

SECTION A

Introduction

Themes in intellectual property

Preliminary thoughts

This book is not just about ideas. It is about ideas skilfully expressed in writing, in music, or in a sculpture. It is about the bright idea for an invention, the details of which have been worked out and which takes the form of a product or a process that can be applied industrially. It is also about a logo or name applied to products in order to distinguish them from other products in the same category and to indicate their origin. And it is also about clothes, and about exhaust pipes for cars made to a new design. Intellectual property is more than a reward for inventors and creators on the basis of a bright idea.

We will investigate this further on all other pages of this book, but let us start with a down-to-earth overview of the plot of our story. The background is a concert given by a famous opera singer. His performance consists of songs taken from various operas. The lyrics and music of these songs can attract copyright protection for their authors, he will have a right in his performance of them. A live recording is made and published on CD and the concert is beamed around the world as a satellite broadcast, two further occasions on which copyright interests arise. Satellite technology involves various patented inventions both in relation to the missile technology and in relation to the transmission of broadcasts. The CD will bear the logo of the record company which allows customers to distinguish the CD from that of another record company. It is most likely that the record company secured a trade mark for its logo to guarantee its exclusive right to use it. The CD's accompanying booklet raises copyright issues as it contains a photograph in which the star is pictured standing next to a sculpture his wife made. The photograph, the sculpture, and the text of the booklet can all be protected by copyright. T-shirts bearing the star's picture are of a different style, but allow him to merchandise his image and to benefit from his celebrity status.

By the time we will have unravelled all the intellectual property aspects of this concert, or at least the legal provisions underlying them, we will have reached the final page of our book; but we hope that this down-to-earth example provides a first impression of what intellectual property means in practice and alerts the reader to the intellectual property aspects of many elements of our everyday life.

Introduction

In recent years intellectual property has attracted a lot of attention. Its importance for international trading relations was emphasized during the negotiations that led to the successful conclusion of the GATT1 Uruguay Round on the world trading system. The GATT TRIPs initiative that led eventually to the Agreement on Trade Related Aspects of Intellectual Property Rights 1994 that was signed in Marrakesh,2 was sparked off by a strong desire to eradicate international counterfeiting and piracy, but it became clear at a very early stage that the cure against the fake Gucci or Cartier watches, Lacoste shirts or even counterfeited fire extinguishing systems in jet engines for passenger planes,3 or against what is often described as a plague threatening (among other things) the worldwide exploitation of intellectual property, required also a harmonisation of national intellectual property laws. It is much easier to eradicate counterfeits at the source with a common set of minimum protection rules than afterwards at a national border once they are in circulation. At European level the realization of the Single Market gave rise to a series of initiatives in the intellectual property area. Harmonization Directives, eg the harmonization of the duration of the term of copyright protection4 and the Trade Mark Directive,5 were coupled with moves towards a set of truly European intellectual property rights6 and Community responses to the need for adequate protection felt by the computer industry.7 Our own legislation was updated as a result of a number of these developments and we have also seen the further development of, for example, the tort of passing-off and the

1 The General Agreement on Tariffs and Trade, basically the world free trading system which, as a structure and organization, was succeeded by the World Trade Organization (WTO) as a result of the Uruguay Round of trade negotiations.

2 The final text of TRIPs was published in (1994) 33 ILM 1197 and in (1994) 25 IIC 209. The agreement is administered by the World Trade Organization (WTO), which succeeded to GATT.

3 See M-Ch Piatti 'Measures to combat international piracy' [1989] 7 EIPR 239 at 239-40.

4 Directive 93/98 harmonizing the term of protection of copyright and certain related rights (1993) OJ L 290/9.

5 Directive 89/104 on the approximation of the laws of Member States relating to trade marks (1989) OJ L40/1.

6 Eg the Community Trade Mark, see Council Regulation 40/94 on the Community Trade Mark (1994) OJ L11/1, and the Community Design, see Council Regulation 6/2002 on Community Designs (2002) OJ L3/1.

7 See eg Directive 91/250 on the legal protection of computer programs (1991) OJ L122/42 and Directive 96/9 on the legal protection of databases (1996) OJ L77/20.

protection offered to the merchandising activities involving real and fictitious characters, to fill the gaps not covered internationally (eg goodwill, characters, and information).

Due in part to these developments the various intellectual property rights have become relatively well known:

- (a) trade marks;
- (b) patents;
- (c) copyright;
- (d) rights in performances;
- (e) registered designs; and
- (f) design rights.

Let us add some more examples to our concert example discussed above. Intellectual property addresses problems such as how the Compact Disc system, as a technological invention, is temporarily protected by patents, how the aesthetic appearance of a telephone in the shape of a golf caddy can be protected as a registered design, and whether the functional design of kitchen utensils can attract (unregistered) design protection. We could also use intellectual property laws to examine how the registration of the trade mark 'Sprite' by the Coca-Cola Company for its lemon taste soft drink is linked to the fact that it allows consumers to identify the drink and to distinguish it from similar soft drinks and how such a trade mark is protected against imitation, how copyright grants and protects certain rights in literary, artistic, and musical creations and which rights exist in performances. Other related areas that we will equally have to consider include the law of confidence and passing-off. These form an essential national addition to the types and level of protection provided on the basis of international conventions.

A brief historical overview: the origins

When we refer to intellectual property rights, we do not wish to make the distinction between industrial intellectual property rights, such as patents and trade marks, and artistic intellectual property rights, such as copyright. We think this distinction is no longer valid as copyright is now used in such a flexible way, for example to protect computer programs, that it can no longer be called an exclusively artistic right. The same concepts underlie each type of intellectual property. A strong form of unity exists between all types of intellectual property and the common law concepts in use in this area. But this dichotomy between 'industrial' patents and 'artistic' copyright has been an essential element in the historical development of the protection of what we call intellectual property. Before we try to define this term and to justify the continuing existence of intellectual property rights, let us have a brief look at the historical roots of our topic.

The origin and the evolution of the patent system

Patents can be traced back as far as the end of the Middle Ages.⁸ Inventor privileges, which in England took the form of royal grants under the prerogative, were granted all over Europe. Although not altogether absent, the idea of the promotion of inventive activity through the grant of a market monopoly was strongly overshadowed by the idea that these privileges were the perfect tool to reward political creditors and give them a trading monopoly granted by letters patent.

In England, Parliament reacted against this practice and in 1624 the Statute of Monopolies was issued. It was primarily a reaction against the existing practice and the trading monopolies to which this practice gave rise, but it was also influenced by the idea that in certain circumstances a market monopoly would be necessary as an incentive to innovate. The result of this influence is found in section 6 of the Statute of Monopolies. The 'true and first inventor' was granted a patent monopoly for 14 years upon 'any manner of new manufacture'. As England felt that France and Holland were clearly further advanced in their technical development, any person who imported new technologies with a view to establishing an advanced domestic industry was equally considered to be an inventor. The flexibility on this point emphasizes that this new patent system should be seen as a deliberate act of economic policy.⁹ By rewarding eventually both devisors and importers of new technologies, the development of industrial activity, growth, and employment emerges as the primary aim of the legislation. Gratitude towards the inventor is only of secondary importance. The policy aspect is reinforced by the provision that manufactures that are 'contrary to the law or mischievous to the state, by raising prices of commodities at

⁸ See also S Thorley, C Birss, S Burkitt and R Miller *Terrell on the Law of Patents* (15th edn Sweet & Maxwell 2000) 1–5.

⁹ See B Dölemeyer 'Einführungsprivilegien und Einführungs patente als historische Mittel des Technologietransfers' [1985] GRUR 735. This German article is the best source for this view.

home, or hurt trade, or generally inconvenient¹⁰ would not be protected. Only those manufactures which fit in with the policy will be protected as the realization of the aims of the policy is the ultimate reason for the existence of the patents.

These early developments represent only the start of a long development process wherein the industrial revolution in Europe was the key element. The eighteenth century saw the development of the patent specification, first as a tool to define the content of the protected invention against infringers by means of a statement enrolled with the Court of Chancery and later, in the modern sense, as a source of technical information, provided by the patentee as consideration for the monopoly granted to him by the patent. The novelty concept, which corresponded previously to the fact that the invention was not yet practised in the country, was enlarged to incorporate also the question of whether the trading community did already know of the invention through publication.

The Patent Law Amendment Act 1852 removed the inefficiencies and uncertainties in the procedures for securing a patent. The applicant could register his specification with the Commissioners of Patents, with an option to file a provisional application up to one year before the complete specification was worked out and filed. Patents were granted simply upon registration and at a reasonable fee. This led to an increase in the number of patents, some of them of dubious value due to the absence of any examination of the applications. The problems arising from the inadequacy of the patent litigation procedures were addressed by the Patents, Designs and Trade Marks Act 1883. A single judge replaced the juries and patentees were obliged to delineate the scope of their monopoly in at least one of their claims, but even more important was the replacement of the Commissioners by the Patent Office. This Patent Office was charged with the examination of the patent applications. In a first stage it examined whether the formal requirements and the requirement that the patentee should provide a proper description of the patent had been observed. An examination of the novelty of the application based on a search of previous British specifications, was added to the examination process from 1905 onwards.¹¹ This change clearly demonstrates how strongly the origins of intellectual property are linked to, and the evolution of them is a response to, commercial necessities.

All over Europe and in North America specific patent legislation was introduced at national level in the course of the nineteenth century. As a similar evolution took place in all these countries and as the technology that was being developed was not only to be used in the country in which it was developed, a need for international cooperation arose. In 1883 the Paris Convention for the Protection of Industrial Property was created as the basic instrument for international patent protection.¹² It provides minimal rules of protection, which were translated into the national patent legislation. On top of that it contains a rule of national treatment:¹³ Foreign inventors shall be treated in the same way as their domestic counterparts and their inventions shall be granted the same level of protection.

The development of the first half of the twentieth century can be characterized as a consolidation effort at legal and organizational level. The new phenomenon of the vast number of newly independent states created a crisis in the patent system in the early 1960s. A flood of patent applications had to be dealt with independently by an ever-growing number of national patent offices. International and regional cooperation was seen as the solution. Attempts to arrive at regional patent systems¹⁴ and treaties providing assistance and combating the seemingly endless duplication of the examination procedures, such as the global Patent Co-operation Treaty,¹⁵ were started in this period. Another problem newly independent states faced, especially in the third world, was the inappropriateness for their purposes of the existing patent legislation. The adoption of new patent laws in these countries and the reform of the international patent system to this new environment form processes which have not yet been concluded.¹⁶

Trade marks

The use of marks which are added to goods to distinguish them from similar goods has a history of at least 2,000 years. Indeed, the Romans embossed their pottery or impressed it with a mark and merchants have used marks ever since to distinguish their goods. Although the courts became involved in the actions against infringers,¹⁷ no proper trade mark legislation was enacted and the system was based purely on common law principles. The main

¹⁰ See Statute of Monopolies 1624.

¹¹ See Patents Act 1902.

¹² See FK Beier 'The Significance of the Patent System for Technical, Economic and Social Progress' [1980] IIC 563 at 570.

¹³ Art 2 of the Paris Convention.

¹⁴ Eg the Nordic Patent System and the European Patent Convention.

¹⁵ See below under International Intellectual Property Conventions.

¹⁶ See most recently the Patent Law Treaty (Geneva 2000) as an attempt to harmonize procedures before the national patent offices. The United Kingdom has signed this treaty which is not yet in force as it awaits ratification by a sufficient number of states. In July 2004 eight states had ratified the treaty, whereas it will enter into force three months after the tenth instrument of ratification will have been deposited.

¹⁷ See *Sykes v Sykes* (1824) 3 B & C 541, a case which contains some basic principles (damages at common law—deceit).

problem traders faced was that each time they brought an infringement action they had to prove their title to the mark. This depended on the existence of an established reputation associated with the mark.

In France this problem had been solved by the introduction of a registration system and a similar registration system was introduced in England in 1875 by the Trade Marks Registration Act.¹⁸ Our trade mark legislation was consolidated by the Patents, Designs and Trade Marks Act 1883. In the same year the Paris Convention was signed. The principles contained in this Convention apply to trade marks as well as to patents.¹⁹ The next step in the consolidation process was the statutory definition of the term trade mark in the Trade Marks Act 1905. This was followed in the Trade Marks Act 1919 by the division of the register into Part A, where stringent requirements were coupled with better protection in terms of remedies, and Part B. The Trade Marks Act 1938 was based on the same principles but the drafting was more detailed. It was amended by the Trade Marks (Amendment) Act 1984 to include also service marks. The division of the register into two parts was abolished by the Trade Marks Act 1994, but the British system still contains an examination stage before the mark is registered.

We have seen that at international level many of the principles applied to patents are equally applied to trade marks.²⁰ This is not always the case for copyright, to which we now turn our attention.

The origin and the evolution of the copyright system

Copyright is historically linked to written literary works. As handwritten copies were such a formidable investment of time and effort, the number of copies available was low. Plagiarism was not a problem. All this changed when Gutenberg invented movable type and Caxton developed the printing press in the second half of the fifteenth century. The arrival of this technology made the printing of multiple copies possible. This could be done quickly and at relatively little expense.

Stationers acquired the works from their authors and organized the printing and the sale of these works. These entrepreneurs took the commercial risk to exploit the works of the authors and wanted exclusive rights in the publication of the works to protect them against copiers. They found an ally in the Crown which wanted to control the importation and circulation of books. The stationers organized themselves in a guild and the Crown granted the Stationers' Company a charter in 1556. Lawfully printed books were entered in the Company's register and, as the right to make an entry in the register was reserved for the stationers, this system effectively amounted to a licensing system and secured a printing monopoly for the Company members. On top of that they were granted powers to act against infringing copies. This system remained in place until the end of the seventeenth century.

A brief period of anarchy was followed by the first real copyright statute: the Statute of Anne 1709. It gave the 'sole right and liberty of printing books' to authors and their assignees. There was, however, no shift from an entrepreneurial copyright to an author's right with the emphasis exclusively on literary creation and its creators. The emphasis remained on the commercial exploitation of books. Printers and booksellers were explicitly named among the author's assigns.²¹ The right started from first publication and lasted for 14 years, but it was only enforceable by seizure and penalties if the title of the book had been registered with the Stationers' Company before publication.²² Before publication the author could rely on certain rights of literary property at common law to obtain protection against unauthorized copying²³ and if the author was still alive on expiry of the term of protection of 14 years the right was 'returned' to him for another 14 years.

At the end of the eighteenth and during the nineteenth century the duration of the term of copyright protection was gradually increased. Simultaneously the scope of copyright was widened to include other types of works apart from literary works. Engravings, prints, lithographs, sculptures, dramatic, and musical works all received copyright protection during that period. Drama and music did not fit in well with the existing 'copy-right', the right to produce copies of the work and prevent others from doing so, as their exploitation involved much more performances, rather than the sale of printed copies. A 'use' right was sought by authors such as playwrights and composers. A performing right for dramatic works was created in 1833²⁴ to remedy this problem. It was extended to musical works in 1842.²⁵ The British emphasis on the entrepreneurial exploitation aspect of copyright was not shared by those who saw copyright almost exclusively as the expression of reverence for the creating artist and his act of artistic creation. The latter tendency was particularly strong in France and Belgium, as illustrated by the use of the term *droit d'auteur* (author's right and not copy-right). As a major exporter of copyright material, Britain

¹⁸ For a comprehensive overview of the historical development of the law of trade marks (and passing-off) see Ch Morcom, A Roughton and J Graham *The Modern Law of Trade Marks* (Butterworths 1999) 5–12 (2nd edn planned late 2004).

¹⁹ See above.

²⁰ Industrial designs are also found in this category.

²¹ See s 1.

²² See ss 1 and 2.

²³ *Donaldson v Beckett* (1774) 2 Bro P C 129, 4 Burr 2408.

²⁴ Dramatic Copyright Act 1833.

²⁵ Literary Copyright Act 1842, s 20.

had an important interest in a compromise which secured at least some form of copyright protection abroad. The approach taken bears strong similarities to the contemporary evolution regarding patents. In the copyright area the Berne Convention was signed in 1886.²⁶ A personal connection between the author and a Member State of the Berne Union, or first publication of the work in a Member State of the Union, is from that moment onwards sufficient for protection in all Member States on a national treatment basis.

When the convention was revised in 1908 the need to agree on further minimal rules was felt. Copyright protection was no longer to depend upon registration or any other formality, but upon the act of creation of the work and the term of copyright protection would last at least the author's life and 50 years. When these changes were incorporated into the Copyright Act 1911, it signalled the end for the Stationers' Company. The 1911 Act also widened the scope of copyright further. The producers of sound recordings were granted the exclusive right to prevent unauthorized reproductions of their recordings.²⁷ Significantly, this right was not given to the performing artist, but to the entrepreneur involved. The right was also labelled copyright, but the *droit d'auteur* tradition would instead distinguish it as a neighbouring right, because it does not directly protect the original artistic creation of the author. The work protected is only derived from the author's original artistic creation.

This right in sound recordings was an important precedent. It indicated that copyright would be flexible enough to offer protection to all works in whose creation new technical possibilities for artistic expression had been used. Protection was granted on a similar basis in cinematograph films, broadcasts, and the typographical format of published editions by the Copyright Act 1956.

At international level the developing countries advocated major changes to the Berne Convention during the 1960s. The Stockholm 1967 and Paris 1971 Revisions of the Berne Convention granted in the end only minimal concessions with a lot of strings attached to them: they can allow certain translations and publications of foreign works if these are not otherwise made available.²⁸ In a separate development, performing artists have been granted certain rights. The Convention on the Protection of Performers, Producers of Phonograms and Broadcasting Organizations was signed in Rome in 1961. Under the provisions of this Convention, performers have the right to prevent the fixation or the broadcasting of their live performances.²⁹ Record makers can prevent the reproduction of their records³⁰ and broadcasting organizations can control the re-broadcasting and the public performance for an entrance fee of their broadcasts.³¹ The Rome Convention has unfortunately never reached the same level of adherence between nations as the Berne Convention.³² A second Phonograms Convention which deals with mutual protection against the unauthorized commercial copying of sound recordings was signed in 1971. These international provisions have been translated into the Copyright, Designs and Patents Act 1988 mainly as Part II: Rights in Performances.³³

This brief historical overview of the development of patent and copyright law³⁴ clearly demonstrates that the divide between patents, as purely industrial rights, and copyright, as a purely artistic right, was never absolute in nature. Especially in Britain copyright always had an entrepreneurial, almost industrial, orientation. Copyright was never an exclusively artistic right, as opposed to the other industrial property rights. In recent years this tendency was emphasized by the use of copyright to protect computer programs. It is however true that copyright is different from the other rights. Patents protect the invention, but copyright protects not only the creation, but also grants some strong, additional, personal rights to the creator. These moral rights have always been an essential aspect of the French '*droit d'auteur*', and in Britain they were incorporated in their own right for the first time in the Copyright, Designs and Patents Act 1988.³⁵

Each right is an intellectual property right, but each right has its own characteristics. Before examining each right in detail, we will try to define the term intellectual property and we will also examine whether the continued existence of intellectual property rights can be justified.

26 For a full account of the history of the Berne Convention and the Berne Union see S Ricketson *The Berne Convention for the Protection of Literary and Artistic Works: 1886-1986* (Kluwer 1987) ch 1.

27 Section 19(1); The courts later held that the producers could also prevent public performances of their recordings, *Gramophone Co v Cawardine* [1934] Ch 450.

28 For more details, see the appendix to the Berne Convention upon which agreement was reached at the Paris revision conference (1971) reproduced in J Phillips (Consultant ed) *Butterworths Intellectual Property Law Handbook* (Butterworths 6th edn 2003).

29 See Arts 7-9. The same right does not exist in relation to recorded performances.

30 See Arts 10-12.

31 See Art 13. They cannot control the diffusion by wire or by cable of their broadcasts, however.

32 Hopefully the WIPO Performances and Phonograms Treaty that was signed in Geneva in 1996, and entered into force in may 2002, will be more successful. The text of this treaty is reproduced in Phillips op. cit.

33 Before the Copyright, Designs and Patents Act 1988 came into force the Performers' Protection Acts 1958-1972 offered some protection to performing artists, but the level and the type of that protection were unsatisfactory.

34 More details can be found in K Garnett, J Rayner James, and G Davies *Copinger and Skone James on Copyright*, (Sweet & Maxwell 14th edn 1999), 31-51.

35 Part I, ch 4, ss 77-89.

A definition and a justification of intellectual property

Intellectual property rights are first of all property rights. Secondly, they are property rights in something intangible. And finally, they protect innovations and creations and reward innovative and creative activity.³⁶

Property rights

The essential characteristic of property rights is that they are exclusionary rights through which third parties are prohibited from the use and exploitation of the subject precluded by these rights.³⁷ Through property rights externalities can be internalized;³⁸ in other words the subject of the right is brought under the control of the owner of the property right. These rights will only develop when the cost of this internalisation is smaller than the gains of it.³⁹ If we take a bicycle as an example of an item of tangible property, it becomes clear that the owner of the bicycle has the exclusive right to use the bicycle and such a monopolistic right in real and personal property is conceded almost naturally. Property rights in items such as our bicycle developed because nobody would be prepared to invest time, materials, and skills in designing and producing bicycles⁴⁰ if he or she would have no right in the result of the process that would enable them to benefit from their work. The most obvious way to do so is to sell the bicycle, but again there would be no interest in the bicycle, this time in acquiring it, should the buyer be unable to get the exclusive right to use the bicycle. The nature of the object gives this right a monopolistic character. If someone uses the bicycle, no one else can use it. The physical nature of the unique embodiment of certain limited resources in the bicycle automatically leads to a particular competitive⁴¹ exclusionary effect.⁴²

Intangible property rights

In this respect intellectual property rights are fundamentally different. The nature of the property which is the subject of the right and which is protected does not necessarily lead to competitive exclusionary effects. Concurrent use of inventions by a number of manufacturers, including the patentee, or simultaneous performances of a musical are possible.⁴³ The invention and the musical will not perish, nor will any use or performance lessen their value. The subject matter of intellectual property rights, eg inventions or creations, has a link with knowledge and ideas. In economic terms this subject matter constitutes a public asset and its use is not by its nature individually appropriable.⁴⁴ In many cases imitation is even cheaper than invention or creation.⁴⁵ The competitive exclusion only arises artificially with the creation of a legally binding intellectual 'property' right as an intangible property right. This gives the inventor or the creator, owners of the intangible property right, the exclusive use of the invention or the creation.

An economic justification⁴⁶

Why are these intangible property rights created? Economists argue that if everyone would be allowed to use the results of innovative and creative activity freely, the problem of the 'free riders'⁴⁷ would arise.⁴⁸ No one would invest in innovation or creation, except in a couple of cases where no other solution would be available,⁴⁹ as it

³⁶ US Council for International Business *A New MTN: Priorities for Intellectual Property* (1985) at 3.

³⁷ See M Lehmann 'The Theory of Property Rights and the Protection of Intellectual and Industrial Property' [1985] IIC 525 at 530.

³⁸ An externality is an economic situation in which an individual's pursuit of his or her self-interest has positive or negative spill-over effects on the utility or welfare of others. It can be seen as a market failure and in this context a property right is a tool used to correct such a market failure. See R Ekelund and R Tollison *Economics* (Little, Brown & Company 1986) 404–5.

³⁹ H Demsetz 'Toward a Theory of Property Rights' 57 (1967) *American Economic Review* 347 at 350; for an overview of the property rights theory see R Cooter and Th Ulen *Law and Economics* (HarperCollins 1988) esp ch 4, but also ch 5.

⁴⁰ At most they would design and produce one bicycle to get from A to B themselves, but even that cannot be taken for granted in a situation where no property rights exist.

⁴¹ The difference is that between my bicycle and bicycles as a concept.

⁴² Lehmann 'The Theory of Property Rights and the Protection of Intellectual and Industrial Property' 525 at 531.

⁴³ Ibid.

⁴⁴ Ullrich 'The Importance of Industrial Property Law and Other Legal Measures in the Promotion of Technological Innovation' [1989] *Industrial Property* 102 at 103.

⁴⁵ See E Mansfield, M Schwartz, and S Wagner 'Imitation Costs and Patents: An Empirical Study' [1981] *Ec J* 907.

⁴⁶ We will approach the justification issue from the point of view of the developed countries. The international transfer of technology and the different level of development in developing countries present additional problems: see eg Primo Braga 'The Economics of Intellectual Property Rights and the GATT: A View From the South' [1989] *Vanderbilt Journal of Transnational Law* 243.

⁴⁷ See R Benko *Protecting Intellectual Property Rights: Issues and Controversies* American Enterprise Institute for Public Policy Research (AEI Studies 453) (1987) at 17.

⁴⁸ Inappropriability, the lack of the opportunity to become the proprietor of the results of innovative and creative activity, causes an under-allocation of resources to research activity, innovation and creation: see K Arrow 'Economic Welfare and the Allocation of Resources for Invention' in National Bureau for Economic Research *The Rate and Direction of Inventive Activity: Economic and Social Factors* (Princeton University Press 1962) at 609–25.

⁴⁹ Eg a case where the existing technology is completely incapable of providing any form of solution to a new technical problem that has arisen.

would give them a competitive disadvantage.⁵⁰ All competitors would just wait until someone else made the investment, as they would be able to use the results as well without investing money in innovation and creation and without taking the risks that the investment would not result in the innovative or creative breakthrough it aimed at.⁵¹ The cost of the distribution of the knowledge is, on top of that, insignificant.⁵² As a result the economy would not function adequately because we see innovation and creation as an essential element in a competitive free market economy. In this line of argument innovation and creation are required for economic growth and prosperity.⁵³ Property rights should be created if goods and services are to be produced and used as efficiently as possible in such an economy.⁵⁴ The perspective that they will be able to have a property right in the results of their investment will stimulate individuals and enterprises to invest in research and development.⁵⁵ These property rights should be granted to someone who will economically maximize profits.⁵⁶ It is assumed that the creator or inventor will have been motivated by the desire to maximize profits, either by exploiting the invention or creation himself or by having it exploited by a third party, so the rights are granted to them.⁵⁷ This argument applies as well to intangible property rights, such as patents which determine the value of an item in a direct way, as to rights such as trade marks which do so only indirectly through their use as a means of communication.⁵⁸

But how does such a legally created monopolistic exclusive property right fit in with the free market ideal of perfect competition? At first sight every form of a monopoly might seem incompatible with free competition, but we have already demonstrated that some form of property right is required to enhance economic development as competition can only play its role as market regulator if the products of human labour are protected by property rights.⁵⁹ In this respect the exclusive monopolistic character of the property rights is coupled with the fact that these rights are transferable. These rights are marketable; they can, for example, be sold as an individual item. It is also necessary to distinguish between various levels of economic activity as far as economic development and competition are concerned. The market mechanism is more sophisticated than the competition/monopoly dichotomy. Competitive restrictions at one level may be necessary to promote competition at another level. Three levels can be distinguished: production, consumption, and innovation. Property rights in goods enhance competition on the production level, but this form of ownership restricts competition on the consumption level. One has to acquire the ownership of the goods before one is allowed to consume them and goods owned by other economic players are not directly available for one's consumption. In turn, intellectual property imposes competitive restrictions on the production level. Only the owner of the patent in an invention may use the invention and only the owner of the copyright in a literary work may produce additional copies of that work. These restrictions benefit competition on the innovative level. The availability of property rights on each level guarantees the development of competition on the next level. Property rights are a prerequisite for the normal functioning of the market mechanism.⁶⁰ Or, to take the example of patents: 'patents explicitly prevent the diffusion of new technology to guarantee the existence of technology to diffuse in the future.'⁶¹ Trade marks on the other hand distinguish identical goods or services of different sources. They therefore enable the consumer to distinguish between such products and services and grant the rightholder the exclusive right to apply the mark to the goods and services for which it has been registered. In doing so they enable competition between producers of identical goods or services. They therefore encourage a wider variety of goods and services being made available between which the consumer can distinguish by means of the trade mark in terms of quality, price, etc.

This clearly demonstrates that it is not correct to see intellectual property rights as monopolies which are in permanent conflict with the fundamental rule of free competition. Free competition can only exist and a market economy can only flourish when certain restrictions in furtherance of competition are accepted. Intellectual property rights are necessary to achieve this. The main problem is that this only justifies the existence of exclusive property rights as the result of innovative activity. The particular form intellectual property rights have taken in a

50 See Ullrich 'The Importance of Industrial Property Law and Other Legal Measures in the Promotion of Technological Innovation' [1989] *Industrial Property* 102 at 103.

51 One could advance the counter-argument that inventions and creations will give the innovator an amount of lead time and that the fact that it will take imitators some time to catch up would allow the innovator to recuperate his investment during the interim period. In many cases this amount of lead time will, however, only be a short period, too short to recuperate the investment and make a profit. See also Mansfield, Schwartz and Wagner 'Imitation Costs and Patents: An Empirical Study' 907 at 915 et seq.

52 See Benko *Protecting Intellectual Property Rights: Issues and Controversies* at 17.

53 Ibid ch 4 at 15, and US Council for International Business *A New MTN: Priorities for Intellectual Property* (1985) at 3.

54 See B Pretmar, 'The Economic Impact of Patents in a Knowledge Based Market Economy' (2003) 34 *IIC* 887 and E Mackaay, 'The Economics of Intellectual Property Rights in Civil Law Systems' in AN Hatzis (ed) *An Introduction to European Law & Economics*, (Edward Elgar (forthcoming)).

55 P Lunn 'The Roles of Property Rights and Market Power in Appropriating Innovative Output' [1985] *Journal of Legal Studies* 423 at 425.

56 Lehmann 'Property and Intellectual Property—Property Rights as Restrictions on Competition in Furtherance of Competition' [1989] *IIC* 1 at 11.

57 For an economic-philosophical approach see also Mackaay 'Economic and Philosophical Aspects of Intellectual Property Rights' in M Van Hoecke (ed) *The Socio-Economic Role of Intellectual Property Rights* (Story-Scientia 1991) 1–30.

58 See Lehmann 'The Theory of Property Rights and the Protection of Intellectual and Industrial Property' 525 at 531.

59 Ibid 'Property and Intellectual Property—Property Rights as Restrictions on Competition in Furtherance of Competition' 1 at 12.

60 Ibid 'The Theory of Property Rights and the Protection of Intellectual and Industrial Property' 525 at 539.

61 Benko *Protecting Intellectual Property Rights: Issues and Controversies* ch 4 at 19.

particular national intellectual property statute and even more the way in which these rights are used and exercised are not automatically justified by this theory. The restrictions on competition are only justified in so far as they are restrictions in furtherance of competition on the next level, which is either the production level or the innovation level. Any restriction which goes further hinders the optimal functioning of the market economy. It is the task of the provisions on competition law to regulate this system in such a way that this optimal level of functioning is achieved and maintained. This co-existence of intellectual property and the rules on free competition is a permanent balancing act and one of the most challenging and interesting parts of the study of intellectual property.

Goods perish through use, while intangible property is, at least in theory, perpetual.⁶² But the socio-economic value of these rights is not so important that a perpetual restriction on competition is necessary and justifiable to enhance competition on other levels. Innovative activity will be sufficiently enhanced, without too far-reaching restrictions of competition on the production level, when the intellectual property right is restricted in time. For patents, which grant the patentee extensive restrictive powers and whose protection is wide in scope, the term of protection is relatively short (20 years). From now on literary works are to be protected under copyright for a period of the life of the author plus 70 years, but the protection granted is weaker. Only the particular expression of an idea is protected; the idea as such is left unprotected. This attempt to get the balance between restriction on and freedom of competition right through the use of a fixed term can be seen as lacking precision and potentially unjust, but introducing a sliding scale would require the determination of the term of protection on the basis of the merits of each individual invention or creation. This would create massive administrative costs that outweigh the benefits derived from the system and on top of this it would create an undesirable climate of legal uncertainty.⁶³

Another way of getting the balance right is the duty to exercise and use which is linked to patent and trade mark rights. Compulsory use and compulsory licences are an integral component of most intellectual property legislations. The idea behind it is first of all that use of the intellectual property right will provide an income to its owner and that this profit will encourage him to continue his innovative work. The only reason why a restriction of competition at the level of production is acceptable is the enhancement of competition on the innovative level through the possibility for the owner of the right to realise a profit. This justification collapses if this right is not used. This defect is remedied by the introduction of the duty to exercise and use.⁶⁴ The weaker protection accorded under copyright law renders this restriction superfluous in that area. Such a duty equally does not exist for real and personal property. It can be seen as an important difference between intangible industrial property and (normal) real and personal property.

A second reason for the obligation to use is that it is felt that the grant of an exclusive right should be counterbalanced by the fact that the previously unavailable subject matter of the right is made available to society. The obligation to use is necessary because, due to the exclusive right, the owner of the intellectual property right is the only one who makes it available. More specifically, for patents there is the additional requirement to reveal the technical details and specifications of the invention, to bring them into the public domain. In exchange for the exclusive right, society has the right to share the development of technical knowledge and eventually to use it for further research and further developments. This represents an additional advantage of the patent system, as the alternative is to be found in the use of the secrecy system. Technological developments are, in the absence of a patent system,⁶⁵ kept secret. Society is unable to share this new knowledge and the inventor can only use the invention in a way which does not reveal the technical functioning of it, because once in the public domain it can be used freely by all competitors. The inventor is put in a very weak position. It has been demonstrated that a patent system that grants the inventor adequate property rights fulfils the task reserved for such a system in a market economy in a better way. The law of secrecy cannot replace the patent system fully; it can only be a useful addition to it.⁶⁶

Up to now we have mainly been concerned with patents and trade marks. Historically copyright developed on a very different basis with a lot of emphasis on the link between the author and his work. An attempt was made to make sure that it was the author rather than someone else who would secure the benefits resulting from the work and its exploitation. Over the years though copyright has increasingly been used to protect the commercial exploitation of the work and new, more technologically orientated types of works have been protected by copyright.⁶⁷ It is therefore submitted that the same economic justification theory can now be applied to

⁶² It may lose its economic value after a number of years though. Eg an inventive production process protected by a patent can be applied indefinitely, but will after a number of years be overtaken by new technological developments and lose its economic value.

⁶³ For more details see Lehmann 'The Theory of Property Rights and the Protection of Intellectual and Industrial Property' 525 at 535-6.

⁶⁴ Ibid 525 at 532-3.

⁶⁵ This technique can also be used as an alternative in a particular case for a patent application if the costs of revealing the technical detail of the invention and the other costs linked to such an application are perceived to be higher than the benefits of the stronger protection offered by the patent system. Potentially the duration of the secrecy is endless, which is also an advantage over the patent system.

⁶⁶ See Lunn 'The Roles of Property Rights and Market Power in Appropriating Innovative Output' 423.

⁶⁷ J Reichman 'Charting the Collapse of the Patent-Copyright Dichotomy: Premises for a Restructured International Intellectual Property System' (1995) 13 Cardozo Arts & Ent LJ 475.

copyright.⁶⁸ Protection against the copying of the work, for example, will restrict competition between the rightholder and his exploitation of the work on the one hand and copyists on the other hand. Such a restriction will encourage the rightholder though to create more works, thus enhancing competition at the higher, creative level, as there is now more of a prospect of securing a return. This is no doubt not the only motivation for authors, but it is clearly an important factor. One additional problem arises though in relation to the economic analysis of copyright. Copyright has to strike a balance between providing the incentives for authors on the one hand and the right of access to information of the public on the other hand. Or in the words of the famous study by Landes and Posner:

Copyright protection—the right of the copyright's owner to prevent others from making copies—trades off the costs of limiting access to a work against the benefits of providing incentives to create the work in the first place. Striking the correct balance between access and incentives is the central problem in copyright law.⁶⁹

Cooter and Ulen focus on the same issue when they argue that:

[p]ut succinctly, the dilemma is that without a legal monopoly too little of the information will be produced but with the legal monopoly too little of the information will be used.⁷⁰

Let us analyse the implications of these specificities of copyright in a bit more detail. The innovation and creation level interacts with the production level; this is given. In the copyright sphere we are dealing with works that are the expression of ideas. Starting from these ideas, one has to recognize that they are by their nature public goods and can therefore freely be accessed and used by anyone. The way in which these ideas enter the public domain is through their expression by an individual author, as such expression is required for the transmission of the idea. From an economic point of view it is also important to keep in mind that such access is non-exhaustive in nature. The consumption of the expression does not necessarily make the expression and its material support unsuitable or unavailable for further consumption. It is also the case that in the light of modern (digital) technological advances the cost of reproduction and distribution of the expression of the idea have become marginal and that such reproduction and distribution is easily achievable and can be done in a minimum amount of time. There is therefore plenty of room for free-riders. The situation is therefore entirely in favour of competition at the production level. At the innovation and creation level there is very little in terms of incentive to create. The creator may not be able to recoup the cost of production, as the cost of copying is lower and there is no tool to reap any substantial benefit from such creative activity. In economic terms there is therefore no efficient market of the authors' expression of ideas.⁷¹

Copyright is the tool that is created to give authors a right in their expression of ideas, hence securing appropriate profits deriving from the act of creation for them. Copyright will lead to the creation of an immaterial property right in the expression of an idea by the author, a right which the author can use to secure appropriate profit from his or her act of creation on the market.⁷² This will enhance creation by providing an incentive and therefore competition on the innovation and creation level will be stimulated, whilst any such right will inevitably limit competition at the production level as competitors are no longer free to copy the copyright work. A restriction on competition is put in place in furtherance of competition.⁷³

Copyright fulfils here the pro-competitive regulating role filled by the property right when it comes to the consumption and the production level. An important distinction needs however to be drawn. Property rights are a legal recognition of a situation, ie the physical possession of and control over the goods, whereas copyright is not based on a de facto situation at all. It is rather an artificially created right, put in place by the legislator to regulate competition at the innovation and creation level and to provide the much needed incentive to create. This difference gives copyright a different standing. It was created specifically as a tool to enhance competition by the legislator.

Up until now we have looked at 'traditional' copyright in literary and artistic works such as books and sculptures. It is however necessary to add that copyright has developed in two ways in recent years which may have influenced the position. On the one hand copyright has been expanded to protect the results of technological evolutions. On the other hand we have seen an increasing emphasis on the economic interests of those who exploit copyright works, such as producers and publishers. It is important to note that as a result copyright is increasingly used to protect information goods and the investment needed for the creation of these goods. It is clear that the level of originality involved in the creation of such information goods is lower and that the link with the author and his creativity that makes the work his own individual creation is weaker in these circumstances. This must also weaken the justification for strong copyright protection for these information works as these elements were

68 See R Watt *Copyright and Economic Theory: Friends or Foes?* (Edward Elgar 2000).

69 W Landes and R Posner 'An Economic Analysis of Copyright Law' 18 (1989) *Journal of Legal Studies* 325 at 326.

70 R Cooter and T Ulen *Law and Economics* 145.

71 G Ramello 'Copyright and Antitrust Issues', paper published in 2002 and available on line at <www.serci.org>, at 8.

72 K Maskus *Intellectual Property Rights in the Global Economy* (Institute for International Economics 2000) at 28–32.

73 See Lehmann 'Property and Intellectual Property—Property Rights as Restrictions on Competition in Furtherance of Competition' 20, 1, 1–15.

described above as the basis for the economic justification of copyright.⁷⁴ Another important element is the fact that by their nature information goods have a poor substitutability.⁷⁵ This applies to some extent to all copyright works, for example we are interested in a novel because of the way in which the author has expressed the idea and therefore the novel cannot be easily substituted by another novel in which another author expresses the same idea in his or her different own way, but this factor is more strongly present in relation to information goods.

Maybe some additional remarks on the type of monopoly granted by intellectual property rights are appropriate. It is in no way an absolute monopoly. It is limited in time. There is also competition with similar products, similar trade marks, etc. Inventions compete with substitute technologies so that the profits based on the exclusive use of the invention are rarely monopolistic rents.⁷⁶ The latter situation only arises in those rare situations in which an invention is such a radical step forward that there is a (temporary) absolute lack of substitutability.⁷⁷ And in copyright only one particular expression of an otherwise unprotected idea is granted copyright protection. Intellectual property rights do not give their owners an automatic profit. They are directly oriented towards demand. The reward they provide for innovative activity depends upon the competitive structure of the market concerned. Only when the market appreciates the innovation on its merits will the owner be rewarded and make a profit.⁷⁸ 'The ownership of intangibles in the sense of abstract property rights (. . .) is therefore limited to a temporary, ephemeral competitive restriction.'⁷⁹ Intellectual property rights confer exclusive rights, but they hardly ever confer a real monopoly in the sense that the monopolist can act in an arbitrary way without being influenced by his competitors.

It has to be added that a number of economists have argued against the existence of intellectual property rights and especially against the existence of patents. In their view patents do not promote technological innovation, or there are more effective ways to promote innovation.⁸⁰ They are, however, unable to provide clear evidence that intellectual property rights do not fulfil a useful economical function and none of their alternatives has ever been tested successfully in practice.⁸¹ All they can demonstrate is that some features of the existing patent system cannot be justified economically. They prove that the existing system does not always achieve a perfect balance between the various levels of competition. This is undoubtedly true, but the solution is not the abolition of the whole system. What is required could rather be described as fine-tuning of the system.⁸²

There is also a substantial amount of empirical economic evidence in support of the economic justification for the existence of intellectual property rights. Most of these studies deal with patents and the causal relationship between the availability of patent protection and investment in research and development and in innovation.⁸³

This economic theory provides a justification for the existence of intellectual property rights. A related point is the issue of who gets these intellectual property rights. It has been suggested that the economic theory proves that it is valuable to have intellectual property rights, but that it is unable to guarantee that the enforcement of these rights will have valuable results in each individual case. The author and the inventor must obtain these rights to secure the best possible system. This can only be accepted if one uses the labour theory to justify the allocation of the property rights whose existence the economic theory justifies.⁸⁴ This theory was formulated by John Locke⁸⁵ and is the combination of two concepts. The first concept is that everyone has a property right in the labour of his own body and brain and the second concept adds to that; that the application of human labour to an unowned object gives you a property right in it. When applied to intellectual property rights,⁸⁶ this could explain why it is the author who gets the copyright in the book and why it is the inventor who gets the patent in the invention. The combination of the economic theory and the labour theory provides a full justification for the system of intellectual property rights.⁸⁷ This reference to the labour theory explicitly justifies the fact that it is the author or the inventor who should own the intellectual property right, but it is submitted that this is already implicit in the economic

74 S Lemarchand, O Fréget and F Sardain 'Biens informationnels: entre droits intellectuels et droit de la concurrence' [2003] *Propriétés Intellectuelles*, issue 6, 11–23 at 18.

75 Ramello 'Copyright and Antitrust Issues', at 8.

76 Ullrich 'The Importance of Industrial Property Law and Other Legal Measures in the Promotion of Technical Innovation' 102 at 105.

77 Lehmann 'The Theory of Property Rights and the Protection of Intellectual and Industrial Property' 525 at 537.

78 See Ullrich 'The Importance of Industrial Property Law and Other Legal Measures in the Promotion of Technical Innovation' 102 at 112.

79 Lehmann 'The Theory of Property Rights and the Protection of Intellectual and Industrial Property' 525 at 537.

80 See eg Fritz Machlup *An Economic Review of the Patent System Study No 15*, US Congress, Senate, Judiciary Committee, Subcommittee on Patents, Trademarks and Copyrights, Washington DC (1957) and Edith Penrose *The Economics of the International Patent System* (Johns Hopkins University Press 1951), see also Machlup and Penrose 'The Patent Controversy in the Nineteenth Century' (1950) 10 *J Econ Hist* 1.

81 This is admitted by Fritz Machlup at the end of his study.

82 See Beier 'The Significance of the Patent System for Technical, Economic and Social Progress' 563 at 572.

83 eg CT Taylor and A Silberston *The Economic Impact of the Patent System* (1973), the 1973–4 study of the Ifo-Institut für Wirtschaftsforschung in Munich concerning the relationship between the Patent System and Technical Progress which is discussed in KH Oppenlander 'Patent Policies and Technical Progress in the Federal Republic of Germany' [1977] *JIC* 97 and A Silberston *The Economic Importance of Patents* (Cambridge University Press 1987); an overview of older studies can be found in J Schmookler *Invention and Economic Growth* (Harvard University Press 1966); see also Lunn 'The Roles of Property Rights and Market Power in Appropriating Innovative Output' 423.

84 H Spector 'An Outline of a Theory Justifying Intellectual and Industrial Property Rights' [1989] 8 *EIPR* 270 at 272–3.

85 John Locke 'The Second Treatise' Section 27 in *Two Treatises of Government* ed Peter Laslett, (Cambridge University Press 1970).

86 See Robert Nozick *Anarchy, State and Utopia* (Basil Blackwell 1974) at 181–2.

87 Spector 'An Outline of a Theory Justifying Intellectual and Industrial Property Rights' 270 at 273.

theory. An intellectual property right as a restriction on competition at production level, because not everyone can produce the goods protected by the right, will not stimulate competition on the innovation level if the right is not given to the innovator, be it an author or an inventor. One will only be stimulated to innovate when one gets the intellectual property rights in the innovation. This effect, which is the key element in the economic justification theory for intellectual property, disappears when someone else gets the intellectual property rights in the innovation. The actual exploitation of the right can be done by the rightholder or by a licensee—this does not affect the justification at all.

Other ways to justify intellectual property

This economic analysis justifies the continued existence of intellectual property rights and economic history confirms the correctness of the analysis.⁸⁸ One also finds a series of other elements of justification in an historical analysis and in a socio-economic analysis.⁸⁹

There seems to be a need for a system protecting innovation once a country starts to develop its industry. This becomes especially clear when one takes the example of patents. There is a correlation between industrialization and patent protection. Patents are introduced when the process of industrialization starts and each increase in the level of patent protection corresponds to progress in the industrialization process. This evolution is present in most European countries from the fifteenth century onwards, but it becomes very prominent in the nineteenth century due to the Industrial Revolution. It has to be added that this link between patents and industrialization is based on the idea that a country will not be able to benefit from the industrialization process in Europe if it does not introduce a system of patent protection—a conclusion that was reached as a result of an active debate in which both the advantages and disadvantages of the introduction of a system of patent protection were fully taken into account.⁹⁰

Apart from this historical correlation, we should turn our attention also to the evolution of economic output. The introduction of a system of patent protection in a country's legal system goes together with a clear increase in the industrial production of that country. We can refer here to the English example in the eighteenth century, but all other industrialized countries could equally serve as examples. Another striking feature is the high level of industrialization in all countries with a high level of patent protection. It could even be demonstrated that their level of industrialization is higher than the level reached by countries which refuse to grant patent protection or which only grant a weak form of patent protection. The successes of the Spanish and Italian pharmaceutical industries and the Swiss chemical industry at times when patent protection was not available do not prove the contrary. No new product emerged and the success was based purely on imitation. This situation only improved with the introduction of a system of patent protection.⁹¹ It is not, however, possible to establish a causal link between these two facts in a conclusive manner. Other factors than the patent system may be responsible for the higher level of industrialization.⁹²

These historical elements provide additional arguments in favour of the patent system and a system of intellectual property rights in general, but taken in isolation they do not provide a complete and convincing justification for the existence of intellectual property rights.

Other theses that have been suggested as justification for the existence of patents rely on natural rights, rewards for the inventor, and disclosure.⁹³ Immediately after the French Revolution a tendency to explain and justify individual property rights as natural rights on the basis of a series of moral and philosophical arguments became fashionable and was extended to intangible property such as patents and other intellectual property rights.⁹⁴ This theory never found much support outside France.

Similar arguments are found in the reward theory which sees patents as a reward owed by society to inventors to reward their creativity and their services to society.⁹⁵ Society has a moral obligation to compensate and to reward the inventors.⁹⁶ This argument cannot justify the existence of the patent system, even if one agrees that the inventor should be rewarded. We demonstrated above that a patent offers only a potential monopoly, a potential reward to the inventor. Not all patents, only those which are commercially attractive and whose commercial

⁸⁸ See Lehmann 'Property and Intellectual Property—Property Rights as Restrictions on Competition in Furtherance of Competition' 1 at 11.

⁸⁹ Beier 'The Significance of the Patent System for Technical, Economic and Social Progress' 563.

⁹⁰ Ibid at 571–2.

⁹¹ Ibid at 573–4.

⁹² Ibid.

⁹³ Benko *Protecting Intellectual Property Rights: Issues and Controversies* ch 4 at 16.

⁹⁴ This theory was endorsed by the French National Assembly and became part of the preamble to the patent law of that period, see the quotation in Machlup and Penrose 'The Patent Controversy in the Nineteenth Century' 1 at 11.

⁹⁵ This theory applies also to the other intellectual property rights.

⁹⁶ Machlup and Penrose 'The Patent Controversy in the Nineteenth Century' 1 at 17 quoted in this respect J S Mill's statement: 'That he, the inventor, ought to be compensated and rewarded . . . will not be denied . . . it would be a gross immorality of the law to set everybody free to use a person's work without his consent, and without giving him an equivalent.'

exploitation is successful, offer a reward to the inventor. Furthermore, this is an indirect reward. A direct reward, such as a lump sum, a decoration or a title, would be a better idea if the aim of the measure is to reward the inventor.⁹⁷ The inventor would be assured of a reward and would be able to assess the nature or amount of the reward in advance. These two theses based on natural rights and rewards are no longer fashionable as justifications for the existence of intellectual property rights,⁹⁸ although the possibility to reward the inventor is still rightfully considered as a positive side effect of the patent system.

A last thesis we have to mention emphasizes the role the patent system plays in encouraging inventors to disclose their secrets to society. Diffusion of technology, which is considered to be desirable for society, will only take place when they make the technical details of their inventions public. If, as explained above, there is no protection for the invention and everyone can use the technology freely, the inventor will rely on secrecy as imitation of the invention entails only minimal costs when compared to those of the inventor. The technical details of new inventions will not be disclosed in such a system and society will not benefit to the same extent.⁹⁹ Although this theory is helpful and the disclosure of technical knowledge is a very positive aspect of the patent system, it has to be said that its value is in part undermined by two important details. The inventor without patent protection would have some lead time during which he enjoys a kind of market monopoly and during which he can collect a reward for his work as it would take the imitator some time before he is ready to produce and to enter the market.¹⁰⁰ This is reinforced by the fact that the exploitation of a patent quite often requires a substantial amount of secret know-how which the imitator will have to acquire if he is to exploit the invention successfully.¹⁰¹ It has to be added though that in many cases the lead time will not be long enough to recover all costs and make a profit.¹⁰²

The last paragraphs have focused extensively on patents. Many of the arguments can also be used for trade marks, but are there perhaps other additional elements which can justify the existence of copyright? Originally copyright dealt with literary and artistic works. It could be argued that the author was given certain property rights in these works to reward his artistic performance or that the author's claims were based on a natural or moral right. Specifically in the *droit d'auteur* system a lot of emphasis is placed on the fact that the work involves an expression of the personality of the author. Copyright is then also given certain aspects of a personality right (cf moral rights) and does not remain a pure property right. This was perfectly acceptable for works such as novels, songs, and poems, but it becomes increasingly difficult to justify copyright exclusively on this basis. Clearly this theory does not suit computer programs and other highly technological works which are now equally protected by copyright. As copyright has more and more entered the technological field, it becomes clear that the real justification for it is equally to be found in the economic justification theory.¹⁰³ Works protected by copyright are knowledge goods, they are concerned with creativity and innovation and present in this respect the same characteristics as inventions. They too need to be protected as economic rights if artistic, creative and innovative activity in this area is to be promoted. There is however one essential difference with inventions and trade marks. The right involved here is a copyright the subject matter of which is the particular expression in a literary work, in a piece of music, in a sculpture etc by the author of an idea. There is no direct link between the copyright and the idea embodied in the work. One can distinguish between a book and the ideas expressed in it, whereas an invention and the novel idea involved are one and the same inseparable concept.¹⁰⁴ The ideas contained in a work protected under copyright are on top of that not necessarily novel. It would not be possible to justify the protection of these ideas under the economic justification theory. Fortunately this is not necessary as copyright only protects the expression by the author of a certain set of ideas. These ideas themselves are not protected by copyright.

But let us come back briefly to the link between the author and the work. This special aspect of copyright does not only refer to a personality right as seen above, but there is also an important link with Human Rights. The importance of the act of creation and the link with the creator in relation to rights that may flow from it has been emphasized by René Cassin, one of the architects of the current Human Rights framework. In his view the ability and the desire to develop intellectual and creative activities from which copyright works may result is potentially found in all human beings. As such it deserves respect and protection in the same way as all other basic faculties

97 See M Blakeney *Legal Aspects of the Transfer of Technology to Developing Countries* (ESC Publishing 1989) at 51–3.

98 Benko *Protecting Intellectual Property Rights: Issues and Controversies* ch 4 at 17.

99 See Blakeney *Legal Aspects of the Transfer of Technology to Developing Countries* at 53 and Benko *Economic Theory and Intellectual Property Rights* at 16–17.

100 See M Braunstein, WJ Baumol, and JW Mansfield 'The Economics of R & D' in B V Dean and J C Goldhar (eds) *Management of Research and Innovation* (John Wiley & Sons 1980) 19–32.

101 See F M Scherer *Industrial Market Structure and Economic Performance* (University of Chicago Press 1980) at 447.

102 Reichman 'Charting the Collapse of the Patent-Copyright Dichotomy: Premises for a Restructured International Intellectual Property System' 475 argues in this respect that patents and copyright should be restricted to the really desiring highly creative or innovative cases. Anything else in between should be protected by lead time only. When necessary (because of the speed at which copying—reverse engineering takes place in the new digital environment) that lead time can be created artificially.

103 See W Grosche 'Economic Aspects of Intellectual Property Rights, especially of Copyright' and A Strowel 'An Appraisal of the Economic Analysis of Copyright Law' in M Van Hoecke *The Socio-Economic Role of Intellectual Property Rights* (Story-Scientia 1991) 65–72 and 103–35 and R Watt *Copyright and Economic Theory: Friends or Foes?* (Edward Elgar 2000).

104 See Benko *Protecting Intellectual Property Rights: Issues and Controversies* ch 4 at 21 and 23.

that are common to all men. This would mean that creators can claim rights by the very fact of their creation. This is a broad statement and it is by no means clear that such rights are by definition Human Rights and that they must cover all creations and necessarily take the format of an exclusive right in such creations.¹⁰⁵ Further analysis is therefore warranted.

The first key provision in an international instrument that identifies copyright as a Human Right is found in Article 27 of the Universal Declaration of Human Rights.¹⁰⁶ According to Article 27 everyone has first of all 'the right to the protection of the moral and material interests resulting from scientific, literary or artistic production of which he is the author'. But it is equally important to note another element of the same article where it is stated in its first paragraph that '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'. Copyright will therefore have to strike a balance somewhere in the middle.

The second key provision in an international instrument that identifies copyright as a Human Right is found in the International Covenant on Economic, Social and Cultural Rights.¹⁰⁷ This Covenant is to be seen as a follow up action on the Universal Declaration of Human Rights. Important though is the fact that this follow up action took the form of a Treaty and that as such it can impose legally binding obligations to implement its provisions on States that became contracting parties to it. Article 15 of the Covenant is very clear in this respect and imposes a number of responsibilities and steps to be taken on Contracting States in the following way:

[. . .] (2) The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for the conservation, development and the diffusion of science and culture.

(3) The States Parties to the present Covenant undertake to respect the freedom indispensable for scientific research and creative activity.

(4) The States Parties to the Present Covenant recognize the benefits to be derived from the encouragement and development of international contacts and cooperation in the scientific and cultural fields.

These obligations apply to the substantive rights granted in paragraph one of Article 15 of the Covenant, which are very much based on Article 27 of the Universal Declaration of Human Rights. As such they comprise the rights of everyone (a) to take part in cultural life, (b) to enjoy the benefits of scientific progress and its applications and, most importantly for our current purposes, (c) to benefit from the protection of the moral and the material interests resulting from any scientific, literary, or artistic production of which he is the author. Once more the need for copyright to strike a balance emerges, but the identification of copyright, or at least certain aspects of it, as a human right is an additional justification for the existence of copyright.¹⁰⁸ It is not a complete justification though as it does not indicate where the balance lies and as such it is not able to justify each and every aspect of the current shape of copyright law.

Current economic importance of intellectual property

Our historical overview demonstrated that intellectual property rights were introduced because they were thought to be essential for further industrial and economic development. We will now try to analyse the current economic importance of intellectual property rights. It is submitted on the basis of indirect evidence that this importance is huge.

The recent GATT-WTO agreement contained the TRIPs initiative on intellectual property. This initiative was a reaction by the governments that were concerned by the complaints of industry. Figures pointing to multi-million dollar losses in royalties due to the counterfeiting of famous trade marks in countries which offered a low level of protection for intellectual property rights were published by industrial sources. One can understand and accept these figures on the basis that almost every product and almost every service nowadays bears a trade mark. In 1974 WIPO, the world intellectual property organization, estimated that four million trade marks were in use in the world¹⁰⁹ and there is every reason to believe that there are more trade marks in use now than in 1974. The recent

105 R Cassin 'L'intégration, parmi les droits fondamentaux de l'homme, des droits des créateurs des oeuvres de l'esprit' in *Mélanges Marcel Plaisant: Etudes sur la propriété industrielle, littéraire et artistique* (Sirey 1959) at 229 and M Vivant *Le droit d'auteur, un droit de l'homme?* 174 RIDA (1997) 60 at 87.

106 Adopted and proclaimed by the United Nations in 1948 as General Assembly resolution 217 A (III) of 10 Dec 1948, specifically in relation to copyright see JAL Sterling, *World Copyright Law*, 2nd edn (Sweet & Maxwell 2003) 43.

107 The International Covenant on Economic, Social and Cultural Rights, 993 UNTS 3, GA Res 2200(XXI) 21 UN GAOR Supp (No 16), 49, UN Doc A/6316 (1966) was adopted on 16 Dec 1966.

108 For a complete analysis on this point see P Torremans 'Copyright as a Human Right' in P Torremans (ed) *Copyright and Human Rights*, (Kluwer Law International 2004).

109 This figure is quoted by M Blakeney *Legal Aspects of the Transfer of Technology to Developing Countries* (ESC Publishing 1989) at 113 with a reference to the UNCTAD report 'The Role of Trade Marks in the Promotion of Exports from Developing Countries' (1981).

GATT-WTO agreement attaches great importance to the strengthening of the protection for trade marks and the other intellectual property rights, which clearly emphasizes their tremendous economic value.

The evolution to an economic system based on high technological developments has resulted in the proliferation of patents. Many of these patents have an enormous commercial value.¹¹⁰ Just think about the whole evolution in the field of genetic engineering. These disease resistant plants, purified seeds, and drugs produced by genetically engineered bacteria, all protected by patents, are the products of the future and the patentholders are cashing in. It is clear that there would be no incentive to invest huge resources in high technology research and developments if there was no prospect of recuperating the investment and obtaining a fair return on the investment on top of that if patent protection was not available, especially when one takes into account that not every research programme will lead to success.¹¹¹ One should also not forget the vast number of patents granted for relatively slight improvements upon the existing technology. They may not grab the headlines, but they have a tremendous importance in industry as they allow the improver to appropriate the results of his work and gain a competitive edge over his or her competitors who would otherwise, in a majority of cases, be able to reverse engineer the improvement at a fraction of the original cost.

What about the economic importance of copyright? Just imagine the range of products covered: books, compact discs, movies, television broadcasts, computer programs, multimedia products, etc. Copyright has become very wide in scope and a number of the new technological developments protected under copyright are of enormous commercial importance.

Add to that the business generated by the phenomenon of character merchandising which allows real and fictitious characters, such as pop stars and the likes of Popeye and Mickey Mouse, to earn more money by allowing others to market goods more easily because they are linked to these real or fictitious characters through a picture or a name than the amount they earn through their normal activities and you understand that the current economic importance of intellectual property is indeed huge. This is even more so because intellectual property is now involved in almost every aspect of our highly developed economic life with its strong emphasis on technological progress and brand names. Intellectual property is indeed pushed by market forces. The Marrakesh Agreement of the GATT, now WTO, led to many developing countries adopting stricter intellectual property protection regimes and saw an important expansion of the international intellectual property regime. Now attention is turning to a next step at WTO level in the direction of even stronger intellectual property protection, even if the economic impact of these current reforms is still the subject of a lively discussion.¹¹²

One could even argue that the original presumption in favour of free competition and the perception of intellectual property rights as exceptional rights whose grant was only appropriate in cases of exceptional, innovative, and creative activity no longer exists. This point of view accepts that industry now presumes that intellectual property protection will be available for every new product and every new development and sees full-scale free competition as the exception.¹¹³ It is clear that such a reversal of attitude cannot be encouraged unconditionally. Indeed, serious consideration should be given to the questions of overlap between intellectual property rights in the sense that recent expansion of rights has given rise on many occasions to several rights protecting the same thing. This aspect of convergence of rights aggravates the existing inflation of rights. Innovators and creators are increasingly unable to go about their business without taking out in advance a whole raft of licences. Is this not an aberration? Has the time not come to start thinking about cutting back the sometimes excessive scope of intellectual property rights and to reduce the overlap between the various rights? Maybe the Doha Round of WTO negotiations and its demands to reduce the impact of TRIPs in certain areas rather than expand on it is a sign that this is indeed the case and that continued and almost unlimited expansion of intellectual property rights is not the way forward.¹¹⁴ It is indeed clear on the basis of the analysis in this chapter that intellectual property rights should play a pro-competitive role if their existence is to be justified. Unduly wide and overlapping rights may well fail the test and therefore endanger the survival of the whole system of intellectual property and the beneficial role it plays in our economy.

¹¹⁰ See also G Parchomovsky and S Wagner 'Patent Portfolios' University of Pennsylvania Law School, Scholarship at Penn Law (2004), paper 51, available on line at <www.lsr.nellco.org/upenn/wps/papers/51>.

¹¹¹ See Pretnar 'The Economic Impact of Patents in a Knowledge Based Market Economy' 887.

¹¹² See in general K Maskus *Intellectual Property Rights in the Global Economy* (Institute for International Economics 2000) and for a practical example in one particular country and industry Madieha Azmi and Alavi, 'TRIPS, Patents, Technology Transfer, Foreign Direct Investment and the Pharmaceutical Industry in Malaysia' [2001] *The Journal of World Intellectual Property* 947.

¹¹³ R Merges 'The Economic Impact of Intellectual Property Rights: an Overview and Guide' conference paper delivered at the ICARE international conference on 'The Economics of Intellectual Property Rights' Venice, 6-8 Oct 1994 and see also Reichman 'Charting the Collapse of the Patent-Copyright Dichotomy: Premises for a Restructured International Intellectual Property System' (1995) 13 *Cardozo Arts & Ent LJ* 475.

¹¹⁴ See already in 1995 Reichman 'Charting the Collapse of the Patent-Copyright Dichotomy: Premises for a Restructured International Intellectual Property System' 475. Now even the judiciary starts to make comments in that sense, see *MGM and others v Grokster and Streamcast*, judgment of the United States Court of Appeals for the 9th Circuit of 19 Aug 2004, available on line at <www.ca9.uscourts.gov> (copyright infringement in a US context) and *Lambretta Clothing Co Ltd v Teddy Smith (UK) Ltd and another* [2004] All ER (D) 269, at para 41 per Jacob LJ (unregistered design right overlap in a UK context).

International intellectual property conventions

It has become clear in the course of this introduction that intellectual property is not necessarily exploited at a national level,¹¹⁵ it is in fact exploited at a global level. Video cassettes and CDs which contain materials protected by copyright are marketed in an increasing number of countries. Patents in CD technology were exploited wherever a CD pressing plant was built, until these rights expired recently. And the Coca-Cola trade mark is found on cans and bottles all over the world.

Inventors and creators would under these circumstances lose out if intellectual property regimes were completely different in each country. They would not get adequate protection and they would not be adequately rewarded for their work if intellectual property rights, based on the same principles and equally applicable to inventions and creations made abroad, were not available in each country in which the patent, trade mark or copyright is exploited. The whole economic justification theory would also collapse in such a case. A global economy presupposes a global intellectual property system.

Two types of international cooperation can be distinguished in this respect. First there are the treaties and conventions laying down minimum uniform provisions and standards of protection.¹¹⁶ They recognize that each country will have its own intellectual property laws, but they harmonize the minimum standards and the basis underneath all these laws and they also secure protection under these laws for works of foreign inventors and creators or for works created abroad. Anti-counterfeiting initiatives are also part of this category, as they link in with global minimum standards of protection and their effective enforcement.

These treaties and conventions still require an inventor or creator to register in each country in which protection is sought. Only copyright, which, as we shall see, does not have a registration requirement, is an exception to this rule. The second category of treaties and conventions operates at this level. Many of them involve a single application and examination procedure or at least a certain level of cooperation between the national intellectual property authorities in this area. The more advanced types of measures provide for uniform provisions in the various national intellectual property laws or at least for a thorough harmonization of these provisions. Many of these more advanced measures are found in Europe.¹¹⁷

We will now give an overview of the various treaties, conventions, and other measures.¹¹⁸

Patents

In the patent area the minimum international rules are found in the Paris Convention for the Protection of Industrial Property which was signed in 1883, but which has been updated by later Acts. The Convention has been implemented in the states adhering to the Convention by means of national Patent Acts. One hundred and sixty-eight states now adhere to the Paris Convention.¹¹⁹ The impact of the Paris Convention was enlarged even further by the TRIPs Agreement. Article 2 of that agreement obliges all contracting states to comply with the main substantive provisions of the Paris Convention, even if they are not members of it. This guarantees a coverage that is virtually worldwide in scope, since very few countries will be able to afford staying outside the WTO administered system, of which TRIPs forms part. On top of that the TRIPs Agreement contains further and tighter substantive minimum rules in relation to patents in Articles 27 to 34.

Normally an applicant files a separate patent application in each country where he or she intends to work the invention or desires protection for it. This was felt to be a complicated procedure, because the details are different in each country, and a waste of time and effort. The Patent Co-operation Treaty (Washington 1970, (PCT)) provides for the filing of a single application and also provides a facility for a preliminary international search for the requirements for patentability. One hundred and twenty-four states adhere at present¹²⁰ to the PCT.

Patents are also an important source of technological information. If the patent system is to fulfil this role adequately at an international level a uniform system of classification is necessary. An invention must also be new if a patent is to be granted for it. This can only be tested by means of a well-structured patent register. This classification system is contained in the Strasbourg Convention on the International Classification of Patents¹²¹ (Strasbourg 1971, IPC).

¹¹⁵ All historical arguments refer to more than one country and the economic justification theory is not restricted to a particular national market.

¹¹⁶ This is of course a second-best solution, but the best solution, uniform intellectual property laws, is clearly not available in practice.

¹¹⁷ It is also worth mentioning the initiatives taken by a large group of South American countries, the Andean Group as they call themselves. It would lead us too far though to discuss these measures in this book, in which we are primarily concerned with UK and European law.

¹¹⁸ For the text of these instruments see J Phillips (Consultant Ed) *Butterworths Intellectual Property Law Handbook*.

¹¹⁹ Figure correct on 15 July 2004.

¹²⁰ Figure taken on 1 Jan 2004.

¹²¹ On 15 July 2004 54 states had signed up to this convention.

Finally, an attempt has been made to streamline national patent procedures by means of the Patent Law Treaty (Geneva 2000), which is likely to come into force in the next few years once it will have attracted a sufficient number of ratifications.¹²²

Trade marks

The minimum rules for trade marks are also contained in the Paris Convention. The TRIPs Agreement has added to that,¹²³ apart from requiring all its contracting states to comply with the substantive provisions of the Paris Convention.

The international exploitation of a trade mark is facilitated by the Madrid Agreement Concerning the International Registration of Marks (Madrid, 1892). Registration in one state that is a signatory to the Madrid Agreement gives a person the right to file a single application for registration in any other signatory country designated in the application. A separate application in each state is no longer required. Some states, including the UK, could not accept some of the provisions of the Madrid Agreement. They joined the system only through the Protocol to the Madrid Agreement, signed in Madrid in 1989.¹²⁴ There are a number of differences on substance between the Agreement and the Protocol.¹²⁵ A further attempt to harmonise the procedural aspects of a trade mark application is made in the Trade Mark Law Treaty (Geneva 1994).

A uniform classification system for trade marks, based on classes for goods and services and lists of goods and services that fall in each of the classes, is provided by the Nice Agreement Concerning the International Classification of Goods and Services for the Purposes of the Registration of Marks (Nice 1861, last revised in Geneva in 1977)¹²⁶ and the Vienna Agreement Establishing an International Classification of the Figurative Elements of Marks (Vienna 1985).¹²⁷ The latter deals with device marks.

As in the area of patent law there is also a treaty harmonising the procedures before the national trade mark registries. The Trade Mark Law Treaty was signed in Geneva in 1994 and has been ratified by 32 states.¹²⁸

Design rights

This is the third area covered by the Paris Convention and the TRIPs agreement. An industrial design can be deposited internationally and will attract protection in all Member States of the Hague Agreement Concerning the Deposit of Industrial Designs (The Hague, 1925). Thirty-eight states now¹²⁹ adhere to this system and the provisions of this Agreement have recently been updated by the Geneva Act of the Hague Agreement Concerning the Deposit of Industrial Designs (Geneva 1999), which entered into force on 23 December 2003 and currently attracts 15 contracting states. An international uniform classification for industrial designs was established in Locarno, in the Locarno Agreement Establishing an International Classification for Industrial Designs (in force since 1970).¹³⁰

Copyright

The most important international convention in the copyright area is the Berne Convention for the Protection of Literary and Artistic Works (Berne 1886, latest Act is the Paris Act). This Convention is to copyright what the Paris Convention is to industrial property rights. One hundred and fifty six states are now members of the Berne Union.¹³¹ A competing Universal Copyright Convention (Geneva 1952, revised at Paris in 1971, UCC) was promoted by UNESCO, but lost most of its importance when its most influential member state, the US, joined the Berne Convention. This effect is now reinforced by the fact that the TRIPs Agreement requires its contracting states to comply with most of the provisions of the Berne Convention.¹³² Further substantive provisions are found in Articles 9–14 of the TRIPs Agreement and yet further measures to take account of the new developments in

¹²² As of July 2004 eight countries have deposited their instrument of ratification. Two more are needed for the Treaty to enter into force.

¹²³ Arts 15–21.

¹²⁴ On 15 July 2004, 77 states adhered to the Madrid system, 56 of them have ratified the Agreement, and 66 the Protocol. The European Union and its Community Trade Mark system have now also adhered to the system.

¹²⁵ See below in the trade marks chapters; see also G Kunze 'The Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks' [1992] 82 The Trademark Reporter No 1 and 'The Madrid System for the International Registration of Marks as Applied under the Protocol' [1994] 6 EIPR 223–6.

¹²⁶ On 15 July 2004 72 states adhered to this Agreement.

¹²⁷ On 15 July 2004 19 states adhered to this Agreement.

¹²⁸ Figure taken on 16 July 2004.

¹²⁹ Figure taken on 15 July 2004.

¹³⁰ On 15 July 2004 there were 44 Member States.

¹³¹ Figure taken on 26 July 2004.

¹³² Not with those on moral rights though: see Art 9.

copyright are found in the WIPO Copyright Treaty (Geneva, 1996),¹³³ which is closely linked to the Berne Convention as a special treaty under Article 20 of that Convention.

The rights of performers, recorders and broadcasting organizations required supplementary protection. In this respect the most important Convention is the Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations (Rome 1961).¹³⁴ The WIPO Performances and Phonograms Treaty (Geneva, 1996)¹³⁵ provides major improvements in this area and entered into force on 20 May 2002.

All conventions, treaties, agreements, and protocols described above are administered by the World Intellectual Property Organization (WIPO) with headquarters in Geneva.¹³⁶ International registrations are dealt with by its International Bureau. The UCC forms an exception to this system.

As part of the Uruguay Round of world trade negotiations, the GATT (now WTO) contracting states reached an agreement on the TRIPs initiative. Its aim was to impose worldwide minimum terms for the protection of intellectual property. This system does not replace the existing conventions, but it works in addition to them. It obliges those countries which do not yet protect intellectual property to introduce that protection if they do not want to be excluded from the world free trading system and from membership of the World Trade Organization (WTO), which runs the system. The old system worked on an entirely voluntary basis. The standards of protection introduced by the TRIPs initiative are also slightly higher than the minimum standards contained in the old conventions, as was seen above.

European initiatives

The creation of a single European market based on the principle of free competition required a further substantial harmonization of intellectual property provisions. The rather loose international cooperation on a standard basis of minimal rules was not sufficient.

Patents

In Europe cooperation in the patent area was taken further. The European Patent Convention (Munich 1973, EPC) provides a system comprising a single patent application and search. This is carried out by the European Patent Office in Munich, which started working on 1 June 1978. At the end of the procedure the applicant is granted a bundle of national patents, one for each Member State indicated in the application. The EPC is not an initiative of the European Union, other European countries such as Switzerland, Turkey and Liechtenstein adhere to it as well.¹³⁷

The European Community wanted to go further and replace the bundle of national patents at the end of the granting procedure by a single Community patent. This was the aim of the Community Patent Convention signed at Luxemburg in 1975.¹³⁸ The Convention never entered in force. At present attempts are under way to revive the project as an EU Regulation. The European Patent Office would administer the new scheme, but a final agreement is held up by issues concerning the use of languages.¹³⁹

Other initiatives of the Community relate to pharmaceutical inventions and inventions relating to plant protection products where the term of protection was extended by means of the introduction of a Supplementary Protection Certificate for Pharmaceutical Products¹⁴⁰ and a Supplementary Protection Certificate for Plant Protection Products¹⁴¹ and to biotechnological inventions.¹⁴²

¹³³ This treaty entered into force on 6 Mar 2002 and as of 12 August 2004 there are 48 contracting states.

¹³⁴ On 12 Aug 2004, 78 states had adopted this Convention.

¹³⁵ On 12 Aug 2004 there were 44 contracting states.

¹³⁶ We do not discuss plant variety rights in this book, please refer to the International Convention for the Protection of New Varieties of Plants (the UPOV Convention); in the biotechnology area the Budapest treaty on the International Recognition of the Deposit of Micro-organisms for the Purpose of Patent Procedure, in force since 1980, is also relevant.

¹³⁷ At the time of writing there were 28 Member States and a revised version of the EPC has been agreed on 29 Nov 2000 and is awaiting ratification.

¹³⁸ See Convention for the European Patent for the Common Market (Community Patent Convention) (1989) OJ L401/10.

¹³⁹ See the Commission Proposal for a Council Regulation on the Community Patent (2000) OJ C337/278, COM (00) 412 final. The most recent draft dated 8 Mar 2004 is available from the Commission's website at <www.europa.eu.int/comm/internal_market/en/indprop/patent/index.htm>.

¹⁴⁰ EC Council Regulation 1768/92 concerning the creation of a supplementary protection certificate for medicinal products (1992) OJ L182/1.

¹⁴¹ EC Parliament and Council Regulation 1610/96 concerning the creation of a supplementary protection certificate for plant protection products (1996) OJ L198/30.

¹⁴² After a first attempt to get a Directive approved failed, the Commission made a second attempt. This led eventually to the adoption of Directive 98/44/EC of the European Parliament and the Council of 6 July 1998 on the legal protection of biotechnological inventions (1998) OJ L213/13.

At the lower end of the innovation scale some form of protection is planned for inventions that do not qualify for full patent protection. The utility model that is currently proposed should provide that protection.¹⁴³

The European Union has also adopted a special registration system for plant varieties that operates separate from the patent system and is in line with the international UPOV Convention.¹⁴⁴ And at present discussions are under way to agree on a Directive on the patentability of computer-implemented inventions.¹⁴⁵

Trade marks

The Community acted on two levels. The national Trade Mark laws of the Member States have been harmonized by means of a Directive¹⁴⁶ and a Community Trade Mark has been created by means of a Regulation.¹⁴⁷ This latter system is in force since 1996, with far greater success than expected, and provides a single Trade Mark for the Community as a whole. The Community Trade Mark Office, which is officially called Office for Harmonization in the Internal Market (trade marks and designs), is located in Alicante, Spain.

Industrial designs

The Community undertook the same action in this area as the one taken in relation to trade marks: harmonization of the national design laws by means of a Directive and a single Community Design Right by means of a Regulation. The difficult issue of spare parts and a repair clause made negotiations very cumbersome, but eventually a Directive was agreed in October 1998.¹⁴⁸ Shortly afterwards agreement on a Regulation on Community Design¹⁴⁹ was reached and the Alicante Office (OHIM) was able to extend its role from a mere Community trade mark office to a Community trade mark and design office in January 2003.

Copyright

The Community has up to now refrained from making an attempt to harmonize copyright as a whole. Only certain aspects of copyright, such as the term of copyright protection have been harmonized.¹⁵⁰

A number of areas have received special attention: computer programs,¹⁵¹ rental rights and lending rights,¹⁵² satellite broadcasting and cable retransmission,¹⁵³ and databases.¹⁵⁴ And a new Directive is now harmonizing certain aspects of copyright and related rights in the Information Society.¹⁵⁵ The implementation of that Directive should enable the EU to accede to the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty soon, especially as Member States have undertaken to legislate timely to meet the provisions on moral rights for performers which are not retained in the Directive.¹⁵⁶ Although not of the same importance and dealing with a small point in copyright law agreement on the Directive to harmonize the provisions on *droit de suite* was only reached after heated debates and its implementation in UK law will be delayed until 2010.¹⁵⁷ At the time of writing the Commission was focusing its attention on the management of copyright and related rights on the one hand and on a review of the *acquis communautaire* in the area of copyright and related rights. Both are the subject of consultation procedures, but no new legislative initiatives have yet emerged.

Enforcement of intellectual property rights

Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights attempts to streamline the enforcement mechanisms of the Member States and to

143 See now the Amended Proposal for a European Parliament and Council Directive approximating the legal arrangements for the protection of inventions by utility model (2000) OJ C248/56, COM (99) 309 final; see below Ch 6. This proposal is now likely to be linked to that on the Community Patent, if it is ever to be revived at all. Strong opposition remains against any form of Utility Model at EU level.

144 Council Regulation (EC) 2100/94 of 27 July 1994 on Community plant variety rights (1994) OJ L227/1, as amended.

145 Proposal for a Directive of the European Parliament and of the Council on the patentability of computer-implemented inventions COM(2002) 92 final dated 20 Feb 2002 (2002) OJ C 151/129.

146 First Council Directive to approximate the laws of the Member States relating to trade marks (1989) OJ L40/1.

147 Council Regulation (EC) 40/94 on the Community Trade Mark (1994) OJ L11/1.

148 Directive 98/71/EC of the European Parliament and of the Council of 13 October 1998 on the legal protection of designs (1998) OJ L289/28.

149 Council Regulation 6/2002 on Community Designs (2002) OJ L 3/1.

150 EC Council Directive 93/98 harmonizing the terms of protection of copyright and certain related rights (1993) OJ L290/9.

151 Council Directive 91/250 on the legal protection of computer programs (1991) OJ L122/42.

152 Council Directive 92/100 on rental rights and lending rights related to copyright in the field of intellectual property (1992) OJ L346/61.

153 Council Directive 93/83 on the coordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmission (1993) OJ L248/15.

154 Parliament and Council Directive 96/9 on the legal protection of databases (1996) OJ L77/20.

155 [2001] OJ L167/10.

156 See COM (97) 193.

157 Directive 2001/84/EC of the European Parliament and of the Council of 27 Sept 2001 on the resale right for the benefit of the author of an original work of art [2001] OJ L 272/32.

achieve a common minimum standard. The Directive covers all intellectual property rights and Member States have until 29 April 2006 to bring their national legislation into line with it.¹⁵⁸

Miscellaneous

The Community has also adopted measures in the areas of counterfeiting,¹⁵⁹ topographies of semiconductor chips,¹⁶⁰ comparative advertising,¹⁶¹ and electronic commerce.¹⁶² And a short Directive dealing with the legal protection of conditional access services was also adopted on 20 November 1998.¹⁶³

An overview

Intellectual property rights play an important role in economic life in this age of technological innovation. Their existence can be justified on an economic basis, with other factors offering further support. Intellectual property rights are also international in character and in that respect they fit in rather well with the economic reality of the global economy. We now turn to the detailed examination of each of the separate intellectual property rights.

¹⁵⁸ Directive 2004/48/EC of the European Parliament and of the Council of 29 Apr 2004 on the enforcement of intellectual property rights [2004] OJ L195/16. For a critical view on the original Commission proposal see WR Cornish, J Drexler, R Hilty, and A Kur, 'Procedures and Remedies for Enforcing IPRS: The European Commission's Proposed Directive' [2003] EIPR 447 (supported by a large number of academics amongst which this author).

¹⁵⁹ Council Regulation 3842/86 laying down measures to prohibit the release for free circulation of counterfeit goods (1986) OJ L357/1, now replaced by Council Regulation 3295/94 laying down measures to prohibit the release for free circulation, export, re-export or entry for a suspensive procedure of counterfeit and pirated goods (1994) OJ L341/8.

¹⁶⁰ Council Directive 87/54 on the legal protection of topographies of semiconductor products (1987) OJ L24/36.

¹⁶¹ Parliament and Council Directive 97/55 amending Directive 84/450 on misleading advertising (1997) OJ L290/18.

¹⁶² Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (2000) OJ L178/1.

¹⁶³ (1998) OJ L320/54; Conditional access services are typically only available through the use of a decoder or upon payment of a fee. The number of these services that is available on the internet is increasing rapidly.