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Intellectual property through the lens of human development

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[T]he legal regime of intellectual property has insinuated itself more deeply into our lives and more deeply into the framework of international law, affecting everything from the recreational home user's ability to share music, to the farmer's ability to replant seed, to the production and distribution of life-saving drugs. Indeed, with full compliance to the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement now required (as of January 1, 2005) in all but the world's very least developed countries, intellectual property law becomes literally a question of life or death. Despite these real world changes, intellectual property scholars increasingly explain their field through the lens of economics. (Sunder 2006, p. 261)

Introduction

Intellectual property rights (IPRs) intersect with many vital areas of human well-being and development. From access to medicines, food, education and the arts, through to the preservation of cultural heritage, there are few human endeavours untouched by intellectual property (IP). As knowledge-based economies rapidly expand in our information age, the need for balance between private rights and the public interest over intangible creations becomes ever more pertinent. There are divided views, meanwhile, on how and if IP can advance the public interest. Sir Hugh Laddie (2002) wrote in his foreword to the seminal report of the Commission on Intellectual Property Rights (CIPR) on *Integrating Intellectual Property Rights and Development Policy*:

On the one side, the developed world side, there exists a powerful lobby of those who believe that all IPRs are good for business, benefit the public at large and act as catalysts for technical progress. They believe and argue that, if IPRs are good, more IPRs must be better. On the other side, the developing world side, there exists a vociferous lobby of those who believe that IPRs are likely to cripple the development of local industry and technology, will harm the local population and benefit none but the developed world. They believe and argue that, if IPRs are bad, the fewer the better. The process of implementing TRIPS has not resulted in a shrinking of the gap that divides these two sides, rather it has helped to reinforce the views already held... So firmly and sincerely held are these views that at times it has appeared that neither side has been prepared to listen to the other. Persuasion is out, compulsion is in. (Ibid., p. iii)

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¹ This chapter is dedicated to the memory of Sir Hugh Laddie (1946–2008). I am grateful to many for their review and invaluable comments on earlier drafts of this chapter, especially Margaret Chon, David Clark, Claire Comfort, Graham Dutfield, Brett Frischmann, Sakiko Fukuda-Parr, Michael Gollin, Hans Haugen Morten, Richard Ponzio, Tim Scott and David Wong.



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Fervent debate continues over the socio-economic impacts of IP, generating increased public awareness of these issues and at least some notable legal reforms. Increasingly drawn into the debate are a spectrum of individuals and communities who grapple with IP in many different ways. Some are uncertain about their rights whether as IP holders or as users of material which might be under IP protection. Others seek to inform themselves further on the social dimensions of IP – in a field marked by the lack of reliable empirical evidence on the economic impacts of IP, the social dimensions are even more opaque and harder to gauge. Yet others are only beginning to explore how IPRs have come to pervade and circumscribe their daily lives in palpable ways.² In addressing these social and legal dimensions, this study explores how the social impact of IP might be approached and evaluated more systematically.

What developments have there been in the law, along with calls for reforms, since the publication of the CIPR report almost a decade ago? The various chapters in this book try to trace some of those developments. Notably, at the behest of developing countries and civil society organizations, a 'Development Agenda' has emerged at the World Intellectual Property Organization (WIPO).³ This agenda brings to focus many continuing socio-economic concerns that developing countries have in relation to IP, and is intended to mainstream development into WIPO's work. That the path of adopting and evolving such an agenda has been jagged reveals, however, many challenges ahead in reconciling the socio-economic agendas and cultural interpretations that diverse stakeholders bring to a discussion on IP and development. While a 2008 report by the International Expert Group on Biotechnology, Innovation and Intellectual Property (IEGBIIP) heralds a 'new era of IP collaboration' - in contrast to the 'Old IP' era, said to be waning and 'out of sync with the level and types of innovation' socially needed - many challenges lie ahead in finding the right social equilibrium for IP.4

Importantly, new - though some might say 'old' - questions have been raised on the very models of development that continue to inform IP policies. Chon (2007, p. 476) observes that 'recent debates within international intellectual property law reveal a development divide - not only a divide between developed and developing countries according to their material well-being, but also a divide in understanding development as growth contrasted with development as freedom'. In other

² This is framed positively on WIPO's virtual tour of 'IP in Everyday Life' at http://www.wipo.int/

about-ip/en/athome.htm (accessed 1 May 2009). 3 WIPO member states finally adopted in September 2007 a Development Agenda, consisting of a series of recommendations to enhance the development dimension of the Organization's activities. For background on the Development Agenda and related proposals, see http://www.wipo. int/ip-development/en/agenda/ (accessed 15 January 2010); for some history and implications of WIPO's work on the Development Agenda, see Halbert 2007; de Beer 2009; New 2009. See also Chapter 9 of this book.

⁴ See International Expert Group on Biotechnology, Innovation and Intellectual Property (IEGBIIP) 2008, 'Toward a new era of intellectual property: From confrontation to negotiation', Montreal, Canada, September 2008 ('IEGBIIP Report 2008'), p. 13. See p. 2 of the report for the composition of the expert group, led by principal investigator Richard Gold from the Faculty of Law, McGill University, Canada.



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words, the debate surrounds the very understanding of development itself. Within an 'economic growth' model for development, IPRs are often assumed to play a crucial role as an engine of growth and innovation in a country as well as a conduit for foreign investment and technology transfer (see CIPR 2002, pp. 20–26; Straus 2008). It is not uncommon to encounter descriptions of IP or forms of IP (e.g. patents or copyright) as the 'engine of growth' (Idris 2003) or the 'engine of development' (Oman 2000).⁵ Such literature suggests IP protection as an essential driver or even pre-condition of economic growth and development in a country. These viewpoints remain powerful in shaping IP policies at many national and international forums, even though the empirical evidence connecting IP protection and economic development is mixed and inadequate (CIPR 2002; Chon 2006; IEGBIIP 2008). Economic studies have yielded ambivalent results on these connections, not least because it is often difficult to separate out the impact of IP from other intertwined factors relating to an economy. Economists themselves differ in their views on the linkages between IP and economic development. Surveying the existing economics literature on IP, Maskus (2008, p. 500) observes that:

There are multiple relationships in principle between intellectual property protection and economic development, most of them complex and difficult to measure. Despite extensive literature on the subject, much of the available evidence is anecdotal and may be interpreted in various ways.⁶

What seems less debatable is that similar levels of IP protection will have differential socio-economic impact, depending on the stage of development and cultural contexts of countries (United Nations Development Programme [UNDP] 2001; Ostergard 2007; Maskus 2008). Thus, the evolving Development Agenda at WIPO is an opportunity for countries to nuance their engagement with IP according to many more considerations, including meeting basic needs in food and health, increasing capabilities for education, attaining human rights, protecting cultural heritage and sustaining the environment for future generations. In exploring these and other dimensions of development, this book highlights 'human development' as a particularly useful framework for broaching social and legal reforms around IP.8 Central to the human development paradigm is the work of economist and Nobel laureate Amartya Sen since the 1980s on the 'capability approach' to development (Sen 1987, 1999). The human development paradigm views the expansion of 'human

⁵ For further examples, see IPcentral Weblog, 'IP as the Engine of Economic Growth' (7 November 2005), available at: http://weblog.ipcentral.info/archives/2005/11/ip_as_the_engin_1.html (accessed 20 March 2010).

While noting that some of the earlier empirical studies (e.g. Gould & Gruben 1996) on positive correlation between strong IPRs and economic growth may hold true for advanced, industrialized countries, Ostergard (2007) attempts to show through economic modelling that this relationship may actually prove negative for those developing countries which lack strong capacity for domestic R&D. For a recent review of literature in this area, see Chatterjee, S., David, J. Deng, F., Dippon, C. & Lopez, M. 2008, 'Worldwide: Intellectual Property Rights in Developing Countries', available at: http://www.mondaq.com/article.asp?articleid=57856 (accessed 5 July 2009).

On differential impacts of IPRs on developed and developing countries, see further Park & Ginarte 1997. See the discussion in Dutfield & Suthersanen 2007, pp. 3–12.



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capabilities' (discussed in Section 3) and genuine choices as an important goal of development policies. It draws attention, for example, to questions of social justice and empowerment that may present blind spots in pure income measures of development. Although its application to innovation and IP is more recent, the human development perspective is not new to policymakers. National human development reports have been produced by more than 140 countries, and particular themes have been tackled in the regional and global reports of the United Nations Development Programme (UNDP). Along with Sen's capability approach, some aspects of the 'basic needs' approach to development from the 1970s have also been influential in the human development literature and policies (Haq & Jolly 2008). Some of the essential elements of the human development paradigm are reflected in the following passage from the UNDP *Human Development Report 2001*:

Human development is about much more than the rise or fall of national incomes. It is about creating an environment in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests. People are the real wealth of nations. Development is thus about expanding the choices people have to lead lives that they value. And it is thus about much more than economic growth, which is only a means – if a very important one – of enlarging people's choices... Fundamental to enlarging these choices is building human capabilities – the range of things that people can do or be in life. The most basic capabilities for human development are to lead long and healthy lives, to be knowledgeable, to have access to the resources needed for a decent standard of living and to be able to participate in the life of the community. Without these, many choices are simply not available, and many opportunities in life remain inaccessible. (UNDP 2001, p. 9)

It has been suggested that 'there can be as many human development dimensions as there are ways of enlarging people's choices', and that key parameters of human development can evolve over time and vary both across and within countries. The concept of human development itself is also subject to revision and rethinking to meet new challenges. While it is impossible to embrace the entire spectrum of subject areas pertaining to human development and IP in one book, the following chapters address in detail the main topics of health, food security, access to education, implications of new technologies, protecting bio-cultural heritage and promoting cultural diversity and the arts. Some cross-cutting themes, such as gender equality and climate change, are addressed in sections within chapters.

⁹ See UNDP webpage, 'Human Development Reports', available at: http://hdr.undp.org/en/reports/ (accessed 15 March 2010). See the discussion in Ponzio 2008; Fukuda-Parr 2008.

⁽accessed 15 March 2010). See the discussion in Ponzio 2008; Fukuda-Parr 2008.

10 UNDP, 'Origins of the human development approach', available at: http://hdr.undp.org/en/humandev/origins/ (accessed 15 January 2010). The succession of Human Development Reports (HDR) produced by UNDP since the 1990s – with topics as diverse as 'new technologies' (UNDP 2001), 'cultural liberty' (UNDP 2004), 'climate change' (UNDP 2007) and 'human mobility' (UNDP 2009) – testify to the broad range of potential subject matter within the umbrella of human development. See also Fukuda-Parr 2003a, 2003b.

¹¹¹ This is an important topic explored in the (forthcoming) UNDP *Human Development Report* 2010, 'Twentieth Anniversary Edition: Rethinking Human Development', see http://hdr.undp.org/en/reports/global/hdr2010/ (accessed 1 February 2010).



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This introductory chapter aims to provide some background on IP, while highlighting key human development concerns. Section 1 touches on the nature of IPRs and explores the increasing breadth of subject matter coming under the various forms of IP protection. Section 2 discusses common rationales for protection of IPRs such as copyright and patents, along with some historical trends. Section 3 then sketches some of the basic ideas in the capability approach to human development and explores their potential relevance within the IP context. The capability approach is only one aspect of the human development paradigm and does not exclude other ways of viewing development. Section 4 highlights some important perspectives intertwined with human development, bringing to the fore human rights considerations that increasingly overlap with IP debates. Some questions are then posed in the conclusion for further thought as the reader ventures into other chapters of this book.

1. The expanding matrix of intellectual property rights

Intellectual property refers to a class of legal rights which typically protect intangible creations of the mind. It was only in the twentieth century that the term 'intellectual property' became used generically to refer to a 'group of legal regimes which began their existence independently of each other and at different times in different places' (Drahos 1996, p. 14; see also Tansey 2008, p. 11). While many think of patents, copyrights and trademarks when discussing IP, there are various other regimes governing IPRs such as trade secrets, geographical indications, plant variety protection (PVP), industrial designs and utility models. Though working quite independently of one another, albeit with increasing subject-matter overlap, these property regimes together encompass all kinds of intangible elements, including 'inventions' in almost any field imaginable, expressions on any topic in any medium, databases, reputations and, indeed, ideas.

A non-exhaustive description of various forms of IPRs is found in Box 1.1. There is significant variation in the kinds of subject matter covered by the many forms of IPRs, the nature of the rights granted, the conditions for exercise of the rights (or how the rights are infringed), and the exemptions or privileges retained for the public in terms of access to the intangible elements protected and their physical embodiments (such as drugs, books and branded goods). Although it is impossible to touch on all of these aspects in this introduction, a few points will be highlighted here about the nature of IPRs and the expanding subject matter of IP protection. Various chapters in this book delve with more detail into particular forms of IPRs. This introductory chapter focuses mainly on patents and copyright.

It has been said that information is by nature non-rivalrous and non-excludable. By treating certain embodiments or applications of information as private property, IP laws effectively 'parcel' information and enable the rights owners to prevent others from handling and commercially exploiting the information in certain ways without their permission. As Cornish and Llewelyn note, 'the right-owner does not need the right in order to exploit a market for its goods and services: a patent is not a pre-condition to exploiting one's own invention' (2003, p. 6). Since IPRs are 'rights to stop others doing certain things', it is said that they are essentially



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BOX 1.1. Some types of intellectual property rights¹²

Copyright: Copyright protection covers a broad range of literary and artistic works such as novels, poems, plays, mimes, dance, songs, films, drawings, paintings, photographs, sculptures, architectural designs and multimedia productions. Computer programs now fall within copyright protection under the category of 'literary works' (TRIPS Agreement, Article 10(1)). It has been said that copyright 'prevents unauthorised reproduction, public performance, recording, broadcasting, translation, or adaptation, and allows the collection of royalties for authorised use' of protected works (CIPR 2002, p. 13). Copyright 'only prevents copying, not independent derivation' (ibid.). The general rule is that copyright protects 'expressions of ideas' but not the ideas themselves. The expression involved has to pass a test of 'originality', which is not defined in the Berne Convention on Literary and Artistic Works ('Berne Convention') and which is interpreted differently in different jurisdictions. There are no formalities for copyright subsistence in countries which are signatories to the Berne Convention. Articles 9 to 14 of the current 1971 version of the Berne Convention leave some discretion as to what acts may be defined as infringement under national laws. National statutes usually lay down a list of acts which would infringe copyright, along with provisions dealing with exceptions or defences to infringement. The Berne Convention provides for a minimum copyright term of author's life plus 50 years (Article 7(1); Article 7(6)). Different rules apply for pseudonymous and anonymous works (Article 7(3)), works of joint authorship (Article 7 bis), cinematographic works (Article 7(2)), photographic works and works of applied art (Article 7(4)). Copyright can be assigned and licensed in most jurisdictions. Along with copyright, most countries also recognize moral rights, although to varying extents (see definitions in Chapter 5 and 8).

(Source: CIPR 2002, p. 13; Berne Convention (Paris Act, 1971); see further Chapters 5-8)

Related Rights: The purpose of related rights is 'to protect the legal interests of certain persons and legal entities who contribute to making works available to the public; or who produce subject matter which, while not qualifying as works under the copyright systems of all countries, contain sufficient creativity or technical and organizational skill to justify a copyright-like property right' (WIPO 2005a, p. 18). Related rights are known as 'neighbouring rights' in some jurisdictions. The law of related rights 'deems that the productions which result from the activities of such persons and entities merit legal protection in themselves, as they are *related* to [or neighbouring on] the protection of works of authorship under copyright' (ibid. pp. 18–19). As generally understood, there are three kinds of related rights: the rights of performing artists in their performances, the rights of producers of phonograms in their phonograms, and the rights of broadcasting organizations in their radio and television programmes (WIPO 2004, p. 46). Some laws make clear, however, that 'the exercise of related rights should leave intact, and in no way affect, the protection of copyright' (WIPO 2005a, p. 19).

(Source: WIPO 2004, p. 46; WIPO 2005a, pp. 18-22; see further Chapters 7 and 8)

Trade Secrets: Trade secrets are one of the oldest forms of IP around. Gollin (2008, p. 67) notes that in IP law, 'a trade secret is any information used in the operation of a business that is sufficiently valuable and secret to give an actual or potential economic advantage over others'. Trade secrets usually consist of commercially valuable information about production methods, business plans and clientele (CIPR 2002, p. 13). They are protected as long as they remain secret, by laws which prevent acquisition by commercially unfair means and unauthorized disclosure (ibid.). Examples include customer lists, financial information and secret formulas like the recipe for Coca-Cola (Gollin 2008, p. 67). To benefit from legal protection, the owner

¹² This compilation incorporates text from the listed sources and comments from Claire Comfort and Joshua Sarnoff.



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must usually take reasonable measures to keep the information secret, such as through confidentiality agreements (ibid.). Such requirements vary with jurisdictions.

(Source: CIPR 2002, p. 13; Gollin 2008, pp. 67-69)

Patents: A patent may be granted for a product or process which constitutes an 'invention' and meets specific requirements under national laws. Article 27 of the TRIPS Agreement provides that 'patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application' (Article 27(1)). A patent confers exclusive rights on the owner to prevent others from making, using, offering for sale, selling or importing for these purposes the product under patent, without the owner's consent (Article 28(1)(a)). Normally, a process patent extends such control also to the use, offer for sale, sale or importation of the products directly obtained by that process (see Article 28(1)(b)). The patent is granted for a fixed period of time (Article 33 of the TRIPS Agreement stipulates 20 years minimum from filing date). In return, society requires that the patent applicant disclose the invention in a manner that enables others to put it into practice. Along with sufficient disclosure of the invention, there are typically three basic requirements (although details differ from country to country) that determine the patentability of an invention: novelty (new elements or features that are not in the 'prior art'), non-obviousness (a sufficient inventive step for one skilled in the field), and utility (as used in the US) or industrial applicability (as used in most other countries). Unlike infringement of copyright, imitation is not always necessary for there to be a patent infringement. There are, however, usually exemptions from infringement for certain uses of patented products and processes, for example, in the case of experimental use.

(Source: CIPR 2002, p. 12; TRIPS Agreement; see further Chapters 2-4)

Utility Models: While not as widespread as patents, utility models (known as petty patents, innovation patents or utility innovations in some jurisdictions) are also used to protect inventions.¹³ Utility models are similar to patents, but tend to confer rights of shorter duration to certain kinds of small or incremental innovations. They are usually sought for technically less complex inventions (e.g. in the mechanical field) or for inventions that have a short commercial life. The substantive requirements for acquiring protection for a utility model are [usually] less stringent than for patents, and vary with countries. While the 'novelty' requirement must always be met, the requirements of 'inventive step' or 'non-obviousness' may be much less stringent than for patents or absent altogether. In practice, protection for utility models is often sought for innovations of a rather incremental nature, which may not meet the patentability criteria. The procedure for obtaining protection for a utility model is often shorter and simpler than for a patent, with generally lower fees for obtaining and maintaining the right.

(Source: WIPO 2005b, pp. 8–9; see further Suthersanen, Dutfield & Chow 2007).

Industrial Designs: An industrial design, in general terms, is the ornamental or aesthetic aspect of a useful article. This aspect may depend on the shape, pattern or colour of the article. In a legal sense, industrial design refers to the right granted in many countries, pursuant to a registration system, to protect the original, ornamental and non-functional features of a product that result from design activity. Industrial designs can generally be protected if they

(continued)

¹³ Utility models are found in the laws of more than thirty countries, as well as in the regional agreements of the African Regional Intellectual Property Organization (ARIPO) and the Organisation Africaine de la Propriété Intellectuelle (OAPI). In addition, some countries, such as Australia and Malaysia, provide for titles of protection called innovation patents or utility innovations, which are similar to utility models (WIPO 2005b, p. 8). Other countries, like Ireland and Slovenia, have a short-term patent that is equivalent to the utility model (ibid.).



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Box 1.1 (continued)

are new and original, but in contrast to copyright, the article must be useful and able to be reproduced by industrial means. In most industrial design laws, designs that are dictated solely by the article's function are excluded from protection (e.g. a screw). Industrial design registration protects against unauthorized exploitation of the design in industrial articles. It typically grants the owner of the design the exclusive right to make, import, sell, hire or offer for sale articles to which the design is applied or in which the design is embodied. The term for an industrial design right varies from country to country.

(Source: WIPO 2005b, pp. 9-10)

Trademarks: Trademarks provide exclusive rights to use distinctive signs, such as symbols, colours, letters, shapes, sounds or names to identify the producer of a product, and protect its associated reputation (CIPR 2002, p. 13). Trademarks operate as indicators of the trade source, and can also symbolize qualities associated by consumers with certain goods and services (Cornish & Llewelyn 2003, p. 587). They can provide a guarantee that the goods and services measure up to expectations (ibid.). In order to be eligible for protection a mark must be distinctive of the proprietor so as to identify the proprietor's goods or services (CIPR 2002, p. 13). The main purpose of a trademark is to prevent customers from being misled or deceived. The period of protection varies, but a trademark can be renewed indefinitely (usually on payment of fees). In addition many countries provide protection against acts of unfair competition (see Article 10bis of the Paris Convention for the Protection of Industrial Property), for example in preventing misrepresentations as to trade origin, regardless of whether a trademark has been registered and infringed (CIPR, p. 13). There is special protection for 'well known' marks, which typically includes protection against diminution of the value of the mark even without consumer confusion. IP protection can also extend to trade names, service marks, collective marks and certification marks.

(Source: CIPR 2002, pp. 13; see further Chapter 5)

Geographical Indications: Geographical indications (GIs) identify the specific geographical origin of a product, and the associated qualities, reputation or other characteristics. They usually consist of the name of the place of origin. For example, food products sometimes have qualities that derive from their place of production and local environmental factors. Appellations of origin are an example of GIs. Under the Lisbon Agreement, "4" appellation of origin" means the 'geographical name of a country, region, or locality, which serves to designate a product originating therein, the quality and characteristics of which are due exclusively or essentially to the geographical environment, including natural and human factors' (Article 2). GIs are now protected against misrepresentation under Article 22 of the TRIPS Agreement, with stronger protection given to wines and spirits (Article 23). While GIs have been used mainly in relation to agricultural products, their use has been increasingly explored for other products including crafts. Apart from local factors such as climate and soil, GIs may also 'highlight particular qualities of a product, which are due to human factors found in the place of origin of the products, such as specific manufacturing skills and traditions' (WIPO 2005b, p. 14).

(Source: CIPR 2002, p. 13; WIPO 2005b, pp. 14-15; see further Chapter 5)

¹⁴ Lisbon Agreement for the Protection of Appellations of Origin and their International Registration (Lisbon, 31 October 1958) as revised at Stockholm, 14 July 1967, and amended 28 September 1979, 923 U.N.T.S. 205 (entered into force with current regulations 1 April 2002), available at: http://www.wipo.int/export/sites/www/lisbon/en/docs/lisbonagreement.pdf (accessed 3 February 2010).



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'negative' rights (ibid., p. 6; see also Laddie et al. 2000, p. 1). 15 Thus, copyright is not so much a right for the owner to 'copy' her own work (which the owner can do anyway), but rather a right to prevent others from reproducing and handling the work in certain ways. ¹⁶ Going further in granting exclusive rights than copyright (though for shorter periods), patents in fact enable the rights owners to prevent others from making a protected invention, even where this is done through independent research efforts. 17 In this sense, patents have been described as giving rise to 'monopoly' rights (see Cornish & Llewelyn 2003, pp. 35–41). Moreover, patents may protect not only new products but even newly discovered uses of already known

The terms of protection for patents and copyright have been expanding over the centuries (and particularly in the last decades). Under the TRIPS Agreement, ¹⁸ patent rights are now granted for a minimum term of twenty years from the filing of application (Article 33), though this tends to require the periodic payment of renewal fees; otherwise patents will prematurely lapse. The term of copyright protection has expanded historically from fourteen years under the English Statute of Anne of 1710,¹⁹ to author's life plus a minimum of fifty years under Article 7 of the Berne Convention for the protection of Literary and Artistic Works (1971).²⁰ The latter is a 'minimum' standard only – members are free to provide longer terms under their national systems and often do.²¹ Special rules may also apply to particular types of works (see Box 1.1). To give some examples, the term of protection in the US is the life of the author plus seventy years, and ninety-five years from first publication for works made for hire.²² The term of protection for copyright is also the

that these are 'essentially ancillary'.

16 If someone owns the copyright in a film he can stop others from showing it in public but it does not follow that he has the positive right to show it himself (Laddie et al. 2000, p. 1).

As Cornish and Llewelyn (2003, p. 6) note, IPRs comprise rights to stop not only so-called 'pirates, counterfeiters, imitators' but also 'in some cases third parties who have independently reached the same

ideas from exploiting them without the licence of the right-owner'.

Ragreement on Trade-Related Aspects of Intellectual Property Rights (Marrakesh, 15 April 1994), Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994) (entered into force 1 January 1995) [hereinafter 'TRIPS Agreement'], available at: http://www. wto.org/english/tratop_e/trips_e/t_agm0_e.htm (accessed 3 February 2010).

Statute of Anne, 1710, 8 Ann., c. 19 (Eng.), available at: http://www.copyrighthistory.com/anne.html (accessed 27 March 2010).

Berne Convention for the Protection of Literary and Artistic Works (Berne, 9 September 1886), as revised at Paris, 24 July 1971, and amended 28 September 1979, 1161 U.N.T.S 30 (Paris Act entered into force 15 December 1972) [hereinafter 'Berne Convention'], available at http://www.wipo. int/treaties/en/ip/berne/trtdocs_wo001.html (accessed 3 February 2010).

²¹ Coupled with the relatively low threshold for copyright protection, an increasingly long term of protection does not have trivial results. Sir Hugh Laddie (1996, p. 256) noted in the UK context: 'As is now familiar in copyright law, the process was one of levelling up the protection rather than levelling down...Indeed if a modern day architect were to design a new Albert Memorial, he would have the satisfaction of knowing that his copyright is likely to be sprightly and in the prime of life long after the concrete and steel of his architectural creation have started to crumble. The question to be asked: what justification is there for a period of monopoly of such proportions? It surely cannot be based on the principle of encouraging artistic creativity by increasing the size of the carrot. No one is going to be more inclined to write programs or speeches, compose music or design buildings because 50, 60, or 70 years after his death a distant relative ... might still be getting royalties'.

See Copyright Term Extension Act of 1998, P.L. 105-298, § 102(b) (amending 17 U.S.C. § 302).

 $^{^{15}}$ While some aspects of IP confer positive entitlements, such as the right to be granted a patent or to register a trademark upon fulfilling the requisite conditions, Cornish and Llewelyn (2003, p. 6) qualify



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author's life plus seventy years in European Union (EU) countries.²³ While related rights typically enjoy a shorter term of protection, there are developments at the European Parliament and Commission to extend the term for those rights.²⁴ Meanwhile, trademarks, geographical indications and trade secret protections are potentially perpetual provided certain conditions are continually met.

While there are regional and international efforts to harmonize IP laws, the protection of IPRs still varies significantly amongst countries and is generally restricted to the geographic area of the state in question. In this sense, IPRs are territorial. In the case of some IPRs such as patents and trademarks, protection is obtained through meeting formalities in each country where it is sought. A product that is patented in country A might be reproduced legitimately (under IP laws) in another country where the same product is not patented. An applicant may, however, be able to obtain patents for the same invention in multiple countries, through filing applications in individual countries or through multiple and simultaneous patent applications under the Patent Cooperation Treaty (PCT).²⁵ Through provisions of reciprocity in international conventions (including the Berne Convention) and regional or bilateral agreements, some forms of IPRs such as copyright have been effectively extended to other territories without formalities. The TRIPS Agreement incorporates many provisions from other IP instruments including the Berne Convention and the Paris Convention for the Protection of Industrial Property of $1883.^{26}$

Conventional forms of IP such as copyright and patents emphasize what is new, rather than pre-existing, in extending protection to particular works or inventions. Though most jurisdictions have preconditions such as 'originality' for copyright, or 'novelty' and 'inventive step' for patents, interpretations vary significantly amongst countries' national courts and patent offices on the thresholds for protection, and may not coincide with a layperson's concept of these terms. The differences are especially apparent when new technology challenges both existing legal rules and ethical standards – for example, in patent claims in relation to the isolation of gene

Council Directive 93/98/EEC of 29 October 1993 harmonizing the term of protection of copyright and certain related rights, OJ No. L 290 (1993), *replaced by* Council Directive 2006/116/EC of 12 December 2006 on the term of protection of copyright and certain related rights (codified version), OJ No. L 372 (2006)

25 Patent Cooperation Treaty (Washington,19 June 1970), 1160 U.N.T.S 231, 9 I.L.M 978 (1970), as amended 3 October 2001 (entered into force as amended 1 April 2002), available at http://www.wipo.int/pct/en/texts/articles/atoc.htm (accessed 3 February 2010).

<sup>(2006).
24</sup> On 23 April 2009, the European Parliament approved a legislative proposal extending the term of copyright protection for sound recordings from fifty years to seventy years after first release. The European Parliament has also requested that the European Commission (EC) evaluate the possibility of a similar copyright term extension for performers and producers in the audiovisual sector. See European Parliament legislative resolution on the proposal for a directive of the European Parliament and the Council amending Directive 2006/116/EC of the European Parliament and the Council on the term of protection of copyright and related rights, 23 April 2009, P6.TA9(2009)0282, available at: http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P6-TA-2009-0282+0+DOC+PDF+V0//EN (accessed 3 March 2010).

pct/en/texts/articles/atoc.htm (accessed 3 February 2010).

Paris Convention for the Protection of Industrial Property (1883), as revised at Stockholm, 14 July 1967, and amended 28 September 1979, 828 U.N.T.S. 303, 21 U.S.T. 1583 (entered into force 7 July 1884) [hereinafter 'Paris Convention'], available at: http://www.wipo.int/export/sites/www/treaties/en/ip/paris/pdf/trtdocs_wo020.pdf (accessed 3 February 2010).