I reject the objection that antitrust interference, which allegedly deprives IPRs of their typical excluding powers, amounts to an encroachment on their *essential* function. This is not the case. Aside from the fact that such interference would occur, as emphasised, only in exceptional situations of foreclosure of competitors from a certain market, *even in principle* that pro-competitive interference by antitrust law could in no way be seen as an encroachment of IPRs' function. This, in systematic terms, is to protect inventors against free riding by granting them a *micro-monopoly* that is, on the given specific technological *solution* they have developed, not a *macro-monopoly* on the industrial *sector* to which that solution belongs.⁵⁵ This assumption draws comfort from the indisputable principle that patent protection cannot cover a type of function even if the patented solution might be, at the date of filing, the first and only solution to satisfy that kind of usefulness.

One is further comforted by the often recalled built-in pro-competitive features of the patent paradigm: from the public disclosure of a sufficient description of the invention to the non-voluntary (cross-) licence mechanism provided by article 31(1) of the TRIPs Agreement in favour of derivative inventions of high technical and economic profile. Thus, *a fortiori*, no encroachment of IPRs' function can reasonably be affirmed when antitrust law intervenes to grant third parties' access on reasonable economic terms (free riders do not pay!) in exceptional cases in which the otherwise *normal* exercise of IPRs would prejudice the competitive scenario in a whole market *sector*. This leads us also to reckon that the antitrust *correction* properly concerns not the IPR's exercise as such, but the *market situation of competitive bottleneck that has grown around the IPR* – be it due to the owner's manoeuvring or to objective circumstances such as the growth and maximisation of locking-in network effects.⁵⁶

⁵⁵ In this regard, although reaching different conclusions than the one supported here, Posner explains that the use of the word *monopoly* with regard to IPRs 'though common is unfortunate, because it confuses an exclusive right with an economic monopoly. [...] A patent or a copyright does carve out an area of exclusive rights, but whether the right holder can use his right to obtain a monopoly return depends on whether there are good substitutes for his product'. V.R.A. POSNER, *Transaction Costs and Antitrust Concerns in the Licensing of Intellectual Property*, in *Les Nouvelles*, March 2005, p. 1.

⁵⁶ With regard to this issue, J. Drexler has pointed out that 'the copyright is not the cause of IMS's dominant position [...] the problem is that the lock-in effect excludes

Thus, pro-innovation as well as pro-competition reasons support the approach defended here. This applies, let us again emphasise, also to (derivative) innovations situated on the same market as that of the standard owner. Even for an additional reason: 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 'competition on merits'.⁵⁷ Now, 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 firms engaged in improving on the existing technology: *on any* (level of) *market*.

PART II

INTELLECTUAL PROPERTY AND UNFAIR COMPETITION

9. The Corporatist Origins of the Law

Let us now consider the other side of the IP/competition law intersection, namely that concerning the law on unfair competition.

Two preliminary comments are necessary. I have not used the word 'legislation' because *ad hoc* statutes only exist in some Member States of the EU such as Germany and Italy, whereas in others, like the UK, common law principles developed by the courts are applied. Apart from this formal difference, there is so far no body of EU legislation to refer to, as in the case of antitrust

any other method of collecting data from the relevant market'. However, he added that 'although it may not be denied that in *IMS Health* the copyright is not the cause of the dominant position, the copyright remains essential so that *IMS Health* can effectively exploit its dominant position' and therefore even if the exclusive right does not represent in itself the cause of the overall monopolistic situation, 'the competition problem may be cured by restricting the exercise of the exclusive right'. See J. DREXL, *IMS Health and Trinko – Antitrust Placebo for Consumers Instead of Sound Economics in Refusal-to-Deal Cases*, in *IIC*, 2004, p. 788.

⁵⁷ W.B. ARTHUR, *Increasing Returns and Path Dependence in the Economy*, Ann Arbor, 1994 (see the second chapter on *Competing Technologies, Increasing Returns, and Lock-in by Historical Small Events*, pp. 13 *et seq.*); R. PERITZ, *Dynamic Efficiency and US Antitrust Policy*, in A. CUCINOTTA, R. PARDOLESI and R. VAN DEN BERGH (eds), *Post-Chicago Developments in Antitrust Law*, Cheltenham, UK, 2002.

law. The only general legislation, referred to *en bloc* in the TRIPs Agreement (article 39.1), is article 10-*bis* of the Paris Convention. However, the principles it expresses are so generic that the various national courts have often interpreted and applied them using diverging approaches, as we shall see shortly when comparing the traditional continental approach with that of the English-speaking countries. In my opinion, this is the true reason why all attempts to pass modern supranational legislation have so far failed.⁵⁸ However, closer, if not always linear, European integration gives one hope that the current attempt to draw up a body of European rules in the field undertaken by the Max-Planck Institute in Munich at the European Commission's behest will be successful, at least in the medium term.

For a better understanding of the development of this branch of law, let us briefly review its origins. The rules arose a few decades after the triumph of liberal economic principles, although their original function was ancillary to trademark and patent laws. More precisely, these rules were originally aimed at filling the gaps in the early IP legislation with reference to business practices which, albeit prejudicial to IPR owners' goodwill and condemned by the dominant professional circles, could not be legally classed as infringement and therefore enforced under the existing legislation.

Thus, thanks to the new rules, a (product) patent holder could protect her *finished* product not only against reproduction of its technical substance but also against imitation of its distinctive forms (passing-off). Similarly, a trademark owner could prevent competitors from acting in a way aimed at unduly profiting from the trademark's reputation, thereby causing confusion and poaching customers. The additional function eventually went beyond filling the gaps in patent and trademark law to the point of covering any other type of competition contrary to 'honest practices in industrial or commercial matters' (article 10-*bis* of the Paris Convention for the Protection of Industrial Property of 20 March 1883, as revised at The Hague on 6 November 1925), a concept substantially corresponding to that of other 'general clauses' of some national laws – from the German law of *Gute Sitten* (article 1, Law on Unfair Competition, UWG, 1909) to the Italian *principi della correttezza professionale* (article 2598, no. 3, Civil Code).

⁵⁸ The gap has not really been filled by Directive 2005/29/EC of 11 May 2005 (Official Journal L 149/22 of 11 June 2005) on unfair commercial practices. The directive is a detailed restatement (based also on a *black list*: see Annex 1) of activities that are detrimental to consumers. And although specifically all such activities can also be viewed, in substantive terms, as acts of unfair competition, the specific pro-consumer perspective of the Directive precludes it from covering such unfair business conducts as poaching of employees, boycott, dumping, etc.

For a long time, the rules on unfair competition were applied, especially in continental Europe, with a strongly protectionist, corporative bias. Often the invoking of rules of professional ethics reflected, as Richard Posner notes, a desire to limit competition out of self-interest rather than any real wish to benefit consumers and the market. For example, imitation of formal features of a competing product was condemned even in the absence of a real risk of passing-off; comparative advertising was prohibited per se (that is, even if mentioning true facts) just because of its disparaging effect; poaching of employees was forbidden, even if it merely took the form of offering better working conditions, etc. In the ultimate analysis, that approach was based on the idea that goodwill belongs to the firm that generated it, as a quasi-property (sometimes without the 'quasi'). Hence the development of an erroneous concept of 'misappropriation', even in the absence of deceitful conduct. One can only agree with the remark of the Italian Supreme Court (decision no. 11859/1997): such an approach corresponds to a corporatist vision that contradicts the logic of fostering freedom of competition and respecting the paramount collective interests – especially market transparency – within which framework the constitutional system places the fight against unfair competition.

10. A Fresh Breeze from across the Channel

If I remember rightly, the British courts were the first in Europe, between the wars, to move gradually beyond this sectorial business approach. In the US too, the misappropriation doctrine had little support from the courts.⁵⁹ Anglo-Saxon jurisprudence generally refused to extend proprietary protection beyond the IPRs established by law, outside whose confines only fraudulent operations on the market were held to be unlawful ('no misappropriation without misrepresentation').

This development came later and more slowly in continental Europe, as a by-product of the emergence, after World War II, of a new vision of capitalism inspired by the postulates of the 'social market economy' (*soziale Marktwirtschaft*). As concerns competition, this vision (inspired by the theses developed, before World War II, by the 'Ordo-liberal' school of Freiburg), translated into two basic guidelines: (a) the adherence to the principle of freedom of competition (as acknowledged in its adversarial toughness), and (b) the acknowledgment that the limits of this freedom should be fixed where private business interests may collide with social welfare – meaning both collective

⁵⁹ W. CORNISH, *Intellectual Property – Patents, Copyright, Trademarks and Allied Rights*, London, 2003, IV, pp. 12 *et seq.*

consumers' interests and the general interest in a system based on effective competition. In the words of the Italian Supreme Court (decision no. 1185/1997, Berruti J), the 'guiding value' for unfair competition is 'the freedom of competition, which is both the object and extent of the protection in question: a value to defend – it must be added – against the risk that the individual freedom of enterprise can *kill another's freedom of competition*' (emphasis added).

This pro-competitive evolution inevitably led to a diffuse, but substantial rejection, in most Member States, of the traditional proprietary/protectionist bias, whose reference to goodwill as 'quasi-property' was emblematic. A line of thought vividly synthesised by the British Judge (now Lord) Robin Jacob: 'There is no tort of taking a man's market or customer. Neither the market nor the customers are the plaintiff's to own. There is no tort of making use of another's goodwill as such' (*Hodgkinson & Corby and Roho v. Ward*, 1995).

11. The 'New' Relationship with IPRs

As regards the relationship with intellectual property rights, within this modern perspective the rules on unfair competition defend *separate, distinct* 'competitive interests' from those to which the IPR paradigm relate. In other words, unfair competition rules are no longer applicable so as to strengthen IPRs' excluding power, in terms of either duration or scope.

Two examples may clarify this statement. First, on expiry of the exclusive rights to a registered design, the loss of the monopoly may lead to confusion (passing-off) precisely because competitors are now in principle free to use a form no longer protected by exclusive rights. The various products offered on the market must therefore be differentiated from one another sufficiently to ensure that purchasers are not misled. Now, the approach I have called protectionist assigns to the competitors of the ex-patentee the duty to adopt distinctive 'variations', while the former owner can continue to exclusively (and indefinitely) use, as a form of her *finished product*, the very design to which the expired registration related. Thus, the rules against passing-off are objectively transformed into a 'proxy' for the IPR, extending its excluding power in perpetuity. On the opposite side, the modern pro-competitive approach, equally concerned to avoid confusion after the expiry of the IPR, would rather put the onus on the ex-patent owner to 'dress' her *finished product* with distinctive ('off-registration') variations, and this either right from the start, or in any event as the expiry date approaches. And competitors would never (without any time limit) be allowed to reproduce such variations, otherwise incurring in passing-off.

The second example relates to the case of a new industrial machine, where a competitor reproduces a certain arrangement of the internal parts which was

not claimed by the inventor and therefore cannot be covered by the patent. Nevertheless, according to the approach that prevailed until recently in several countries, the unauthorised reproduction of such an arrangement amounted to ‘misappropriation’. The paradoxical result was that since protection against unfair competition lasts of course in perpetuity, the unpatented components would be protected against reproduction imitation for *longer* than those claimed in the patent! On the contrary, according to the interpretation I support, *that* reproduction would be lawful, since

- in the case of imitation of internal parts there can be no risk of confusion
- unpatented technology cannot be subject to exclusive exploitation.

Once again, we must reject the attempt to assign to unfair competition law the role of IPRs’ proxy: in this second case, in order to surreptitiously expand the scope of exclusive rights of production and trade.

In conclusion, according to the modern pro-competitive approach, unfair competition law ‘integrates but does not expand’ – as it did in its very origins – IP protection. In particular, it can certainly protect IPR holders’ competitive interests against a series of misconducts based on misrepresentation fraud, boycott, etc., but cannot any longer be used as a means to expand the scope of IPRs, still less to resuscitate the excluding powers after their statutory expiry (or annulment).

12. Unfair Competition, Antitrust, ‘Unfair Commercial Practices’: Which Convergence?

By restraining the criticised tendency towards expansion of the IPRs-related excluding powers, the approach to unfair competition I support highlights a significant jurisprudential convergence, and a useful functional integration, with antitrust law.

This assumption does not contradict the often emphasised different perspectives of the two disciplines (antitrust protects competition as a market system; unfair competition rules protect individual competitors). There is no contradiction but rather a ‘transfusion’ from antitrust to unfair competition of normative profiles as concerns both (a) types of enforced conducts, and (b) criteria for assessing legally relevant factual (economic) conditions and situations. As to (a), the phenomenon I am referring to was first noticed in those legal systems, such as the Italian, which delayed adopting a national antitrust law after the establishment of the Rome Treaty. In that situation, the domestic application of unfair competition rules at times incorporated, in the ‘catalogue’ of unfair acts, such typical antitrust ‘abusive conducts’ as boycott, predatory pricing, tying, etc. This ‘absorption’ eventually extended well beyond that

original *fonction suppléante*, and has generalised it as a standard feature of contemporary enforcement of unfair competition – obviously in its proper ambit of application, that is, the *micro-market* defined by the individual relation of the competing plaintiff and defendant.

As concerns, then, the utilisation of antitrust assessment criteria in unfair competition litigation, this is a promising ‘new beginning’ that increasingly, albeit at times timidly, peeps through (some) courts’ decisions. I am not convinced that the trend will, *and should*, go so far as to fully replicate the typical range of antitrust assessments in unfair competition cases. The individual perspective of the latter suggests a self-restraint, so to say, given that, for example, in unfair competition the degree – the very concept – of ‘market power’ is irrelevant. So, *a fortiori*, are those of ‘concentrated market’, ‘market thresholds’, etc.

That said, a limited, but by no means marginal, area of ‘communication’ seems possible and useful for the purpose of more in-depth, hence reliable assessments of certain postulates and objectives of the enforcement of unfair competition.

For example, the criteria for identifying the relevant market in terms of both geography and goods class (like those based on the parameters of the cross-elasticity of demand or on checking the dependence of consumers) could well be used for the purposes of a more realistic recognition of the competitive relationship, that is, the pre-requisite of applicability of the discipline.

Again, another important contribution from antitrust judiciary practice could be used in order to assess the damages effectively caused by unfair conducts.

Instead of, or at least in addition to, the armchair criteria often used in unfair competition litigations, and incapable, for example, of evaluating the actual exclusionary effects of a boycott, civil courts could well consider law and economics-based interpretative tools (take, for example the Panduit test) currently adopted in antitrust suits, and capable of assessing, even in dynamic perspective, the actual damages suffered by the plaintiff.

13. Conclusion: A Systemic Convergence Focused on Consumer Welfare

In this sense and within these limits, one can thus (re)read the discipline that we are discussing in light of the pro-competitive values enshrined in the constitutional concept of freedom of enterprise – as ‘harmonised’ with the other societal values/objectives of constitutional rank (Chapter 1, section 3). And it is also in this sense that the initially supplemental role played by unfair competition law has positively evolved, going from being a doctrine at the service of exclusionary rights of intangible assets and goodwill to one that is at the service of an open market.

Therefore, the overall interpretative and legislative developments briefly described above and still under way seem to herald a new perspective that attributes to unfair competition law a scope that goes beyond the mere boundaries of the private individual business interests directly involved in competition disputes. A scope that tends to reconcile an adversarial and non-corporatist business culture typical of Anglo-American countries with the postulates of a social market economy typical of continental European countries, as well as with the progressive American theories of 'wealth transfer' that proposed consumer welfare (in specific and differential sense) as the ultimate goal of antitrust.⁶⁰

A new role, then, emerges for the rules on unfair competition, which, shorn of their original markedly protectionist characteristic, have become a coherent part of a wider and multi-layered *competition charter*. A charter that in addition to the 'public' regulation aimed at ensuring a workably competitive market to the ultimate benefit of societal (consumers') welfare also includes a 'private' code of individual competitive conducts⁶¹ that are legitimate insofar as they respect the same basically societal interests. Regulation and code whose shared axiological vision ensure that, in the market spaces kept open by antitrust law, firms may freely compete, that is, fight, against one another in a manner that does not conflict with the general interests that the constitutional system guarantees in relation to market dynamics and economic activities in general.

May I just add that the systemic feature of a multi-layered 'competition charter', based on a shared constitutional perspective of a pro-consumer market economy, seems to be decisively supported by the European Directive (29/2005) on unfair commercial practices, explicitly focused on the protection of consumers' interests, starting from those embodied in, and enhanced by, the 'transparency of information' transmitted to the market. Indeed, the distinctive mark of the Directive – in this case, the well-known Community legislative approach, which, particularly from the 1980s, has pursued the goals of firms' responsiveness and market transparency⁶² – lies just in the *integration and*

⁶⁰ R.H. LANDE, *Wealth Transfer as the Original Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, in *Hastings L. J.*, 1999, p. 871. See also S.C. SALOP, *Question: What is the Real and Proper Antitrust Welfare Standard? Answer: The True Consumer Welfare Standard*, 4 November 2005 (submission to the Antitrust Modernization Commission), available at http://www.amc.gov/public_studies_fr28902/exclus_conduct_pdf/051104_Salop_Mergers.pdf.

⁶¹ I also recall here the remark by Eleanor Fox on the ascription of the prohibition in Section 5 of the US Federal Trade Commission Act (prohibiting 'unfair methods of competition') as 'incipient Sherman Act violations'.

⁶² See, for example, the Directives on producers' liability, misleading advertising, comparative advertising, unfair contract clauses etc.

combination of competition and consumer protection policies. In such a context, both regulations aim at promoting consumer welfare, thus mutually concurring in defining the other's scope and features.⁶³

Bibliographical Notes

Intellectual property and antitrust

In highlighting some of the many contributions on the subject of the intersection between intellectual property rights and antitrust law, a topic that has witnessed a veritable *boom* in the last decade, it is best to start with those dealing with the perspective that I labelled as *original* in the chapter, that is, those on the contractual exercise of IPRs and in particular licences. Here the contributions of greatest interest concern the Regulation on Technology Transfer (TTBER) No. 772/2004, which governs licences on IPR-protected technologies and industrial secrets. In addition to those mentioned in the notes and the bibliographical notes to Chapter 2, particularly worthy of note are S. ANDERMAN, *The New EC Competition Law Framework for Technology Transfer and IP Licensing*, in J. DREXL (ed.), *Research Handbook on Intellectual Property and Competition Law*, Cheltenham, UK, 2008; M. FEIL, *The New Block Exemption Regulation on Technology Transfer Agreements in the Light of the U.S. Antitrust Regime on Licensing of Intellectual Property*, in *IIC*, 1/2005, 36, 31; V. KORAH and A. FATUR, *Annotated Version of the Technology Transfer Block Exemption Regulation*, in *EIPR* 2004, 421; M. HANSEN and O. SHAH, *The New EU Technology Transfer Regime*, in *ECLR*, 2004, 465; S.D. SCHRIJVER and M. MARQUIS, *Technology Licensing in the EU after the Big Bang: The New Technology Transfer Block Exemption Regulation and Guidelines*, in *Business L. Rev.*, 2004, 61; E. VOLLEBREGT, *The Changes in the New Technology Transfer Block Exemption Compared to the Draft*, in *ECLR*, 2004, 660; F. CARLIN and S. STEPHANIE, *The Last of its Kind: The Review of the Technology Transfer Block Exemption Regulation*, in *Northwestern J. of International Law and Business*, 2004, 601; and M. DOLMANS and A. PILOLA, *The New Technology Transfer Block Exemption: A Welcome Reform, After All*, in *World Competition – Law and Economics Rev.*, 2004, 351.

Let us now turn to the hottest topic, that of the intersection between antitrust and the direct excluding exercise of IPRs. The debate commenced in the United States and was particularly influenced and enriched by economic analysis, with special attention focused on the network effects (and associated 'lock in' of consumers) and continued with the European transplant of the doctrine of essential facilities from its original humus of physical infrastructure to intangible assets.

In this transatlantic perspective, see *ex multis* the following contributions, often providing an in-depth legal-economic analysis: M.A. CARRIER, *Innovation for the 21st Century: Harnessing the Power of Intellectual Property and Antitrust Law*, Oxford, 2009; H.C. HANSEN, *Intellectual Property Law and Policy*, Oxford, 2008; J. DREXL, *Is There a 'More Economic Approach' to Intellectual Property and Competition Law?*, in J. DREXL (ed.), *Research Handbook on Intellectual Property and Competition Law*, Cheltenham, UK, 2008; I. HARACOGLU, *Competition Law and Patents: A Follow-on*

⁶³ Consequently, for example, the sharing of business information may be anti-competitive in the absence of guarantees in favour of transparent information functional to rational consumers' choices.

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Intellectual property and unfair competition

Unlike the rules on intellectual property, those on unfair competition have not

witnessed any real international harmonisation, excluding of course the old and general article 10-bis of the Paris Convention for the Protection of Industrial Property of 20 March 1883 (see here C. WADLOW, *The International Law against Unfair Competition: The British Origin of Article 10 bis of the Paris Convention for the Protection of Industrial Property*, Oxford Intellectual Property Research Centre Working Paper Series No. 4, February 2003, available at www.oiprc.ox.ac.uk/EJWP0403.pdf. On attempts, including institutional ones (WIPO, Protection Against Unfair Competition, WIPO, 725 (E), Geneva, 1994), to achieve such harmonisation (which in substantive terms is far more advanced in the antitrust field to the point that there is talk of an 'ordre concurrentiel international': see H. ULLRICH, *L'ordre concurrentiel dans la pensée juridique*, in W. ABDELGAWAD (ed.), *Mondialisation et droit de la concurrence, Actes du Colloqui des 14 et 15 juin 2007 – Dijon*, Paris (Litec) 2008, 51); R.M. HILTY and F. HENNING-BODEWIG, *Law against Unfair Competition: Towards a New Paradigm in Europe?*, Heidelberg: Springer, 2007; F. HENNING-BODEWIG, *Unfair Competition Law: European Union and Member States*, The Hague: Kluwer Law International, 2006; G. DWORKIN, *Unfair Competition: Is it Time for European Harmonization?*, in D. VAVER and L. BENTLY, *Intellectual Property in the New Millennium: Essay in Honour of William R. Cornish*, Cambridge, 2004, 175; F. HENNING-BODEWIG and G. SCHRICKER, *New Initiatives for the Harmonisation of Unfair Competition Law in Europe*, in *EIPR*, 2002, 24(5), 271; X.Y. CHEN, *A Proposal for the International Convention for Protection Against Unfair Competition*, *ivi*, 1996, 450.

A wide comparative picture is offered by R.M. HILTY and F. HENNING-BODEWIG (eds), *Law Against Unfair Competition: Towards a New Paradigm in Europe?*, Berlin, 2007; F. HENNING-BODEWIG, *Unfair Competition Law: European Union and Member States*, The Hague, 2006; C. WADLOW, *The Law of Passing Off: Unfair Competition by Misrepresentation*, London, 2004; L.J. PORFIRIO CARPIO, *La discriminacion de consumidores como acto de competencia desleal*, Madrid, 2002; A. KAMPERMAN SANDERS, *Unfair Competition Law: The Protection of Intellectual and Industrial Creativity*, Oxford, 1997; A.S. ODDI, *Consumer Motivation in Trademark and Unfair Competition Law*, in *Villanova L. Rev.*, Vol. 31, 1986.

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On the convergence/divergence of interpretative lines between the disciplines of unfair competition and antitrust, see in particular H. ULLRICH, *Anti-Unfair Competition and Antitrust Law: A Continental Conundrum?*, EUI Working Paper no. 1, 2005, available at <http://www.iue.it/PUB/law05-01pdf>.

Finally, in relation to the European legislative legislation on 'unfair commercial practices' (Directive 2005/29/EC), which protects consumers, competitors and the market across the board (from the standpoint of 'administrativisation' of the rules of professional propriety), see V. FALCE and G. GHIDINI, *The New Regime of Unfair Commercial Practices at the Intersection between Consumer Protection, Competition Law and Unfair Competition*, in *Proceedings of the VIII Conference on 'Antitrust between EC Law and National Law'* (Treviso, 22–3 May 2008), Brussels and Milan, 2009, 361; H. COLLINS, *The Unfair Commercial Practices Directive*, in *European Review of Contract Law*, 2005, 1, 4, 417.

Appendix – On TRIPs and developing countries: ‘Don’t do unto others ...’

1. Foreword

The question of how and with what effect the rules governing intellectual property rights (IPRs) intervene in relations between industrially developed countries (dominant holders of technology and innovative production techniques) and developing countries has indeed and still is the object of a timeless debate, which in contemporary days has of course eminently focused on the TRIPs Agreement, signed in Marrakesh on 15 April 1994 and entered into force on 1 January 1995.

As is well known, the Agreement reflects intellectual property protection models typical of the advanced industrial world. It is no secret that it was strongly advocated by the most industrialised nations, first and foremost the US, even with direct intense diplomatic support for the proposals and requests of major industries belonging to the International Intellectual Property Alliance. Also well known is that in pushing for the realisation of the TRIPs, the US aimed to incorporate many of the conditions that they had previously successfully negotiated in bilateral agreements with less developed countries, thereafter presenting the draft Treaty as an expression of ‘harmonisation’.¹

Moreover, in order to have the highest number of nations toe the line, adhering to the Agreement (and thus the enforcement of its provisions) was made a pre-requisite for membership of the World Trade Organization (WTO), the multilateral board of international trade which was established (as a replacement for the General Agreement on Tariffs and Trade (GATT)) on the same date as the TRIPs Agreement.

The specific focus on that Agreement is warranted in part because of its paramount importance as a new universal convention which brings together under one roof all industrial law matters, combining Paris and Berne, the two great conventions from the end of the 19th century. Thus – while superseding

¹ See here the enlightening essay by M.P. RYAN, *Knowledge Diplomacy: Global Competition and the Politics of Intellectual Property*, Washington, 1998, *passim*, and esp. chapter 4.

the former classical dichotomy between industrial and intellectual property – the Agreement sets out a common platform, of global reach, for the development of industrial and commercial activities based on the exercise of IPRs as a source of competitive advantage in international trade.

Moreover, TRIPs draws specific attention to the issue at stake. On one hand, as hinted, ‘TRIPs is also a program of deep integration – harmonizing the policies and laws of developing countries with those of the global community – initiated by American multinational corporations and foreign policy-makers’.² On the other hand, when compared with more restrictive (regional and especially bilateral) Agreements bearing on IPRs, the TRIPs’ multilateral character and ‘administrative’ system (in particular as regards the resolution of disputes) translates into a relatively more balanced regulatory structure, which does – and can – put some limits on developed countries’ capacity to easily impose harsher conditions on developing countries (DCs), while offering room for interpretation also aimed at mitigating the inherent disparity in bargaining power. On the contrary, such disparity is notoriously enhanced in plurilateral (sometimes regional) agreements and above all in *bilateral* ones – so-called Free Trade Agreements (FTAs),³ also referred to as TRIPs plus – in which Aesop’s truth is only too well borne out.⁴

However, as pointed out by several scholars and commentators, there are characteristic normative profiles of the TRIPs Agreement that can operate to aggravate the weaker position of the developing countries, especially as concerns the sharing of advanced technologies. I will here analyse, separately and together, two such profiles (which usually draw lesser attention) and then examine if, how and to what extent the overall system of the Agreement can provide room for reducing their apparently negative impact on developing countries’ position in international trade.

² M. RYAN, *op. cit.*, 141.

³ For a lucid assessment of this type of agreements, see recently H. RANGEL ORTIZ, *Sensitive Health and Patent Law Issues in Bilateral Agreements Recently Executed by the United States – The Latin American Experience*, in G. GHIDINI and L.M. GENOVESI (eds), *Intellectual Property and Market Power*, Buenos Aires, 2008, p. 367. The US have recently promoted a plurilateral Trade Agreement against Counterfeiting (the so-called ACTA), which perplexingly excludes, so far, such countries as Brazil, Russia, India, China (‘BRIC’) and Indonesia. For an overview of ACTA’s basic features see: <http://www.ustr.gov/about-us/press-office/fact-sheets/2009/april/acta-summary-key-elements-under-discussion>.

⁴ For instance, the extension of copyright term to life of authors plus 70 years has been imposed in several FTAs without the balancing factor of the rules on ‘fair use’ (G. DUTFIELD, *Knowledge Diplomacy and the New Intellectual Property Fundamentalism*, in J. MALBON and C. LAWSON (eds), *Interpreting and Implementing the TRIPs Agreement – Is it Fair?*, Cheltenham, UK, 2008, p. 31, at p. 32).

Before beginning my analysis, I must enter a caveat.

The dynamics of economic integration continuously work to alter existing equilibria. Thus, the very definition of a country as developing cannot be assumed rigidly: the emerging group of technologically proficient developing countries⁵ offers evidence of different speeds of development. China, India, Brazil and others are to different degrees and in different ways engaged in often highly advanced basic research and R&D activities. Moreover, and thanks also to intense manufacturing ‘delocalisation’ – the typical feature of contemporary globalisation – such countries are emerging, in different ways, also as partners – at times even the dominant partners (think about the Lenovo-IBM deal) – of established Western and Japanese firms. Firms with which, maybe, the former had been at odds for years over IP-related conflicts... Thus, even in the medium term, it may well be that the ongoing technological progress and international economic integration of several developing countries will act in synergy with the general decline of ‘unilateralism’ in international relations. As Graham Dufield asks, ‘Will the United States government [leaving aside, may I add, the hoped-for ‘change’ of policy by the new Administration] be so pro-patent when the proportion of domestic patents granted to Indian and Chinese inventors increases dramatically?’⁶ Such a perspective could largely ‘solve the problem’ of (at that time, many ‘former’) DCs’ access to R&D and technological innovation. At that time, too, such tools like compulsory licences and government use (article 31 TRIPs) might largely be replaced by normal contractual and corporate liaisons.

Tout va très bien, then? I doubt it. The present reality of so many countries (in Africa, first and foremost, but not only there) still struggling to achieve a reasonable technological standard in vital sectors – the reality of the least developed countries (LDCs) in particular – tells us that the problem of a large ‘asymmetry’ of terms of trade, as possibly enhanced by the TRIPs Agreement, is far from being overcome. Even the present global financial and economic crisis might play ambiguously on the emerging countries’ assessment of their own geopolitical interests. Will they act as drivers of the progress of the less developed, or will they ‘forget their past’ and coalesce with the developed world? Hence, the object and purpose of the analysis I am going to attempt may not be in vain – in particular, as concerns the situation and needs of those least developed countries where hundreds of millions of ‘damned of the earth’ (F. Fanon) ‘live’ on a daily income of one-to-two dollars.

⁵ S. BASHEER and T. PRASHANT READDY, *The ‘Efficacy’ of Indian Patent Law: ironing out the creases in Section 3(d)*, Vol. 5, Issue 2, August 2008, available at: <http://ssrn.com/abstract=1086254>.

⁶ G. DUTFIELD, *op. cit.*

2. *Adieu* to the ‘Local Working Requirement’

Let’s now enter into the legal question.

The first normative profile specifically concerns the international diffusion and circulation of technologies. It indeed highlights a relevant development introduced by the TRIPs Agreement in the domain of patents.

I am referring to a rule that had for a long time been advocated by dominant business circles and conceived in general terms (not just in connection with Developing Countries) as a means of supporting ‘industrial freedom’ (freedom of choice of industrial setting) at an international level. I am referring to the repudiation, expressly sanctioned by article 27.1 of the TRIPs Agreement, of the historical principle (enshrined in the Paris Convention 1883, article 5A.2, and adopted by the vast majority of the emerging industrial States of the 19th century) that allowed Member States granting a patent to request that said patent be (industrially) worked *in situ* (the so-called local working requirement (lwr)).⁷ The obvious objective, and rationale, was the fostering of technology sharing and thus the acceleration of domestic industrial growth.

Historical principle, I said. Long before the 1883 Universal Convention, it had characterised the very early stages of Western economic development. Already in late medieval and Renaissance Europe, privileges and franchises (the ancestors of modern patents) were issued primarily to induce the transfer,

⁷ Article 5A of the Paris Convention, incorporated in the TRIPs Agreement via article 2.1 TRIPs, requires a patentee to produce the patented goods in the country where protection is sought if the country issuing a patent so desires and treats a failure to work the patent locally as an *abuse* of the patentee’s exclusive rights. On the other hand, article 27.1 TRIPs makes ‘patent rights enjoyable without discrimination as to the place of invention [...] and whether products are imported or locally produced’. The need to reconcile these two provisions has led scholars like J. STRAUS, *Implications of the TRIPs Agreement in the Field of Patent Law*, in F.-K. BEIER and G. SCHRICKEER (eds), *From GATT to TRIPs*, in ICC, 1996, 18, p. 204) to assume that WTO Members can no longer consider patentees’ failure to work a patent locally as a *per se* abuse. They would commit such abuse (and thus become subject to a compulsory licence under the same article of the Paris Convention) *only* if they should undersupply the country that granted the patent, that is, they would not provide, even by mere exports, enough products to the country itself. Albeit not universally shared (see, for example, J.H. REICHMAN and C. HASENZAHN, *Nonvoluntary Licensing of Patented Inventions: Historical Perspective, Legal Framework under the TRIPs Agreement, and an Overview of the Practice in Canada and the United States*, Draft, UNCTAD/ICTDS, 2002, II, C.2), even such an interpretation – upholding the repeal of the local working requirement – can be reconciled with our argument and thesis. The former indeed provides for a general rule, while the latter refers to a limited exception in the meaning of article 30 TRIPs.

even by mere import, of foreign technologies. Thus, under Elizabeth I, monopoly rights were for that very purpose, such as that granted to two foreigners to introduce the manufacture of hard white Spanish soap, and another for the manufacture of saltpeter, a component of explosive powders previously imported from Antwerp.⁸ This policy was shared *inter alia* by early American legislators. Addressing Congress on 8 January 1790, George Washington called for legislative attention to IP, ‘giving effectual encouragement, as well to the introduction of new and useful inventions from abroad, as to the exertions of skill and genius in producing them at home’.⁹

Let us now return to today’s economic and legal scenario. I submit that, situated within the contemporary framework of *relations between developed countries* – that is, countries that have already achieved industrial maturity and are endowed with sufficient financial means to invest in technology-driven competition – the repudiation, at the very end of the 20th century, of the local working requirement, after over a century of diffuse time-honoured service, represents (as broadly argued) a convincing anti-protectionist stance. At their stage of development, indeed, the requirement implied greater costs in terms of freedom of industrial establishment than benefits in terms of local transfer of technology.

More than this: the early stages of industrial development were marked by national governments that exercised effective strong powers over economic policy. This no longer holds in today’s scenario, where economic sovereignty (and sometimes more than that) lies to a significant extent in the hands of multinational enterprises, which are typically much less sensitive – in the absence of specific political motivation – to the local efforts of single developing nations to fill their technological gap.

I doubt, however, that this is equally true of relations between such countries and developing countries. In this context, the abandonment of the requirement to work the patent locally curtails the *spill-over* of advanced technological skills, and hence the sharing by developing countries of the R&D processes, capacity and production knowledge ‘housed’ within the patents (and the know-how that typically accompanies them). Hence, at the stroke of a pen, the international protection of IPRs has lost a decisive instrument and driving force in assisting developing countries to bridge the gap with advanced countries. *An instrument that industrially advanced countries*

⁸ J. FEDERICO, *Origin and Early History of Patents*, in *J. of the Pat. Off. Soc.*, 1929, 11, 293–7.

⁹ Quotation from PAUL A. DAVID, *The evolution of intellectual property institutions* in A. AGANBEGYAN, O. BOGMOLOV AND M. KASER, *System Transformations: Eastern and Western Assessments (Proceedings of the Tenth Congress of the International Economic Association)*, Vol. I, London, 1994.

largely employed in the past, precisely to enhance, to their own benefit, the sharing of technological knowledge. See, for example, article 53 of the previous Italian Patent Act, in force *till 1996*, to the effect that ‘the import into or sale in the State of objects produced abroad does not constitute working of the invention’.

A double standard?

3. On the Deadlines for Applying TRIP Rules

The hypothesis of a double standard seems somehow to be supported by the second normative profile I am submitting for your consideration.

As is well known, the TRIPs Agreement (article 65) obliged developing countries to apply its provisions within a *short period* (very short from a historical perspective: five years from the signing of the WTO Agreement) that is furthermore *fixed and equal* for all – save for a limited (from a historical perspective) delay of a further five years (article 66) in favour of the least developed countries – this term being further extended in 2001 in Doha to 2016 (only) as concerns the rules on pharmaceutical product patents. (However, the Council for TRIPs may, upon duly justified request by a least-developed country member, accord further extensions.)

Let us dwell for a minute on the geopolitical significance of this unification of models and timing, especially as regards timing. It seems to me that in this way today’s industrialised countries have ‘done unto others’ what they themselves refused to accept could be ‘done unto them’ in the initial stages of their own industrial development. As is well known, today’s industrial powers *themselves determined*, based on their *own* stage of development, how and – above all – when to apply strong models for the protection of intellectual property. For example, at the beginning of the 19th century the German states were considered by France as havens for plagiarists. For its part, Germany introduced legislation against unfair competition between the end of the 19th and the beginning of the 20th centuries, when it recognised that it could afford the ‘luxury of fairness’.¹⁰ May I also recall that before its rapid industrial reconstruction after World War II, Japan was famous for its unbeatable capacity to copy almost everything?

¹⁰ ‘Die deutsche Industrie steht heute auf einer solcher Höhe, sie ist so reich und kräftig, das sie *den Luxus der Ehrlichkeit* gestatten kann’, said the distinguished German jurist Wassermann, in a speech held in Berlin, in 1912, on the occasion of the constitution of a commission for the study of indications of origin (source: L. COQUET, *Les indications d’origine et la concurrence déloyale*, Paris, 1913, p. 317; emphasis added).

As for the US, current champion of the need for stringent protection of intellectual property, Professor Jane Ginsburg¹¹ reminds us that, as concerns copyright, it grew and flourished, till the end of the 19th century, as a ‘pirate nation’, i.e. free riding on the works of English and Irish authors (Dickens’ exasperated protests have remained famous). This continued till the end of the 19th century, when the American publishing industry eventually produced ‘enough’ successful *own* authors to ‘sell’ even on the international market (just think of Hawthorne, Melville, James, Thoreau, Emerson, Whitman, Alcott, Fuller, etc.), thereby eventually accepting the principle of reciprocal international copyright protection. But please note: even under those circumstances, the Chace Act 1891, which acknowledged foreign authors’ and publishers’ copyright – and which remained in force for decades – granted such protection on condition that foreign texts were printed in the US (a local working requirement, indeed), even banning the import of editions published abroad – like the Venetian authorities had done in the late 15th century in granting privileges related to books and printing aimed at fostering the growth of a domestic publishing industry after the emergence of the new technology of printing.¹²

(The less said about Italy the better. Suffice it to say that the industries of my country’s northern regions clamour for protection against counterfeit goods, many of which are produced in and/or imported from the southern regions.)

In the final analysis, those deadlines, accepted willy-nilly by developing countries for applying Western models of IP protection, objectively risk ‘sticking’ those same countries in the disadvantaged economic situation mentioned above: precisely because the value of high-tech products that, in international exchanges, flows from the protection of IPRs, mostly relates to the production ‘of the others’.

‘No, the contrary is true!’, outright supporters of the system proclaim. Quick legal unification tends to speed up recourse to R&D by developing countries, they say. Those optimists argue that a healthy lash of the whip will help backward countries to escape their long dependence on the primary sector, as well as the clutches of technological stagnation. It is a serious objection, certainly convincing when it refers to relations between industrially developed countries (which at times, however, can also be highly conflictual: just think of the disputes about denominations of origin of typical agricultural produce). But as regards relations between developed and developing countries, that objection

¹¹ J.C. GINSBURG and J.M. KERNOCHAN, *One Hundred and Two Years Later: The U.S. Joins the Berne Convention*, in R.P. MERGES and J.C. GINSBURG (eds), *Foundations of Intellectual Property*, New York, 2004, pp. 298 *et seq.*

¹² See here B. BUGBEE, *Genesis of American Patent and Copyright Law*, Washington, DC, 1967, at pp. 43–4.

draws no comfort from experience, except to a very limited degree, and in any case contradicting its underlying assumption.

In fact, the prophesy of the healthy whiplash has started to come true solely for a limited number of developing countries whose levels of industrial investment have enabled them to marshal sufficient resources to give birth to technically complex productions. More significantly, however, the countries in question have reached or are on the verge of reaching that capacity also thanks to a previous *refusal* – and not a previous *acceptance!* – of strong intellectual property protection models.

In short, these emerging countries have objectively done what today's many industrialised countries did in the 1800s and part of the 1900s when they effectively ignored or got around IPRs *until* their own industries were no longer in their infancy. By contrast, the same countries started to effectively observe and respect IPRs as they in turn became producers of advanced technology (often acquired through imitation) and it was then in their interests to adopt a policy of safeguarding intangible assets in domestic and above all international trade. Every country, substantially, has done so, and still does, in the initial stages of its development. *Così fan tutte*.

4. Drawing some Conclusions ...

First of all, both the normative elements I have just recalled refer to legal solutions that at the time the TRIPs Agreement began to be negotiated were no longer of interest for the already developed countries. On the contrary, establishing a standard short term for enacting the common rules, and abolishing the local working requirement altogether provided a level playing field for innovation-oriented competition between countries that had already reached the economic (and financial) stage that enables competition through innovation.

While this confirms the diffuse, but not always technically (in a legal sense) based sentiment that TRIPs is basically tailored to developed countries' interests, the very same features seem to run contrary to the vital interests of the DCs, and especially those of the LDCs.

Indeed, the objective synergy between the two above-mentioned profiles of the TRIPs Agreement may entail a risk for developing countries – and especially for LDCs – that a brake will be put on their chances of industrial development, even if only derivative in nature, and hence their ability to effectively compete on the world market. In other words, they risk remaining 'stuck' even longer in their role as mere importers of patented technology against which they exchange semi-processed raw materials and products with a low technological content.

Thus, it might not be out of place to view the objective and effective scope

of such synergy in light of the historical evidence of a multiform and still hegemonic policy adopted by industrially advanced countries, aimed at maintaining trade models with developing countries that preserve the former's advantages that stem from high-tech production. These models operated to favour the exchange of advanced industrial products against raw materials, semi-processed goods or in any event products with little or no innovative value. And in contemporary times, such a policy (often dubbed 'neo-colonialist'), far from being limited to the traditional context of negotiations on trade tariffs and export quotas etc., is increasingly and specifically being extended to IPRs through *ad hoc* agreements – be they universal ones like TRIPs or more limited regional or bilateral ones (these often being particularly harsh, as aforesaid, for developing countries).

5. ... And Searching for Remedies

Which remedies? The tentative answer must focus on solutions that might be introduced *de lege ferenda*, as explicit reforms to the present legal framework. Indeed, under the two profiles we are discussing, the norms' text (articles 65 and 66 (integrated by the Doha resolution) and article 27.1) is so clear and univocal that it allows no 'redeeming' interpretation, however grounded on a sound economic rationale and systemic legal arguments (see below).

Thus, as concerns the 'time schedule', one might first of all propose that current LDCs (whose official list is of course 'fluid') be bound to adopt TRIPs rules, not at a standard, one-size-fits-all date, but on an individual basis, as each different country reaches a certain level of economic development, measured by a *bundle of objective indexes*, such as per capita income, basic infrastructural assets, export/import balance, gross national product (GNP) etc. A simpler proposal might be that the 'Doha exception' be widened beyond the pharmaceutical sector, thus allowing LDCs to require local working of patents (also in any other sector of relevance for overall economic development: see also section 6, below) until 2016. I prefer the first option, as being more flexibly adaptable to different local realities.

Let us now turn to the critical issue of the local working requirement. Here, as hinted, not only do all too evident economic opportunity and elementary justice call for granting DCs, and especially the LDCs, the faculty to restore such requirement. Indeed, strong systemic arguments press in the same direction – in other words, keeping denying that faculty amounts (also) to a contradiction of the system of TRIPs itself.

Let me start by recalling a couple of TRIPs' 'general provisions and basic principles' (Part I General), namely: (a) that 'protection and enforcement of IPRs' is not an end in itself, but rather a means to 'contribute to the promotion of technological innovation and to the *transfer and dissemination of technology*'

(article 7; emphasis added); (b) more specifically (and logically connected), that ‘Members may, in formulating or amending their laws and regulations, adopt measures necessary... to promote the public interest in sectors of vital importance to the socio-economic and *technological development*’ (article 8; emphasis added).

As ‘basic principles’ – highlighted by WIPO’s in-progress ‘Development Agenda’¹³ – these rules should guide us also in assessing and defining the type and scope of the ‘measures’ that the system of TRIPs allows Members to adopt when the need arises to conciliate IPRs holders’ ‘legitimate interests’ with third parties’ equally ‘legitimate interests’ (article 30).

And here, of course, we think immediately of articles 30 and 31: that is, respectively, of the possibility to ‘provide limited exceptions to the exclusive rights conferred by a patent’ (‘provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner’), and to the possibility of allowing ‘other uses’ (‘other’, that is, different from the measures envisaged in article 30: see official note to article 31) ‘of the subject matter of a patent, without the authorisation of the right holder, including use by the government or third parties authorized by the government’ – thus: ‘Government use’ and ‘compulsory licenses’ (article 31).

At this point, I submit the following argument: that the imposition of a local working requirement inflicts a *much more limited restriction* on the patentee’s rights, and freedom of action, than that stemming from a compulsory licence (or government use). The former only weighs upon the choice between exporting and producing *in situ*, leaving *all* other faculties of the rightholder fully intact – including the choice between producing directly or through a local licensee *of her own trust and appointment*. On the contrary, the imposition of a compulsory licence (or government use) ‘reduces’ the patentee’s position to little more than that of a simple *rentier*.

6. More on the Rationale for the Local Working Requirement, also as Concerns the Supply of Patented Drugs

You have already understood where my argument is leading, so I can be quite brief. In more exists less: if the system of TRIPs specifically allows such a

¹³ See in particular proposals and recommendations Nos. 19, 25 28 by WIPO’s Provisional Committee on Proposals Related to a WIPO Development Agenda (Fourth Session, 11–15 June 2007, at http://www.wipo.int/ip-development/en/agenda/pcda07_session4.html. Further references in A. KUR & H. GROSSE RUSE-KAHN, cit. in Ch. 2, note 82.

heavy restriction/reduction (in terms of compulsory transfer to a third party) of the exercise of such basic patentee's rights as those of producing, distributing, pricing – and this, albeit in exceptional cases, even without requiring a previous attempt to negotiate a contractual licence with the patentee (article 31(b)) – now, if all this is allowed to Members, why shouldn't an imposition of local working requirement, as 'a limited exception to the exclusive rights' of the patentee (article 30), be equally allowed? And allowed, as hinted above, in the framework of Members' general faculty to 'adopt measures necessary... to promote the public interest in *sectors of vital importance* to their ... technological development', as per article 7. I am not referring, for sure, to Dolce & Gabbana underwear, but, for example – and well beyond the pharmaceutical sector – to energy saving processes and products, pro-environmental refining methods, cost-saving and safety-enhancing construction techniques, transportation equipments, etc.

Let me insist on that point: such a working requirement restricts the patentee's rights only in a very limited way: in fact, as said, only the choice to just export in the local market. *All* other basic faculties, I repeat, are left intact – so that article 30's condition that the 'limited exception' does not 'unreasonably conflict with a normal exploitation of a patent or unreasonably prejudice the legitimate interests of the patent holder' seems to be fulfilled: production, distribution, pricing, appointment of licensees fully remain in the patentee's hands.

Thus I maintain my pro-lwr reform proposal in favour of DCs – first and foremost of LDCs – those in direst need of 'catching up'. And I maintain it also under a broader, articulated, jurispolitical and economic rationale. First, as hinted, such reform might be crucial *vis-à-vis* those countries' *industrial policies*, allowing them to share advanced technologies even outside the scenarios of socio-economic 'emergency' which usually justify the granting of compulsory licences and government use. Second, as concerns the effective technological 'spill-over' effect, I submit that the patentee might more eagerly, hence more 'abundantly' in quality as well as in quantity, 'keep feeding' *her own* local plant, or *her own* local licensee with the know-how associated with (but not included in) the invention, and useful for the best implementation thereof. Indeed, it seems all too reasonable to assume that this would much more likely occur than in cases where, by contrast, the patentee should be obliged to surrender her patent to an unrelated, much less controllable (even *vis-à-vis* re-export to affluent markets) licensee, imposed by a foreign government. Third, the basic costs of working the patent would accrue to the patentee and her licensees: not on the local governments or government-related local firms.

Thus, at the end of the day, the overall benefits associated to the local working of the patent by a local licensee might be achieved more efficiently, and at

lower costs for the LDC concerned than by the straight recourse to compulsory licences or 'Government use'.

I hold these considerations basically valid also as concern the supply of patented drugs.

Rationally addressing this problem, which affects a primary human right, requires first of all that it not be confused with the broader problem of LDCs' overall industrial and economic development. Second, I do not think that said problem should be approached by simply crying foul at patent protection, which is just one, albeit fundamental, piece of the puzzle. Rather, an in-depth analysis of the problem and research into viable solutions should encompass the raft of questions posed by such countries', and their populations', financial strains (now aggravated by the major crisis the world has been facing since 2008), as well as the frequent inadequacy of their medical infrastructures for the appropriate administration of vital drugs in highly critical territorial and social contexts. Accordingly, it would be simplistic to view patents' compulsory licensing as an across-the-board first-best and cure-all solution anywhere anyhow – as is implied by quite important resolutions and regulations, such as the Decision of 20 March 2003 by the WTO's General Council, pursuant to the Doha Declaration, which expresses a clear preference for non-voluntary licences, or European Regulation No. 816/2006, which, following suit, establishes a procedure for granting compulsory licences on patents and supplementary protection certificates for the manufacture and sale of drugs solely intended for export to countries afflicted by serious public health problems.

Complex problems require complex solutions. In particular, one should combine actions on patent regime with price regulation, as well as incentives to induce the original producers to adopt a cooperative approach, first of all in providing a constant flow of applicative know-how and information even on 'subpatentable' improvements. Thus, according to the different local contexts, approaches could vary widely. If and where a minimum of industrial infrastructures and financial resources are available, the imposition of a local working requirement, possibly coupled with fiscal incentives, might constitute a reasonable alternative to non-voluntary licensing and/or government use as per article 31 TRIPs, or even the best option in order to encourage the willingness of patentees to invest and manufacture *in situ*, either directly or through appointed licensees of their trust, thus relieving the host country of most deadweight losses associated with launching industrial start-ups in critical economic and social environments. Such willingness might stem, as hinted above, from the prospect of avoiding a substantial 'expropriation', as in the case of compulsory licence, and retaining control of the patent's exploitation and avoiding the risk (the paramount concern of major pharmaceutical companies) that the drugs provided at cheapest prices in LDCs could be re-exported to affluent markets where 90 per cent of profits are made. On the other hand, this would allow the pharmaceutical companies to keep a foothold in regional markets that will eventually develop and progressively allow a price policy

proportionate to (local) industrial production costs. Now, such perspective advantages might well be traded off with both a commitment to produce *in situ* and the acceptance, however, of a price regulation tuned on each different country's economic and financial situation.¹⁴

7. *Seq. A Fortiori*, When Exploitation of Local Biodiversity is Concerned

Last, but by no means least, the recourse to an lwr should be *a fortiori* admissible, if not actually a must, when the patent granted and enforced in a developing country utilises biodiversity preserved and cultivated thanks to local traditional knowledge. It is well known that in such cases the country and local communities providing the biodiversity are usually compensated financially but not – repeat: usually – also by any significant ‘association’ in the exploitation of the R&D based on the germplasm they have nurtured and provided. As recalled elsewhere,¹⁵ we should read the TRIPs Agreement (articles 7 and 8 in particular) in conjunction with the 1993 Rio Convention on biodiversity – which calls for an ‘equitable sharing’ of the benefits (of all kind) stemming from exploitation of biodiversity (article 15.7). Now, such ‘mutually supportive’ interpretation (to borrow the wording of the European Commission’s Communication as of 3 April 2000 ‘on the Relationship between the Convention on Biological Diversity and the TRIPs Agreement’) would allow¹⁶

¹⁴ An alternative approach to compulsory licensing could be explored in the light of the system envisaged by Council Regulation (EC) No. 953/2003 whereby, in the ambit of multilateral conventions and under an institutional aegis (especially of the WTO), patent holders agree to manufacture suitable quantities of patented medicines in developing countries and freely circulate them within the corresponding circuit (as a kind of common market of the developing countries) at prices commensurate with local purchasing power, based on per capita income. This approach (based on the interest of patent holders in maintaining control over the circulation of products marketed at subsidised prices in developing countries, so as to prevent them from being re-imported onto affluent markets) might be more advantageous, also for developing countries, than the one based on compulsory licences, at least in the short/medium term, as it would lead to immediate availability of adequate amounts of the most advanced drugs, and transmission to local companies of advanced technical and manufacturing know-how. I discussed this approach in *Developing Countries’ Access to Patented Essential Drugs: Are Compulsory Licences the Optimal Means?* in *Estudios sobre propiedad industrial e intelectual y derecho de la competencia: Coleccion de trabajos en homenaje a Alberto Bercovitz Rodriguez – Cano*, Barcelona, 2005, p. 511.

¹⁵ G. GHIDINI, *Equitable Sharing of Benefits from Biodiversity-based Innovation: Some Reflections under the Shadow of a Neem Tree*, in J.H. REICHMAN and K. MASKUS (eds), *International Public Goods and Transfer of Technology under a Globalized Intellectual Property Regime*, Cambridge, 2005, pp. 695 *et seq.*

¹⁶ A caveat: such ‘mutually supportive interpretation’ requires that both TRIPs

developing countries that provide biodiversity to require the local working of the patent.

Needless to say, given its specific rationale, this solution should apply in favour of *all* biodiversity-providing developing countries, and not only the least developed ones.

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