

Global Intellectual Property Law

For Nicholas-Sejong and Oliver Kailash

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Preface

Intellectual property plays an increasingly vital role in global trade and economic development. Globalisation of trade means that intangible informational resources are now produced, exchanged and consumed anywhere and everywhere defying jurisdictional borders. Intellectual property has moved into the mainstream of national economic and developmental planning; in the recent past it has also emerged as a central element of multilateral trade relations.

The remits of intellectual property are being constantly pushed wider to include new subject matter. This is not surprising given the constant changes in socio-economic conditions, technology and market opportunities. Even the way intellectual property is conceived changes over time. Patents and copyright originated out of monopoly privileges granted by monarchs to traders, manufacturers and artisans. In time, they were seen as a form of personal property granted to inventors and authors. While to some extent they still are, it is probably more accurate to portray intellectual property rights as a class of intangible business asset that is usually held by companies performing the (admittedly important) roles in the modern economy of investor, employer, distributor and marketer. Individual creators are less and less frequently the ones owning and controlling the rights. These trends bring to the fore the issue of whether and to what extent intellectual property rights clash with current norms relating to human rights, economic governance, fairness and efficiency. Increasingly, then, intellectual property finds itself at the centre of debates on how human society and the resources upon which our well-being depends should best be organised to achieve just and effective outcomes. Thus, we see demands from indigenous peoples for proprietary protection of their ancestral knowledge, protests about the perceived approval of genetically engineered products through the aegis of patent laws, campaigns to improve access to life-saving drugs, criticisms of the alleged anti-development biases of current intellectual property rule-making, and calls for protecting one's dignity and persona through copyright and trade mark law.

This book on global intellectual property offers international and comparative perspectives on intellectual property law and policy. It examines the evolving impact of intellectual property on the international stage, especially in respect of trade, economics and culture. As such, it is by necessity *inter-disciplinary*. A focal point is the analysis of the philosophical, political and

socio-economic parameters within which intellectual property producers and consumers operate. In our view, the complex, interactive and conflict-ridden nature of the globalisation process must inevitably force us to 're-learn' how to learn intellectual property law. Instead of the conventional formalistic learning method in which we must choose whether to focus on national, regional or international law, in this book we cover all three.

This book is our attempt, then, to make the study of global law and policy of intellectual property transcend disciplinary caribuncles such as territorially based case studies or statutes. In our view, no single jurisdiction, however important or influential it may be, can possibly be treated as representing all other jurisdictions or even any single one. While there is much similarity in intellectual property law, and the forces favouring harmonisation are very strong, divergent forces operate too as countries seek to translate (or mistranslate) international obligations in ways that further domestic economic interests. It is not a foregone conclusion that the harmonisers will win.

The present volume is the result of teaching in and research for the University of London's LLM programme on Global Policy and Economics of Intellectual Property Law which has been running successfully for several years. It comprises a comprehensive commentary on international intellectual property law primarily targeted at postgraduate-level students. The case selection is thematic rather than geographical, and is culled primarily from international and supranational jurisprudence (that is, the EU and the WTO), and where relevant, other national higher courts.

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Acronyms

A2K	Access to Knowledge
AIPPI	Association Internationale pour la Protection de la Propriété Industrielle (International Association for the Protection of Industrial Property)
ALAI	Association Littéraire et Artistique Internationale
BIRPI	Bureaux Internationaux Réunis de la Protection de la Propriété Intellectuelle (International Bureaux)
CBD	Convention on Biological Diversity
CII	Computer-implemented invention
COP	Conference of the Parties to the Convention on Biological Diversity
CTM	Community Trade Mark
CTMR	Community Trade Marks Regulation
DIA	Development Impact Assessment
DMCA	Digital Millennium Copyright Act
DNA	Deoxyribonucleic acid
DRM	Digital rights management
ECJ	European Court of Justice
EPC	European Patent Convention
EPO	European Patent Office
FAO	Food and Agriculture Organization of the United Nations
FDA	Food and Drug Administration
FTA	Free trade agreement
GATT	General Agreement on Tariffs and Trade
GIs	Geographical indications
ICANN	Internet Corporation for Assigned Names and Numbers
ICCPR	International Covenant on Civil and Political Rights
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICTSD	International Centre for Trade and Sustainable Development
IGC	Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (of WIPO)
IPRs	Intellectual property rights
LDCs	Least-developed countries

MDGs	Millennium Development Goals
NGO	Non-governmental organization
OECD	Organisation of Economic Co-operation and Development
OHIM	Office for Harmonisation in the Internal Market
PLT	Patent Law Treaty
<i>pma</i>	<i>post mortem auctoris</i>
PVP	Plant variety protection
RNA	Ribonucleic acid
SME	Small and medium-sized enterprise
SPC	Supplementary protection certificate
TBA	Technical Board of Appeal (of the European Patent Office)
TK	Traditional knowledge
TPMs	Technological protection measures
TRIPS	Agreement on Trade-related Aspects of Intellectual Property Rights
UCC	Universal Copyright Convention
UDHR	Universal Declaration of Human Rights
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UPOV	Union Internationale pour la Protection des Obtentions Végétales (International Union for the Protection of New Varieties of Plants)
USDA	United States Department of Agriculture
USPTO	United States Patent and Trademark Office
USTR	United States Trade Representative
WCT	WIPO Copyright Treaty
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WPPT	WIPO Performers and Phonograms Treaty
WTO	World Trade Organization

PART I

The status quo and its origins

1. The globalisation of intellectual property

GLOBALISATION AND LAW

Globalisation is a process, or a series of processes, which create and consolidate a unified world economy, a single ecological system and a complex and dynamic network of communications that covers the world.¹ The world, thus, is interdependent and becoming ever more de-territorialized. Geographical, social and political boundaries definitely do not disappear but they are eroding.

In understanding globalisation processes, an important distinction to bear in mind is that between localised globalism and globalised localism, which shows that globalisation occurs in opposing directions often with great tensions between the two.² Localised globalism focuses on the recipients, who may be victims or beneficiaries depending on your standpoint. Globalised localism concentrates on the standard-setters, often situated in a small number of places. These are the ones who set the rules the rest of the world ends up following.

Let us look at these terms in more detail before proceeding. Globalised localism occurs when a local phenomenon is successfully globalised, for example, the English language, Coca-Cola, or EU or American copyright laws. Much usage of the concept of 'globalisation' concentrates on this phenomenon. Often, the entire process of international policy-making, negotiation, dialogue, rule-making, implementation and enforcement is driven by globalised localism.

Localised globalism refers to the situation when local conditions change and adapt to international and transnational influences. Examples include recognising increasingly international concerns about the environment, and changing local attitudes to deforestation or use of resources. The domestic implementation of the World Trade Organization's Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS) Agreement, for example, is an example of localised globalism whereby general principles recognised in a majority of countries force the remaining nations to change their laws or policies on intellectual property. A threat in this situation is that the local laws may be dispensed with and the local context completely disregarded.

This is all rather black and white. Perhaps a more correct term would be ‘sustainable localised globalism’ whereby some practical local structures, norms, traditions and practices are retained. This would better reflect what so often happens when international laws are interpreted in the light of local conditions. In the British colonial era, for instance, the Privy Council always stressed that British laws had to be adapted to the local conditions.

Notwithstanding this more nuanced interpretation of globalisation, developing countries implementing new multilateral or bilateral intellectual property agreements find their interpretative scope concerning rights, exceptions and limitations curtailed or limited to how the EU or the US interprets the treaties. We would argue that instead of automatically adopting the EU or US interpretations of certain international intellectual property provisions, it would be far better for countries to craft their rights, exceptions and limitations as they see fit, as long as their interpretations of these are consistent with their international obligations. The trouble is that the EU and US sometimes intervene and discourage them in various ways from doing so.

The complex way that intellectual property law is made, is subsequently ‘traded’ in the form, for example, of ‘you “buy” our patent law and we’ll buy more of your wine’ types of transaction, and the contested nature of the rights granted requires us to look at the law from all perspectives – local, regional, global and also holistic. One consequence of such a multi-faceted approach is that we are bound to encounter clashes between national, transnational, international, customary and social-economic rules as they relate to specific objects, works and ideas.

We may also find tensions between the rules, and even *within* them. For instance, an intellectual property right may be granted to a corporation in a symbol, but such legal protection may ignore the possible fact that a group of people has legitimate claims to the same symbol under non-international, customary law. Thus, to Rightholder A what the law is providing is an economic right. To Rightholder B, what she or he may seek to secure is a religious or cultural right, which may include the subsidiary right to prohibit any commercial activity relating to the symbol. Whose rights should take precedence? Traditional analyses of national intellectual property laws tend to dismiss such clashes as miscellaneous or esoteric concerns that are barely worth discussing. Nevertheless, as usage of the internet and the ensuing problems caused by file-sharing show, clashes of interests, rights and freedoms, including cross-cultural ones, are likely to become more serious. We should not be surprised that this is happening. In the wider world, tensions between private property, human rights, religion and mammon continually create sparks, some of which turn into conflagrations.

To make the situation even more tricky, current studies of the law tend to overlook the tensions inherent in the very basis of the legal entitlements

provided under a given intellectual property right. This is particularly noticeable in the case of copyright. In some jurisdictions, copyright is mostly an economic right vested mainly in corporations. In others, copyright (or more accurately, author's rights) continues to be oriented around a set of moral rights vested in individual authors and artists. But in no country is the copyright purely economic or purely moral in nature. Frequently the result is confusing and internally inconsistent law.

‘A COMPETITION OF INTELLECT’?

The current conventional wisdom is that the world's most successful nations are those best at producing, acquiring, deploying and controlling valuable knowledge. Knowledge, especially new knowledge unavailable to one's rivals, is key to international competitiveness and therefore to national prosperity. However clichéd such a view may be, the fact is that many policy-makers believe it to be true and are acting accordingly. As the United Kingdom government expresses it, for example, ‘intellectual property is a critical component of our present and future success in the global economy’. Moreover, it asserts, the economic competitiveness of the UK as of its competitors ‘is increasingly driven by knowledge-based industries, especially in manufacturing, science-based sectors and the creative industries’.³

But can intellectual property ever outpace tangible property as a fundamental base of modern economies? According to some quite influential people it definitely can. Alan Greenspan, former Chairman of the Board of Governors of the US Federal Reserve, had this to say in his speech inaugurating the 2003 Financial Markets Conference of the Federal Reserve Bank of Atlanta:

In recent decades . . . the fraction of the total output of our economy that is essentially conceptual rather than physical has been rising . . . Over the past half century, the increase in the value of raw materials has accounted for only a fraction of the overall growth of US gross domestic product. The rest of that growth reflects the embodiment of ideas in products and services that consumers value. This shift of emphasis from physical materials to ideas as the core of value creation appears to have accelerated in recent decades.

In a more populist tone, the *International Herald Tribune* recently claimed that whereas ‘in another era, a nation's most valuable assets were its natural resources – coal, say, or amber waves of grain . . . in the information economy of the 21st century, the most priceless resource is often an idea, along with the right to profit from it’.⁴

Those who concur with such views, whether or not they accept the all too frequent hyperbole, tend to assume that knowledge-based economies are

nowadays wealthier, almost by definition, than traditional or natural resource-based ones. This is of course basically true. Nonetheless, reality defies lazy platitudes. While Singapore is a prosperous and increasingly creative economy,⁵ the similarly sized Qatar and Brunei are just plain rich. India, with Bollywood, its impressive and rapidly expanding software industry, and its sizeable and growing biotechnological capacity in relation to its GNP, is mired in poverty which may take generations to eliminate. Of course, India cannot become a rich oil-based economy when there is no oil to base its economy on. But most Indians work on the land, and the diffusion of state-of-the-art knowledge and technologies is only one part of the whole solution to the problem of how to eke a decent income from agriculture.

This kind of thinking is not so new as people might think. Policy-making inspired by such ideas goes back centuries. In the Middle Ages, Venetian glass-makers, whose techniques were acquired partly from Germany and Syria, were forbidden from plying their trade outside the city state or giving away their secrets. Transgressors could lose their lives. At the same time, foreign glass-makers were banned from operating there. It may not be entirely coincidental that Venice was the first place to pass legislation providing patents for inventions.

Venetian-style 'knowledge mercantilism'⁶ has not been historically uncommon. But since the Industrial Revolution, knowledge economy rhetoric is often expressed in ways favouring more open trade. In this respect, some nineteenth-century voices manage to sound very twenty-first century. In 1852, Lyon Playfair, a politician and public intellectual of his day, warned that Britain needed to realise, as he thought its foreign competitors already did, that 'the competition of industry has become a competition of intellect'.⁷ Later in life he noted that 'all countries of the world have been brought into a common market to compete for the margins of profit'.⁸

However, even if one accepts the economic and strategic importance of knowledge, it is not necessarily to be concluded that the more intellectual property you have and the stronger the rights are the better, or even that intellectual property is necessary at all. One may more safely conclude that intellectual property policy-making is a high stakes exercise and is consequently an inherently political activity.

RHETORIC, POWER AND THE VARIED INTERESTS OF NATIONS

It is generally assumed that wealth-creating knowledge of the kind that turns economies into knowledge-based ones, comes almost exclusively out of universities, corporate laboratories and film, music, art and design studios, and not out

of such unlikely places as peasant farmers' fields and indigenous communities. Furthermore, that kind of economic transformation requires the availability of high US- or European-style standards of intellectual property protection and enforcement. Basically, rich countries have such standards, poor countries do not. Therefore, to be like rich countries, poor countries must adopt these standards; the 'magic of the marketplace' will presumably conjure up the rest.

Are such assumptions validated by reality? Statistics produced by international organizations like the UN Development Programme (UNDP), WIPO and the World Bank do indeed suggest that most developing countries are not only failing to be innovative but actually have to improve their innovation climate dramatically before they can be competitive in high technology fields, except perhaps as assemblers and exporters of high tech goods invented elsewhere. Admittedly, our usual indicators of innovation, such as R&D spending, education statistics and patent counts do not tell the whole story and may in fact be misleading. But there appears clearly to be a massive innovation gap between the rich and poor worlds that is not going to be bridged for a long time except by a few elite countries, like China, India and Brazil.

But is such a negative and pessimistic view about developing countries entirely accurate? Is there really a massive knowledge and innovation gap between the rich and poor worlds? Confusingly, the best answer to both questions is 'yes and no'. The 'yes' part is obvious. North America, Western Europe and East Asia have a massive lead over the rest of the world in virtually all of the usual social and economic indicators. But why is there a 'no' in the answer at all? Because there is a cultural bias in how we use terms like 'knowledge economy', 'information society', 'intelligent community' and 'creative industry'. The effect of this bias is to underestimate the presence and vital role of applied knowledge in all societies including those appearing to be the most backward and traditional.

Creativity and innovation are *not* the sole preserve of suited knowledge workers in glassy offices, unsuited bohemians in garrets, professional artists and musicians, or of laboratory scientists. If necessity really is the mother of invention, you would surely expect to see most innovation where the needs are greatest. And no needs are greater than those of desperately poor people getting themselves and their families through each day alive and well. Whether we look at health or agriculture, we find that peasant communities are often able to draw upon a huge body of knowledge passed on through many generations.⁹ The same applies to hunters and gatherers. Local knowledge, technologies and traditional cultural expressions can be highly evolutionary, adaptive and even novel. In short, knowledge held within 'traditional' societies can be new as well as old. We should not be surprised by this. Traditional knowledge has always had adaptive elements because the ability to adapt is one of the keys to survival in precarious environments.

So can we just assume, as we tend to do, that the world's knowledge and innovation 'hotspots' are urban areas located almost exclusively in Europe, North America and East Asia? In fact, there are many other innovation hotspots, some in the most remote and isolated regions of the world. The problem is that few people recognise them as such, and few of those are in positions of real power or authority. Consequently, innumerable opportunities to harness local knowledge and innovation for trade and development are missed.¹⁰

Today's more positive view which informs the work of many development workers, seriously challenges the idea that knowledge wealth necessarily goes hand in hand with material wealth, and that innovation cannot be common where there is mass poverty. What they point out also is that knowledge and creative people may be far less scarce than are the institutions to help convert knowledge into wealth for local people and for the benefit of the wider economy.¹¹ Consequently, traditional knowledge and local innovations are being underutilised.

As to the notion that achieving national prosperity and international competitiveness requires countries to make available high US- or European-style standards of intellectual property protection and enforcement, there is very little evidence that this is the case. Naturally, transnational corporations like governments to believe this. Indeed, corporate lobbying has largely been responsible for the barely accountable extension of patents, copyright and trade marks to completely new kinds of subject matter in recent decades. Intellectual property law now encompasses such 'stuff' from the amazon.com 'one-click' shopping button to television programme schedules. We can patent microbes, plants and animals, even genes that have just been discovered and found to have some link to a disease. The binary code behind software programs is classed as a copyrightable work of literature. We can trademark the MGM lion's roar. Protection terms have been extended. The copyright term for authored works in Europe, the United States and many of their trade partners now continues for 70 years after the author's death.

But does every country in the world really need to adopt such standards, as they increasingly have to do, not so much because of TRIPS but as a result of new commitments arising from bilateral trade agreements? Arguably not. In fact such standards may make them worse off. The historical record strongly suggests that many of today's economic leader countries were themselves 'knowledge pirates' in the past, and benefited from being so.¹² As for the present, a case could be made for arguing that we in the developed world are not becoming knowledge-based economies as quickly as we are becoming knowledge-protected economies, or even – and this is a bit more worrying – knowledge-overprotected economies, in which dominant industries maintain their market power by tying up their knowledge in complex bundles of legal

rights and instruments such as patents, copyrights, trade marks and restrictive contracts and licensing agreements. Such bundles of rights often cover just one product; a drug for example may be protected by a trade mark, multiple patents, trade secrets, safety and efficacy test data exclusivity, and copyright on the instructions.

It is far from clear that the creativity and innovation coming out of laboratories and studios is increasing at a rate anywhere near as fast as the rapidly growing size of corporate intellectual property portfolios. Worryingly, this heightened level of protection may not only be a bad thing for consumers in terms of higher prices, but it may actually stifle far more innovation than it promotes. And things may be getting worse. Every major company has to have an intellectual property management strategy, which usually entails the aggressive acquisition and enforcement of rights, because everybody else has one. Among the harmful consequences are increased prices, and a reduced access to knowledge that the generation of new knowledge encouraged by intellectual property rights is insufficient to compensate for.

Ironically, overly zealous enforcement of rights may be bad for business too. As a *Guardian* article rightly states: 'Microsoft's riches rest on copyright law. But they also depend on its constant violation . . . the fact that you can use most MS software for free has been an important factor in spreading the habit of using it and in killing competition'. And this is true – the mass-scale usage of an illegally reproduced product can sometimes make the lawful product a *de facto* standard in the marketplace as is the case with Microsoft.

Moreover, the author of this article points out a major dilemma for many consumers, which companies may need to take a flexible stance towards: 'in the US . . . it is illegal to copy your own CDs on to your own iPod. Obviously, this is a law that is broken all the time, or nobody there would ever buy an iPod. The 60GB model sells for \$350; to fill it up with freshly downloaded content from the Apple store could easily cost another \$25,000. In other words, rather like cigarettes, iPods should carry a financial health label stating that one either breaks the bank, or the law, in order to actually utilize the iPod to the maximum'.¹³

Another trend to mention here is that public interest and pro-competitive limitations and exceptions to the rights in many parts of the world are being narrowed. That is a serious concern for developing countries seeking to acquire expensive life-saving drugs. Other likely negative effects include undue constraints on the reproduction and distribution of educational materials in countries where such materials are scarce, expensive and desperately needed.

Of course, some would argue that copying is bad and that is the end of it. But others plausibly argue that a certain amount of copying and free-riding is necessary, if not beneficial, for competition in any economy, *and even for*

innovation.¹⁴ As for developing countries, imitation there as elsewhere is an essential stage in learning to innovate. Indeed, paradoxical as it might sound, imitation can be creative in itself. According to Kim and Nelson, 'imitation ranges from illegal duplicates of popular products to truly creative new products that are merely inspired by a pioneering brand'.¹⁵ Distinct imitations may include 'knockoffs or clones, design copies, creative adaptations, technological leapfrogging, and adaptation to another industry'.¹⁶ One should not take this argument too far, though. Copying CDs and misappropriation of trade marks provides no scope for learning at all. Moreover, if it is too easy to profit from uncreative imitation, there is unlikely to be much incentive to innovate.

However, while all developing countries have good reason to defend their right to tailor their intellectual property rules and policies to suit their specific needs and conditions, this does not make their interests identical. Lall's research found ample evidence that 'the need for IPRs varies with the level of development'. Based in part on the work of Maskus, he went on to say that:

Many rich countries used weak IPR protection in their early stages of industrialisation to develop local technological bases, increasing protection as they approached the leaders. Econometric cross-section evidence suggests that there is an inverted-U shaped relationship between the strength of IPRs and income levels. The intensity of IPRs first falls with rising incomes, as countries move to slack IPRs to build local capabilities by copying, then rises as they engage in more innovative effort. The turning point is \$7,750 per capita in 1985 prices . . . , a fairly high level of income for the developing world.¹⁷

It is one thing to say that relatively advanced developing countries prefer to weaken their intellectual property rights in order to advance their capacities to innovate through imitation-derived technological learning, and then strengthen them later when they are more innovative. It is quite another thing to assume that such a policy works just because many governments have favoured it. Nonetheless, intuitively it makes much sense and there is a wealth of historical experience to back it up.

For some people, the mobilisation efforts of corporate bodies, such as IBM in the arena of copyright protection of computer programs, and Pfizer in the arena of patent protection of pharmaceuticals, epitomise how global, avaricious and ambitious intellectual property-intensive companies are dictating intellectual property law and policy to the world. As Chapter 2 will show, when we realise how much corporate lobbying was behind the TRIPS Agreement and some other recent international intellectual property agreements, those concerned about the undue influence of large corporations have a point. From a historical perspective, when these corporations impose their preferred intellectual property rules on the world,¹⁸ they echo the *lex mercatoria* spirit of the ancient guilds. Indeed, modern-day corporations as a group-

ing of economic actors with tremendous market power form a kind of globalised guild system. What we have, in a sense, is a curious throwback to the early-capitalist era of mercantilism.¹⁹

Historically, the mercantilist regarded the state as the appropriate instrument for promoting the well-being of his country and pursued national interests at all costs. Moreover, in his view the country was regarded as a unit; there were national interests to be promoted, quite irrespective of the interest of particular sections of individuals. In accordance with such an approach, the state harnessed and controlled resources, skills and products for the purposes and profit of the state.²⁰ This included the encouragement of commercial enterprises by the issue of patents of monopoly in respect of the introduction of new processes, the creation of privileged trading companies,²¹ the foundation of colonies and plantations in order to secure supplies of material as well as a market for the finished commodities, and the establishment of manufactories financed and controlled by the state.²² The mercantilist world was a dog-eat-dog world in which protectionism was the norm and trade advantages for a country were seen as trade disadvantages for its neighbours.

Indeed, such mercantilism, which sees trade as purely a zero-sum game, is reflected in the views of some quite prominent people today. For example, the very influential Bruce Lehman, erstwhile business lobbyist and head of the United States Patent and Trademark Office (USPTO), now claims in public that the US would have been better off pushing for strict environmental and labour standards in the Uruguay Round instead of insisting with so much determination on an intellectual property agreement.²³ The subtext here is that TRIPS was all about helping the US to sell more and buy less. If it isn't helping America to do this, then it is a failure. Consequently, other ways should be found to force American goods on foreigners while keeping out cheaper imports. Labour and environmental standard-setting may be the solution. Ironically, our modern guilds only pretend to care about America's balance of payments problems. If research, development and manufacturing can be done more cheaply on foreign soil but as well as in America, then they will be done on foreign soil. Can it be, then, that Lehman and like-minded people turned against TRIPS because in a sense it is actually working? Arguably, knowledge-based corporations can now relocate to India, China and Brazil with the confidence they lacked in the pre-TRIPS era when patent rights were unavailable, laden with limitations and exceptions, or were just ignored.

Realisation that intellectual property has wide-ranging repercussions is evidenced by the way intellectual property references more and more often find their way to the front pages of newspapers. Trade negotiators were largely unaware of these repercussions when the issue of intellectual property rights was linked with global trade during the Uruguay Round trade negotiations that culminated in the 1994 Agreement Establishing the World Trade Organization,

annexed to which was the TRIPS Agreement. Far more attention was paid to the need to satisfy the pharmaceutical and entertainment industries than to ensure an intellectual property regime that was good for public health, education, food security and the interests of developing countries. According to Nobel laureate in economics, Joseph E. Stiglitz:

I suspect that most of those who signed the agreement did not fully understand what they were doing. If they had, would they have willingly condemned thousands of AIDS sufferers to death because they might no longer be able to get affordable generic drugs? Had the question been posed in this way to parliaments around the world, I believe that TRIPS would have been soundly rejected.²⁴

Stiglitz also notes that:

Intellectual property is important, but the appropriate intellectual property regime for a developing country is different from that for an advanced industrial country. The TRIPS scheme failed to recognize this. In fact, intellectual property should never have been included in a trade agreement in the first place, at least partly because its regulation is demonstrably beyond the competency of trade negotiators.²⁵

CREATIVITY AND THE EVOLVING INTELLECTUAL PROPERTY PARADIGM

What is intellectual property? In its purest sense, it is the only absolute possession in the world. As Chaffe stated, ‘The man who brings out of nothingness some child of his thought has rights therein which cannot belong to any other sort of property’.²⁶ Law textbooks do not shy away from attempting to define intellectual property. One textbook defines intellectual property law as the ‘branch of the law which protects some of the finer manifestations of human achievement’.²⁷ Another states that intellectual property law ‘regulates the creation, use and exploitation of mental or creative labour’.²⁸ For Spence, ‘an intellectual property right is a right: (i) that can be treated as property; (ii) to control particular uses; (iii) of a specified type of intangible asset. In addition, intellectual property rights normally share the characteristics that they are: (i) only granted when the particular intangible asset can be attributed to an individual creator or identifiable group of creators, the creator(s) being presumptively entitled to the right; and (ii) enforced by both the civil and criminal law’.²⁹

In its simplest form, intellectual property is a type of property regime whereby creators are granted a right, the nature of which is entirely dependent on the nature of the creation on the one hand, and the legal classification of the creation on the other. To be placed within one or other of the different classi-

fications of ‘intellectual property’, one has to fulfil the relevant criteria (for example, novelty, originality or distinctiveness) and comply with certain formalities. Depending on these legal (and often artificial) classifications, the creation is accorded a bundle of rights, which vary considerably across the intellectual property spectrum in terms of scope and duration. Figure 1.1 presents a bird’s-eye view of the entire intellectual property spectrum.³⁰

Copyright, patents and trade marks are the accepted bastions of the intellectual property world, with their respective legal satellites that include utility models, unfair competition and passing off laws. Design law appears as an afterthought reflective of some elements of patent and copyright laws. A further consideration of the classifications and their subsidiary divisions gives rise to an increasingly complex array over sometimes overlapping rights for the benefit of creators, owners and traders. The WIPO Convention, for instance, adopts this classification perspective in defining intellectual property.³¹

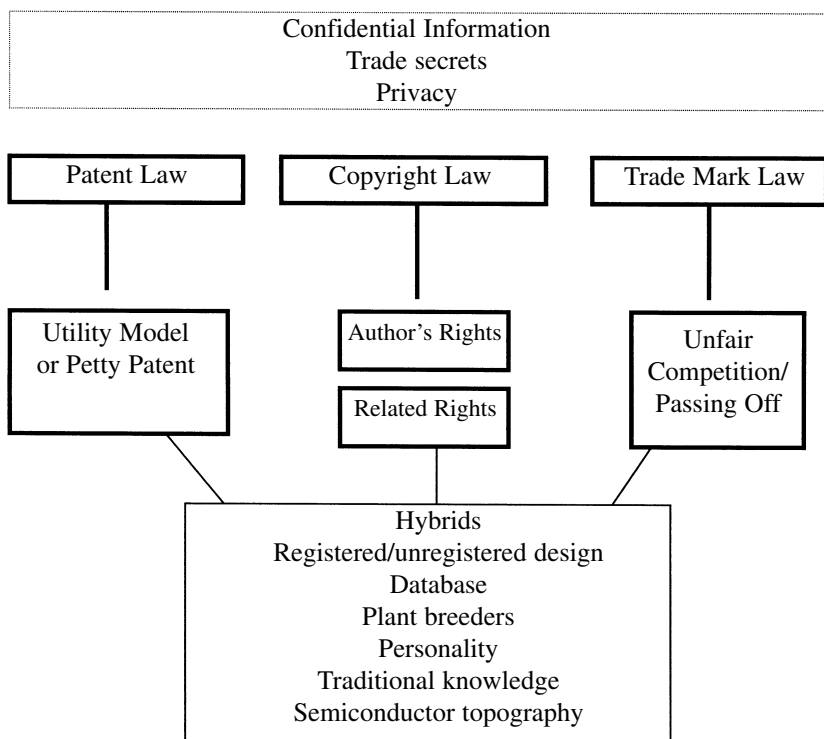


Figure 1.1 The intellectual property spectrum

- (i) *Patent law*: This law grants protection of a limited duration to technological inventions and other types of functional subject matter. However, creations which incorporate functional elements can sometimes also constitute artistic works, industrial designs and even trade marks.
- (ii) *Copyright law*: This law grants a less exclusive type of protection, with a longer term of duration for literary, artistic and scientific creations, as well as for related works such as performances, broadcasts and sound recordings; a sub-category is design rights which protects the appearance of products, and often overlaps legally and conceptually with artistic works, which technically fall under copyright law.
- (iii) *Trade mark law*: Marks which function as signs in the marketplace are protected as trade marks. A sub-category is the common law action of passing off, which is less generous in protection than the wider tort of misappropriation or unfair competition. This area has the greatest potential for overlap not only with patents or copyright laws (especially in relation to aesthetic and functional shapes), but also with other areas of economic torts such as privacy, confidentiality, defamation, disparagement of personality and trade, and fraud.³²

Intellectual property is hardly a static conception, but is in a state of constant evolution and reconsideration. The first English and Venetian laws were public in nature, a means of harnessing foreign technologies, or of regulating and censoring domestic printing. But by the nineteenth century, intellectual property had become classified as a type of private law, conferring private property rights on the few. We now see a change as environmental, health and educational pressure groups clamour for a re-classification of intellectual property rights as law with increasingly more influence in the public sphere than before. Moreover, TRIPS has reinforced the public nature of intellectual property rights in a way that WIPO had never done before, and indeed had been at pains to avoid doing.

Along with this evolution, one sees old rights changing and new rights being created all the time. Essentially, when it comes to extending intellectual property to new types of creations, the options available to policy-makers are to fit such products into existing intellectual property categories or to create new intellectual property rights. In the words of Cornish,³³

Intellectual property may be extended to new subject matter either by accretion or by emulation. Accretion involves re-defining an existing right so as to encompass the novel material; emulation requires the creation of a new and distinct right by analogy drawn more or less eclectically from the types already known.

The accretion option was taken, for example, for photographs, films and computer software, where the copyright system was stretched in ways that the

burgeoning industries concerned found to be satisfactory, albeit with some disagreement about how far and at what speed the stretching should be done. The accretion principle is untenable in the case of sound recordings and television broadcasts. In such instances, the preferred option is Cornish's emulation option. Utility models are another example of emulation. But, in the case of inventions, emulation is inherently risky in the sense that new rights are essentially experimental. Thus, accretion may be a safer option, and one could seek to protect sub-patentable inventions under design law.

Indeed, empirical research into the British, German and Australian utility models systems from a historical perspective indicates that the inception and subsequent development of second-tier patent protection was a response to perceived deficiencies in both patents and designs law. Existing design legislation did not, in the German and Australian experiences, protect functional innovations; whilst in the British case, design legislation was adapted to plug the gap found to exist in the protection of minor and incremental innovations and inventions. Moreover, a consideration of the actual subject matter of protection under the various European utility models laws reveals that the term 'utility model' often incorporates many of the elements that would ordinarily constitute a functional or technical design.³⁴ And indeed, the United Kingdom has introduced such a quasi design-utility model law with its unregistered design right which extends to protecting functional shapes.

The emulation option also leads us to the *sui generis* ('of its own kind') option. This strategy is sometimes chosen to enable innovators in certain fields of science, technology, culture or business to appropriate the outputs of their research in a more effective and balanced manner that, policy-makers believe, would have been difficult to achieve under existing regimes. Examples include plant variety protection, the European database right, and semiconductor chip design protection.

In respect of the latter, a modified copyright approach was adopted in the 1984 United States Semiconductor Chip Protection Act. This legislation is historically interesting as it re-introduced two elements which had increasingly fallen out of favour in the protection of scientific innovation: a non-registration system, and a criterion which was outside the accepted notions of originality, novelty or inventiveness. This legal formula was subsequently adopted by the United Kingdom in its 1988 unregistered design rights regime, but extended to all types of functional designs. The same formula was incorporated into the EU Unregistered Community Design Right protection (see Chapter 7).

Another type of industry-specific law is the US Vessel Hull Design Protection Act,³⁵ which is the result of a rather bizarre lobbying endeavour by the boat industry. Protection is granted to an original design of a vessel hull, vessel plug or vessel mould which makes the vessel attractive or distinctive in

appearance to the purchasing or using public.³⁶ Originality, due to the industrial basis of the right, is even equated to prior art and is defined thus: ‘the result of the designer’s creative endeavour that provides a distinguishable variation over prior work, pertaining to similar articles which is more than merely trivial and has not been copied from another source’.³⁷

Both laws reflect the ‘no-registration/low threshold’ formula which is a variation on the copyright, rather than industrial property, approach. Many policy-makers tend to equate copyright law with ‘art’ and ‘music’ whereas in reality, the copyright approach is extremely attractive to short-lived technologies and industries such as the toy, fashion and textile industries which are fast moving, quickly imitated and in need of immediate and automatic protection, without the encumbrance of application or registration costs. The lower thresholds (based on interpretations of terms like ‘commonplace’ and ‘originality’) are advantageous for industries which customarily rely on the prior state of the art and which represent incremental, rather than massive, design improvements. This lower threshold also allows industries to embark on market testing for their products without any loss of protection. Moreover, copyright laws gravitate towards the individual innovator, creator or designer and are thus friendlier to either the sole inventor or an SME-type inventor.

In this book we interpret the term ‘creation’ in a rather wide sense, defining the act of creativity as being the material realisation of an idea. In a rather simplistic sense, then, intellectual property law is the legal expression of people’s recognised interests in valuable ideas, such interests being either economic or moral in nature, or both. These people are not necessarily the creators themselves.

Dealing with creations requires us to take into account subjective and objective considerations. On the subjective level, the work is the result of the creator’s inherent and deep need or impulse to bring a work into realisation. All other extrinsic driving forces, such as payment, employment, the need to build a reputation in the scientific community or in the marketplace, remain subservient to the inherent need or impulse to create.

On the objective level, there are several factors which balance each other, and produce not only new types of products, but also different manifestations of similar products such as, for example, functional and aesthetic elements of light bulbs. This level *also* helps to explain why intellectual property demarcations are more aligned to objective considerations than to subjective ones. The objective considerations are:

- a. the ‘objective’ creative input of the creator such as creating a totally *novel* or *original* or *distinctive* creation, which is almost accidental rather than intentioned;
- b. market and societal constraints and/or demands.

In one sense, market constraints are equivalent to economic justifications of intellectual property, that is, certain products and/or markets need incentives to supply consumer demand. Examples of market-societal factors include:

- a. perceived need by the market and society for the creation;
- b. whether the creation satisfies the consuming market's cost-benefit analysis, that is, function, performance, reliability versus cost;
- c. whether the creation appeals to sometimes competing societal needs or demands, which may, for example, be of aesthetic, ergonomic, environmental, religious, spiritual, moral character;
- d. whether the creation satisfies the emotional and personal lifestyle needs of the consumers, for example, retail therapy, designer value and status of the creation (ranging from designer clothes to designer drugs); and
- e. implications of the wider economic machinations.³⁸

The importance of external market constraints has been alluded to by Franzosi in relation to patentable inventions.³⁹ Franzosi postulated that a patentable invention consists of a technical phase and a social phase. The technical phase consists of the invention which causes an active element of force to operate on a passive element or object to produce a technical result, that is, the 'pure' act of reducing a discovery to a stable form. The social phase, on the other hand, is the application of the technical result to human needs to satisfy such needs and obtain a social result, that is, the creative impulse to solve a problem. This may take several more years to achieve. In his view, the social phase is the inspiration, the *raison d'être*, of the technical phase.

These theories, in turn, also intersect with Schumpeter's definition of 'innovation'⁴⁰ (that is, 'carrying out new combinations'), which comprises:

- a. the introduction of a new good . . .
- b. the introduction of a new method of production . . . which need by no means be founded upon a discovery scientifically new . . .
- c. the opening of a new market . . .
- d. the conquest of a new source of supply of raw materials . . .
- e. the carrying out of the new organization of any industry . . .

Furthermore, Schumpeter notes that innovation does not occur purely within a natural or legal individual but tends to arise from social interaction which involves both creators and other actors. Schumpeter discusses economic leadership where ideas and creations, he says, 'are always present, abundantly accumulated by all sorts of people. Often they are also generally known and being discussed by scientific or literary writers'. However, society requires an

‘economic leader’ to amass all these things and to present it to society. In underlining the importance of other economic actors in bringing forth an invention, Schumpeter offers the secondary, and much narrower, basis of innovation as something which an economic leader must do in order to render an invention practical and acceptable to societal use.⁴¹

A correlated view is that most innovations, as opposed to ground-breaking and dramatic inventions, are routine and primarily devoted to product improvement or enhanced user-friendliness or searches for new uses for those products. Hence, much of creativity is dictated by market and societal needs and demands. There is, as we outlined above, synergy between the two types of inventive activity, and both types of activities are vital in enabling societal advance and growth.⁴² Too many people focus on creation in the narrow sense of the word; that is, as something highly inventive, new, original or distinctive which is introduced on the market or into society.

In the final analysis, ‘creativity’, however defined, concerns the production and application of information in the conception, development and use of scientific, industrial and cultural goods, irrespective of whether the information or goods technically qualify as an invention, a literary work or a mark. Intellectual property is not always concerned with creativity, some forms of which fall outside the criteria of intellectual property protection.

That is the objective view. However, determining what is creative *and* protectable at the policy level is subject to constant revision and debate, and is an inherently political and commercial matter. It is rarely decided on the basis of genuine objectivity.

With this dynamic perspective, it seems inevitable that the intellectual property regime would outgrow its nineteenth-century boundaries to encompass all sorts of new, esoteric subject matter such as plant varieties and semiconductor topographies, often as it happens with low thresholds of creativity. As ever, but more than ever before, market trends and international business interests drive the political, legislative and judicial definitions of existing and potential intellectual property subject matter.

WHAT THIS BOOK IS (NOT) ABOUT

What are the rules governing freedom of expression and copyright? What rules *should* govern freedom of expression and copyright? Should intellectual property take precedence over public rights of access? Is intellectual property piracy the new terrorism? Are intellectual property rights human rights, or alternatively do they impinge on human rights? And are the powerful countries using intellectual property to keep poor countries poor? These are a few questions that seem pertinent in this young twenty-first century of ours. We hope

this book provides a few of the answers to these questions and to many others that may form in the minds of the curious reader.

Above all, the book sets out to trace and explain the evolving remits of intellectual property, which are rapidly expanding to embrace new subject matter and (usually) increase the extent of protection. It does this by analysing intellectual property rules in various jurisdictions and in key international instruments like the TRIPS Agreement. We also look into the relationships between intellectual property law and science, education and culture, as well as more philosophical issues such as the commodification of persona, the commons, and of life itself. Most significantly of all, perhaps, the book examines the impact of intellectual property on the international stage, especially in respect of trade, development, economics, law, technology, human rights, and biological and cultural diversity.

A disclaimer is in order. This book is not a treatise on the general intellectual property law of any jurisdiction. There are some excellent books on the market which are. As for works specifically on the TRIPS Agreement, the *Resource Book on TRIPS and Development* produced by the UNCTAD-ICTSD Project on IPRs and Sustainable Development provides an extremely comprehensive analysis. The chapters are freely downloadable from the www.IPRsonline.org internet portal along with a wealth of other useful documents.

NOTES

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2. *Ibid.*
3. Gowers, A., *Review of Intellectual Property: A Call for Evidence*, HM Treasury, 2006.
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5. Chow, K.B., K.K. Leo and S. Leong, 'Singapore', in Suthersanen, U., G. Dutfield and K.B. Chow (eds), *Innovation without Patents: Harnessing the Creative Spirit in a Diverse World*, Cheltenham, UK and Northampton, MA, US: Edward Elgar, 2007, 73–118.
6. Stuart Macdonald coined the phrase 'information mercantilism'. See Macdonald, S., *Information for Innovation: Managing Change from an Information Perspective*, Oxford: Oxford University Press, 1998.
7. Dr Lyon Playfair, CB, FRS, 'Industrial Instruction on the Continent', London: George E. Eyre & William Spottiswoode, 1852, 3.
8. The Right Honourable Sir Lyon Playfair, KCB, MP, 'On Industrial Competition and Commercial Freedom. Being an Address Delivered at the National Liberal Club. April 24th, 1888', London: The Liberal and Radical Publishing Co., 6.
9. For examples, see Dutfield, G., *Africa and the Economy of Tradition*, Paris: Fondation pour l'Innovation Politique, 2005; Posey, D.A. (ed.), *Cultural and Spiritual Values of Biodiversity*, Nairobi and London: UNDP & IT Publications, 1999.
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11. *Ibid.*
12. Ben-Atar, D.S., *Trade Secrets: Intellectual Piracy and the Origins of American Industrial Power*, New Haven and London: Yale University Press, 2004; Chang, H.-J., *Kicking away the Ladder: Development Strategy in Historical Perspective*, London: Anthem, 2002; Dutfield, G. and U. Suthersanen, 'Harmonisation or Differentiation in Intellectual Property Protection? The Lessons of History'. *Prometheus*, 23(2), 131–47, 2005.
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15. Kim, L. and R.R. Nelson, 'Introduction', in L. Kim and R.R. Nelson (eds), *Technology, Learning, and Innovation: Experiences of Newly Industrializing Economies*, Cambridge, UK: Cambridge University Press, 2000.
16. *Ibid.*, citing Schnaar, S., *Managing Imitation Strategy: How Later Entrants Seize Markets from Pioneers*, New York: Free Press, 1994.
17. Lall, S. (with the collaboration of M. Albaladejo), 'Indicators of the Relative Importance of IPRs in Developing Countries', Issues Paper no. 3, UNCTAD-ICTSD Project on Intellectual Property Rights and Sustainable Development, Geneva, 2003. (Citing Maskus, K.E., *Intellectual Property Rights in the Global Economy*, Washington, DC: Institute for International Economics, 2000, 95–6.)
18. The original 12 members of the Intellectual Property Committee in the 1980s, for instance, were Pfizer, IBM, Merck, General Electric, Du Pont, Warner Communications, Hewlett-Packard, Bristol Myers, General Motors, Johnson & Johnson, Rockwell International and Monsanto. Drahos, P., 'Global Property Rights in Information: The Story of TRIPS at the GATT', *Prometheus*, 13(1), 6–19, 1995. According to Sell, TRIPS is a case of 12 US corporations making public law for the world. Sell, S.K., *Private Power, Public Law: The Globalization of Intellectual Property Rights*, Cambridge, UK: Cambridge University Press, 2003, pp. 1, 96.
19. 'Mercantilism was the guiding principle of economic policy and the related theory in the age of absolute rulers in Europe', H. Kellenbenz (1965), cited in Braudel, F., *The Wheels of Commerce*, London: Collins, 1982, at 542. Braudel views the era of the mercantilist economy to have existed roughly between the thirteenth century and the eighteenth century. However, the term 'mercantilism' itself was first used by the French physiocrat Mirabeau in 1736, and subsequently by Adam Smith in the *Wealth of Nations* (1776). *The Blackwell Encyclopaedia of Political Thought* (D. Miller, J. Coleman, W. Connolly, A. Ryan, eds), London: Blackwell, 1991, 335. See also Mill, J.S., *Principles of Political Economy*, Book V, Chapter X, § 1, pp. 279 *et seq.*, London: Penguin, 1985.
20. Jardine notes that financial investment by way of patronage was often conferred on artists and craftsmen as a means of attaining social and political advantage. 'The valuable artefacts which they created (or obtained) for their patron were at the same time intrinsically costly commodities and potentially exploitable as the basis for a significant power-broking transaction.' Jardine, L., *Wordly Goods – A New History of the Renaissance*, London: Macmillan, 1996, 238–9.
21. The rise of the shopkeeper or merchant class brought new social distinctions within the shopkeeper trade as the cream of the trade sought to set itself above the rest by forming guilds. Thus, for instance, in Paris, the ordinance of 1625 formed six elite *corps* for drapers, grocers, moneychangers, goldsmiths, haberdashers and furriers; by the eighteenth century, their functions and status had been superseded by the French Chambers of Commerce. Braudel, *op. cit.*, 68, 81.
22. Machlup, F. and E. Penrose, 'The Patent Controversy in the 19th Century', *Journal of Economic History*, 1, 1950, at 2. The authors note that privileges accorded to inventors and craftsmen were 'merely one species in the large genus of privileges, charters, franchises, licenses and regulations issued by the Crown or by local governments within the mercantilist framework'. Other interventionist devices included the direct importation of foreign workers in order to establish a new industry, the fixation of prices and wages (partly in the

- interests of production) and the enactment of Shipping Acts (such as the English Navigation Act 1651) to encourage shipping and the Navy, Braudel, *op. cit.*, 542; *The Blackwell Encyclopaedia of Political Thought*, 335.
23. For example at the 13th Fordham University conference on International Intellectual Property Law and Policy, New York, 31 March 2005.
 24. *Ibid.*
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 27. Cornish, W. and D. Llewelyn, *Intellectual Property: Patents, Copyright, Trade Marks and Allied Marks*, 5th ed., London: Sweet & Maxwell, 2003, 3. The authors add, though, that 'it also shields much that is trivial and ephemeral'.
 28. Bently, L. and B. Sherman, *Intellectual Property Law* (2nd ed.), Oxford: Oxford University Press, 2004, 1.
 29. Spence, M., *Intellectual Property*, Oxford: Oxford University Press, 2007, 12–13.
 30. For an intriguing perspective on the intellectual property system, see M. Koktvedgaard, 'The Universe of Intellectual Property', *GRURInt*, 1996 at 296.
 31. Article 2, para. viii, WIPO Convention (1967).
 32. See Suthersanen, U., 'Breaking down the Intellectual Property Barriers', *Intellectual Property Quarterly* 267, 1998, 268 *et seq.*, discussing this problem of overlapping rights in relation to three-dimensional shapes.
 33. Cornish, W.R., 'The International Relations of Intellectual Property', *Cambridge Law Journal*, 52(1), 46, 1993, at 54–5.
 34. Suthersanen, U., G. Dutfield and K.B. Chow (eds), *Innovation without Patents: Harnessing the Creative Spirit in a Diverse World*, Cheltenham, UK and Northampton, MA, US: Edward Elgar, 2007.
 35. Incorporated as 17 USC Chapter 12.
 36. § 1201(a).
 37. Excluded are staple, commonplace designs dictated solely by a utilitarian function of the article that embodies it.
 38. Such as: adequate supply conditions (the nature of the relevant technology, ownership of raw materials, and the legal framework within which producers operate), viable demand conditions (the availability of and cross elasticity of demand for substitute products, the cyclical and seasonal character of the product, the marketing and purchase characteristics of the product sold, and the rate of growth and variability over time of demand). Suthersanen, at *op. cit.*, 280.
 39. Franzosi, M., 'Patentable Inventions: Technical and Social Phases: Industrial Character and Utility', *European Intellectual Property Review*, 5, 1997, 251.
 40. Schumpeter, J.A. (1983 [1934]), *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*, New Brunswick, NJ: Transaction Publishers, 66.
 41. *Ibid.*, 88–9.
 42. Baumol, W., *The Free-Market Innovation Machine*, Princeton: Princeton University Press, 2002, at 22.