MPI Studies on Intellectual Property and Competition Law 25

Hanns Ullrich
Reto M. Hilty
Matthias Lamping
Josef Drexl *Editors*

TRIPS plus 20

From Trade Rules to Market Principles

Springer

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Innovation and Competition

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Preface

On April 15, 1994, the "Agreement on the Trade-Related Aspects of Intellectual Property Rights" (TRIPS) has been signed in Marrakech as part of the "Agreement on the Establishment of the World Trade Organization" (WTO). Soon thereafter, on January 1, 2015, the WTO entered into operation. Since the Max Planck Institute for Innovation and Competition always took great academic interest in critically analyzing, first the drafting process, and then the freshly created TRIPS Agreement,[1] we felt that after 20 years of existence of the Agreement, there were reasons enough to take a fresh look at it.

Within the framework, which the WTO sets for the economic and legal regulation of international trade relations, the TRIPS Agreement aims at comprehensively ensuring the international protection of intellectual property by obliging all WTO Members to provide for such adequate standards of protection as it defines in detail with respect to the substance and the enforcement of the rights flowing from the main categories of intellectual property. Over the last 20 years, the conditions have changed fundamentally, however, which had been assumed determining the operation of this international system of trade-related intellectual property rights. Due to economic globalization, markets have largely expanded beyond national borders, if not merged internationally. As a considerable number of once developing States have emerged as global and frequently enough as "big" players, the political weights have shifted geographically and the terms of international competition have undergone quite some modification. At the same time, progress of technologies, of transportation and of communication have had a deep impact on the choice of localization of manufacture and on the configuration of the chains of production as well as on the forms and the contents of the exchange of goods and services. Also, the exchange itself has accelerated. As a result, the need for the protection of

[1] F.-K. Beier & G. Schricker (1989), GATT or WIPO – New Ways in the International Protection of Intellectual Property; F.-K. Beier & G. Schricker (1996), From GATT to TRIPS – The Agreement on Trade-Related Aspects of Intellectual Property Rights.

intellectual property has changed and, concomitantly, a need for "protection against protection" has arisen in instances, where the right to protection produces dysfunctional or other potentially harmful effects.

Moreover, developments in public international law, such as the increased awareness of the vulnerability of public international goods or the broader recognition of human rights have made that ever more frequently the reach of intellectual property protection is put into question. Tensions also have made themselves felt inside the WTO. Membership has increased from 76 to 160 States, and, partly due to that increase, the WTO has run into a deep institutional and structural crisis. The rules of so many bilateral and regional (free) trade agreements, which Members have concluded during and after the Uruguay Round, tend to supersede not only the general WTO trade regime of GATT and of GATS, but also the TRIPS system of intellectual property protection (so-called TRIPS plus clauses). At the same time, the TRIPS Agreement, whilst remaining as highly controversial as ever, has been developed further, in part by some smaller, express amendment, but mainly by State practice, WTO dispute settlement, and possibly also by a rich and intense public political (and academic!) discussion of its economic and legal terms.

This publication does not aim at retracing these changes and developments in any detail. Rather, it takes them as points of departure for examining whether the TRIPS Agreement should still be seen only as being part of an international trade regulation, which rests on reciprocity of trade concessions, or whether, instead, it needs to be understood as representing a generally accepted—or at least a generally acceptable—legal order of intellectual property, which Member States are supposed and able to transform into a functionally appropriate system of domestic intellectual property protection. The perspective, therefore, is not that of defining the terms of an outright revision of the TRIPS Agreement as such, which, politically speaking, is not to be expected. Rather, the perspective is that of an interpretative evolution, which makes the Agreement better meet the real needs of the economies concerned.

In that regard, the focus is, first, on establishing a better balance between the conflicting interests of the owners of intellectual property rights and of third parties, users or competitors (many of whom may possibly hold or come to hold such property rights as well). Second, there is a constant concern about a potential need for redefining and improving the terms of protection as a matter of enhancing its macroeconomic functionality. Third, it has become ever more important to ensure the compatibility, if not convergence of intellectual property protection with the protection of other private and public goods. Last, but not least, attention must be had of risks of undue indirect or extraterritorial effects of national systems of protection on other nations' systems and economies.

Given the natural limitation of the number of contributors and of their possible involvement in the common research project, it has not been possible to take up all relevant issues. Therefore, some of the more prominent and already broadly discussed problem areas had to be left unattended, such as the controversial link between the protection of intellectual property and economic development in general, or, more specifically, the relationship between intellectual property

protection and access to medicines at prices, which are affordable under given economic conditions.

The contributions have been submitted to critical discussion at a workshop held in Munich on 14 and 15 April 2014, the "anniversary" of the TRIPS Agreement. We express our sincere thanks to all the invited external experts, who by their generous inputs helped us so much to refine our draft papers into the final versions, which we now present in this book.

Munich, Germany
April 2015

Hanns Ullrich
Reto M. Hilty
Matthias Lamping
Josef Drexl

List of Journals

A. J. Comp. L.	The American Journal of Comparative Law
ABLJ	American Business Law Journal
Admin. L. Rev.	Administrative Law Review
AIPLA Qu. J.	AIPLA Quarterly Journal
AJIL	American Journal of International Law
Akron Intell. Prop. J.	Akron Intellectual Property Journal
Alb. L.J. Sci. & Tech.	Albany Law Journal of Science and Technology
Am. Econ. Rev.	The American Economic Review
Am. J.L. & Med.	American Journal of Law & Medicine
Am. U. Int'l L. Rev.	American University International Law Review
Amer. Econ. Rev.	The American Economic Review
Antitrust L.J.	Antitrust Law Journal
Australian J. Asian L.	Australian Journal of Asian Law
Australian Yb. Int'l L.	Australian Year Book of International Law
Australian Econ. Rev.	Australian Economic Review
Australian L.R.	Australian Law Reports
B.C. L. Rev.	Boston College Law Review
B.U. L. Rev.	Boston University Law Review
Berkeley Tech. L.J.	Berkeley Technology Law Journal
BMM Bulletin	Tijdschrift op het gebied van Merken- en Modellenrecht
B.U. Int'l L.J.	Boston University International Law Journal
Buff. L. Rev.	Buffalo Law Review
BYIL	British Yearbook of International Law
Cal. L. Rev.	California Law Review
Cambridge Yb. Eur. Legal Stud.	Cambridge Yearbook of European Legal Studies
Can. Bus. L.J.	Canadian Business Law Journal
Can.-U.S. L.J.	Canada-United States Law Journal
Cardozo A.E.L.J.	Cardozo Arts & Entertainment Law Journal
Case W. Res. J. Int'l L.	Case Western Reserve Journal of International Law

Case W. Res. L. Rev.	Case Western Reserve Law Review
Chi.-Kent L. Rev.	Chicago Kent Law Review
CLP	Current Legal Problems
CML Rev.	Common Market Law Review
Colum. J. Envtl. L.	Columbia Journal of Environmental Law
Colum. J. Eur. L.	Columbia Journal of European Law
Colum. J. Transnat'l L.	Columbia Journal of Transnational Law
Colum. J.L. & Arts	Columbia Journal of Law & the Arts
Colum. L. Rev.	Columbia Law Review
Colum. Sci. & Tech. L. Rev.	Columbia Science and Technology Law Review
Colum.-VLA J.L. & Arts	Columbia VLA Journal of Law & the Arts
Conn. L. Rev.	Connecticut Law Review
Constit. Polit. Econ.	Constitutional Political Economy
Cornell L. Rev.	Cornell Law Review
Currents	Currents International Trade Law Journal
Duke J. Comp. & Int'l L.	Duke Journal of Comparative & International Law
Duke L.J.	Duke Law Journal
EIPR	European Intellectual Property Review
EJIL	European Journal of International Law
ELJ	European Law Journal
Emory Int'l L. Rev.	Emory International Law Review
EuR	Europarecht
Eur. J. Human Genetics	European Journal of Human Genetics
Euro. Comp. J.	European Competition Journal
EuZW	Europäische Zeitschrift für Wirtschaftsrecht
Fed. Circuit B.J.	Federal Circuit Bar Journal
Fla. L. Rev.	Florida Law Review
Fordham Int'l L.J.	Fordham International Law Journal
Fordham Intell. Prop. Media & Ent. L.J.	Fordham Intellectual Property, Media & Entertainment Law Journal
Fordham L. Rev.	Fordham Law Review
Ga. St. U. L. Rev.	Georgia State University Law Review
Geo. Int'l Envtl. L. Rev.	Georgetown International Environmental Law Review
Geo. J. Int'l L.	Georgia Journal of International and Comparative Law
Geo. L.J.	Georgetown Law Journal
Geo. Wash. Int'l L. Rev.	The George Washington International Law Review
GRUR	Gewerblicher Rechtsschutz und Urheberrecht
GRUR Int.	Gewerblicher Rechtsschutz und Urheberrecht – Internationaler Teil
Harv. J.L. & Tech.	Harvard Journal of Law & Technology
Harv. L. Rev.	Harvard Law Review

Hastings Bus. L.J.	Hastings Business Law Journal
Hastings Comm. & Ent. L.J.	Hastings Communications and Entertainment Law Journal
Hastings L.J.	Hastings Law Journal
Hous. J. Int'l L.	Houston Journal of International Law
Hous. L. Rev.	Houston Law Review
HRQ	Human Rights Quarterly
IDEA	IDEA: The Intellectual Property Law Review
IIC	International Review of Intellectual Property and Competition Law
ILR	International Law Research
Ind. J. Global Legal Stud.	Indiana Journal of Global Legal Studies
Ind. J.L. Tech.	The Indian Journal of Law and Technology
Ind. L.J.	Indiana Law Journal
Ind. L. Rev.	Indiana Law Review
Int'l & Comp. L.Q.	International and Comparative Law Quarterly
Int'l J. Hum. Rts.	International Journal of Human Rights (and Constitutional Studies)
Int'l Leg. Mat.	International Legal Material
Int'l & Comp. L.Q.	International and Comparative Law Quarterly
IPQ	Intellectual Property Quarterly
J. Bus. Entrepreneurship & L.	Journal of Business, Entrepreneurship & the Law
J. Competition L. & Econ.	Journal of Competition Law and Economics
J. Crim. Law Criminol.	Journal of Criminal Law and Criminology
J. Econ. Hist.	Journal of Economic History
J. Econ. Persp.	Journal of Economic Perspectives
J. Hum. Rts.	Journal of Human Rights
J. Int'l Dispute Settlement	Journal of International Dispute Settlement
J. Int'l Econ. L.	Journal of International Economic Law
J. Int'l Econ.	Journal of International Economics
J. Int'l Media & Ent. L.	Journal of International Media & Entertainment Law
J. Int'l. Dispute Settlement	Journal of International Dispute Settlement
J. Intell. Prop. L. & Practice	Journal of Intellectual Property Law & Practice
J. Intell. Prop. L.	Journal of Intellectual Property Law
J.L. & Econ.	Journal of Law & Economics
J. Marshall Rev. Intell. Prop. L.	John Marshall Review of Intellectual Property Law
J. Polit. Econ.	Journal of Political Economy
J. Transnat'l L. & Pol'y	Journal of Transnational Law and Policy Spring
J. W. Intell. Prop.	Journal of World Intellectual Property
J.L. & Com.	Journal of Law and Commerce
J.L. & Econ.	Journal of Law & Economics

J.L. Tech. & Pol'y	Journal of Law, Technology & Policy
J.W.T.	Journal of World Trade
JCRED	Journal of Civil Rights and Economic Development
JEL	Journal of Economic Literature
JIPITEC	Journal of Intellectual Property, Information Technology, and Electronic Commerce Law
JIPR	Journal of Intellectual Property Rights
JITE	Journal of Institutional and Theoretical Economics
JLME	Journal of Law, Medicine & Ethics
JNPÖ	Jahrbuch für Neue Politische Ökonomie
JuS	Juristische Schulung
JZ	Juristenzeitung
Kansas L. Rev.	Kansas Law Review
Law & Lit.	Law and Literature
Law & Contemp. Probs.	Law and Contemporary Problems
Law & Pol'y Int'l Bus.	Law and Policy in International Business
Leg. Iss. Eur. Integr.	Legal Issues of European Integration
Legal Iss. Econ. Integr.	Legal Issues of Economic Integration
Loy. L.A. L. Rev.	Loyola of Los Angeles Law Review
Marquette Intell. Prop. L. Rev.	Marquette Intellectual Property Law Review
MdP	Mitteilungen der deutschen Patentanwälte
Mich. J. Int'l L.	Michigan Journal of International Law
Mich. L. Rev.	Michigan Law Review
Mich. St. L. Rev.	Michigan State Law Review
Mich. Telecomm. Tech. L. Rev.	Michigan Telecommunications and Technology Law Review
Minn. J.L. Sc. & Tech.	Minnesota Journal of Law, Science & Technology
Minn. J. Int'l L.	Minnesota Journal of International Law
Minn. L. Rev.	Minnesota Law Review
MIT SMR	MIT Sloan Management Review
MMR	MultiMedia und Recht
Mod. L. Rev.	Modern Law Review
N.C.L. Rev.	North Carolina Law Review
N.Y.L. Sch. L. Rev.	New York Law School Law Review
N.Y.U. J. Legis. & Pub. Pol'y	New York University Journal of Legislation and Public Policy
Nat. Rev. Genet.	Nature Reviews Genetics
Neb. L. Rev.	Nebraska Law Review
New Eng. Econ. Rev.	New England Economic Review
NJCM-Bull.	Nederlands Juristen Comité voor de Mensenrechte Bulletin
NJW	Neue Juristische Wochenschrift
Nord. Envtl. L.J.	Nordic Environmental Law Journal

Nw. J. Int'l L. & Bus.	Northwestern Journal of International Law & Business
Nw. J. Tech. & Intell. Prop.	Northwestern Journal of Technology and Intellectual Property
NYU J. Int.'l L. Pol.	New York University Journal of International Law and Politics
Or. L. Rev.	Oregon Law Review
Oxford Rev. Econ. Pol'y	Oxford Review of Economic Policy
Pac. Rim L. & Pol'y J.	Pacific Rim Law & Policy Journal
Prometheus	Prometheus Critical Studies in Innovation
Q.J. Aus. Econ.	Quarterly Journal of Austrian Economics
R.I.D.E.	Revue Internationale de Droit Économique
RAND J. Econ.	The RAND Journal of Economics
Rev. Econ. Stat.	Review of Economics and Statistics
ReWir	Recklinghäuser Beiträge zu Recht und Wirtschaft
S. Cal. L. Rev.	Southern California Law Review
Santa Clara Comp. & High Tech. L.J.	Santa Clara Computer & High Technology Law Journal
SMU L. Rev.	SMU Law Review
Stanford L. Rev.	Stanford Law Review
Tex. Int'l L.J.	Texas International Law Journal
TMR	The Trademark Reporter
Trade L. & Dev.	Trade, Law and Development
Tul. Envtl. L.J.	Tulane Environmental Law Review
Tul. L. Rev.	Tulane Law Review
U. Chi. L. Rev.	University of Chicago Law Review
U. Ottawa L. & Tech. J.	University of Ottawa Law & Technology Journal
UC Davis L. Rev.	UC Davis Law Review
UC Irvine L. Rev.	UC Irvine Law Review
UCLA J. Int'l L. & Foreign Aff.	UCLA Journal of International Law and Foreign Affairs
UNSW L. J.	University of New South Wales Law Journal
Va. J. Int'l L.	Virginia Journal of International Law
Va. J.L. & Tech.	Virginia Journal of Law and Technology
Va. L. Rev.	Virginia Law Review
Vand. J. Transnat'l L.	Vanderbilt Journal of Transnational Law
Vand. L. Rev.	Vanderbilt Law Review
Vill. L. Rev.	Villanova Law Review
W. New Eng. L. Rev.	Western New England Law Review
Wash. & Lee L. Rev.	Washington and Lee Law Review
WIPO J.	WIPO Journal
Wis. L. Rev.	Wisconsin Law Review
World Comp. L. Rev.	World Competition Law Review
World Econ.	The World Economy

World Trade Rev.	World Trade Review
WuW	Wirtschaft und Wettbewerb
Yale J. Int'l L.	Yale Journal of International Law
Yale L.J.	Yale Law Journal
ZWeR	Zeitschrift für Wettbewerbsrecht

Contents

Part I
Revisiting the Policy Rationale of TRIPS

The Origins and Structure of the TRIPS Agreement

William Cornish and Kathleen Liddell

Contents

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Abstract The essays in this volume focus upon the Trade-Related Intellectual Property Agreement, which is an important element in the constitution and practice of the World Trade Organisation (WTO). Known to all as the TRIPS Agreement, it reached its twentieth anniversary in operative effect on January 1, 2015. It is unlikely that the text of the TRIPS Agreement will be substantially amended by the Member states of the WTO for at least another decade or two. Our contributors therefore take its current terms as a continuing authority in international law for its immediate future. They do so, however, questioning how far the Agreement was adequate for its own time and how far it remains so in a world that has been changing so extraordinarily during the intervening 20 years and doubtless will continue to do so for the twenty to follow.

1 Introduction

The remit of this chapter is to consider the histories of free trade agreements and intellectual property rights up to the introduction of the revised GATT in 1995, while leaving it to other contributors to comment upon events that have provoked front-line debates in the 20 years that have followed.[1] Some of these contributions discuss particular events, for example decisions by Dispute Settlement bodies and the amendments made in the Doha Round.[2] Others seek to explore possibilities for

[1] For legal commentaries on the interpretation of TRIPS, see A. Taubman, H. Wager & J. Watal (2012), A Handbook on the WTO TRIPS Agreement; J. Malbon, C. Lawson & M. Davison (2014), The WTO Agreement on Trade-Related Aspects of Intellectual Property Rights: A Commentary; C. Correa (2010), Research Handbook on Intellectual Property Law and the WTO; C. Correa (2007), Trade Related Aspects of Intellectual Property Rights; D. Gervais (2012), The TRIPS Agreement: Drafting History and Analysis; T. Stoll, J. Busche & K. Arend (2009), Trade-Related Aspects of Intellectual Property Rights. For some imaginative conceptualisation, see esp. G.B. Dinwoodie & R.C. Dreyfuss (2012), A Neofederalist Vision of TRIPS: The Resilience of the International Intellectual Property Regime; which should be read with their essay supporting a central role for WIPO in international development of intellectual property policy.

[2] See Lewinski (this volume).

the future legal interpretation of TRIPS, continuing the extensive literature on "flexibilities" that arise from the drafting of TRIPS.[3] The recurrent question is the extent to which TRIPS and associated international law principles leave responsibilities and freedoms to be set by domestic or regional legislation, administration, judicial precedent and learned commentary. Some chapters consider the explicit and implicit flexibilities within the international framework in so far as TRIPS sits alongside the revised General Agreement on Tariffs and Trade (GATT) and other bilateral and multilateral agreements containing specific terms relating to intellectual property, such as the North American Free Trade Agreement of 1994 between the United States, Canada and Mexico, which have grown so significantly in number.[4] Other chapters consider external sources of law and practice, and the extent to which they deserve recognition in settling how far TRIPS provisions are cast in concrete and how far in more malleable terms, for example, fundamental human rights, the preservation of biodiversity, environmental control and competition law.[5]

These and other arguments surrounding TRIPS reflect the fact (now largely lost in history) that intellectual property protection is not a natural coordinate within a multilateral agreement on international trade. This is one of the central reasons why TRIPS has proven such a significant, controversial and awkward legal instrument in its 20-year life. It is one of the issues we seek to draw out in this chapter.

Intellectual property rights (IPRs) are constructed for specific, limited objectives to encourage those who trade in a nation state to exploit ideas and indications of source without a competitor making unauthorised use of the protected subject-matter, be it a technical invention or trade secret, a literary or artistic work, a trade mark for goods or services or some other category capable of similar legal protection. Holders of IPRs acquire the power to exclude others in a manner which has come to be characterised as private property, an assignation which implies a good many things.[6] It is the right holder who determines how his right will be utilised—in order to protect his own trade from infringers or through assigning or licensing the right by itself or on contractual terms that often enough set out a complex balance of interests between the parties involved. To achieve their objective, the rights must normally provide their holder with a stable commitment: they are not open during their term to cancellation or limitation by the state that grants them, save in exceptional circumstances. As with other rights of property (in land, commodities or assets) the holders may enforce IPRs against infringers who refuse to negotiate permission to act within the scope of the right. This is a realm of hard national law. Accordingly the owners' first recourse in most legal systems is to proceed by civil action brought privately by them. In consequence the legal attributes of intellectual property tend towards conformity over substantial periods of time. The main risks

[3] For a selection of this extensive literature, see below at fn. 37.

[4] See Drexl (this volume).

[5] See Beiter et al. (this volume).

[6] As acknowledged in the Preamble to TRIPS, Recital 3.

that owners face arise from the conditions of the markets to which their IP is relevant. An IPR may confer an exclusive legal right; but its economic value will partly be set by the prospects of continuing demand for products or services that fall either inside or outside the scope of the particular right.

In contrast, free trade agreements (FTAs) are typically consensual commitments between states, on a bilateral, plurilateral or multilateral basis, over the limits that those states must place on restrictions to trade in products or services between their own and other territories. Their conception was thus of the soft law kind which typified international obligations between states before the twentieth century. The content of FTAs emerges through a participant state first considering the treatment that its exporting industries desire by securing the removal or the lowering of customs barriers and other inhibitions imposed by the country to which they are to be sent; and also the needs of its domestic industries for protection against the inflow of competitive products and services from other participant state or states. Out of this preliminary process of consultation are generated policies in the collaborating states relating to trade between them which will reflect the degree of importance that countries attach to their particular industries. Public servants, under the direction of their politicians, will set about striking deals that are acceptable for the time being, but on the basis that each country may in future seek to alter the terms of its earlier agreement. However, as we shall see, TRIPS has put somewhat more by way of legal backbone into the "hard" regulatory obligations that FTAs impose in respect of IPRs.

In order to put these developments into their historical context as well as outlining the legal framework that is their outcome, it is best to deal with the emergence and growth of free trade agreements and intellectual property separately. This we do in Sects. 3 and 4 respectively, even though it calls for some doubling back in historical description. This enables us to treat the first perceptions of some significant amalgamation between the two and then describe the melting pot of major re-negotiation of the original GATT, which started with the Uruguay Round in 1986 (Sect. 5). With the origins of TRIPS summarised, we then move on to the actual content of the TRIPS Agreement (Sects. 6–9).

2 Political Economy and Free Trade

From the late Middle Ages onwards monarchs and their advisers had begun to seek the advantages of international trade, building upon an instinct to hoard—to accumulate their reserves of precious metals, currency, cultivated farmland, technical secrets, staple materials, profits of trade from colonies and so on—which would eventually be labelled 'Mercantilism'. These policies would be challenged in the later eighteenth century by the French Physiocrats and by Adam Smith and his

great follower, David Ricardo, who did much to make the advantages of free or liberalised trade between states a basic tenet of "classical" political economy.[7]

Inter-state trade instruments were largely the outcome of diplomatic negotiation, the studied politeness of which sometimes erupted in ash clouds of political antagonism. Protection of agricultural prices, for instance, would appeal to domestic landowners, but industrialists at home would claim that in consequence they must pay their labour force more than if imports of food ingredients were free of duties. As industrialising economies came to depend increasingly on their colonial and foreign trade, their politics tended to divide over conservative preferences for national protection at home and liberal preferences for free trade abroad. Once a state established a trade ministry, appointed a trade representative or set up offices to oversee trans-national trade in particular fields, that state was likely to be involved in bilateral discussions or, less frequently, in moves to establish plurilateral trade agreements as a means of balancing these preferences.[8]

Trade negotiations were inevitably pragmatic. Each country's public servants, having consulted its industries, would set about securing advantages for its own exporters by ensuring that they would have only to meet comparatively low tariffs, or even none at all, in countries to which they sought to export. Reciprocally, the exporting country would itself undertake not to impose tariffs above an agreed level for products being put onto its own markets from the other state or states. A government, whatever its political colour, had also to consider the needs of its own domestic economy. How satisfactorily could these be met by its own producers? Where would those producers find their raw materials and their own labour force—skilled, semi-skilled, or unskilled—needed to turn out finished commodities? How much more than the costs of bare subsistence would these workers have to earn in order to keep up a sufficient supply of products to a particular market?

Famously, in 1860, Richard Cobden, a leading voice of the Manchester School of political economy, persuaded the Emperor Napoleon III and his chief adviser, Chevalier, to reduce duties imposed on imports of British coal and coke to France in return for the removal of British duties on French wine. He argued that the two trades would then expand more rapidly than if high tariffs were maintained. Within a few years the trade in each direction grew as Cobden had predicted, though the Emperor remarked ruefully on its hardships for the French coal industry and its workers.[9] The trend of thought would be sustained by the successful negotiation of further free trade

[7] For guidance through the evolving theories of free trade advantages, absolute (Smith) or comparative (Ricardo), see M.J. Trebilcock, R. Howse & A. Eliason (2013), Regulation of International Trade, Ch. 1.

[8] For recent use of the evidence over time of adopting free trade underpinnings in support of industrialising economies, see H. Chang (2002), Kicking Away the Ladder: Development Strategy in Historical Perspective.

[9] A.L. Dunham (1930), The Anglo-French Treaty of Commerce of 1860 and the Progress of the Industrial Revolution in France after Napoleon.

agreements, most of them bilateral or to some degree plurilateral.[10] There would be decades to come in which economic depression would persist even in states advancing towards complex urban conditions. Notably this was so towards the end of the nineteenth century and then in the short-enough peace between the World Wars, when governments turned back to supporting their own industries by protecting them with duties against competing products being imported from abroad.

3 Technical Innovation and Economic Growth

3.1 Incentives to Innovate

Alongside the belief in the rewards of free trade between states ran parallel theories that came to be treated as taproots of capitalist enterprise. Economists as different as Maynard Keynes and Milton Friedman associated economic growth to a large degree with a government's control over its money supply. Others, however, such as Joseph Schumpeter, stressed the emergence of a spirit of entrepreneurial drive as crucial to achieving those major technical innovations that would count as creative destructions of the settled orders of economic behaviour. These were the sources of industrial and commercial "revolutions", which increased the prospects for globalising trade during the period before World War I when competitive colonisation by powerful European states was at its height.[11]

Here was a crossroads between opening international trade to competition and providing incentives for industrial change by bolstering innovation. National governments that were promoting the scramble for technology and its productive application began to look at policies that would justify an acceptable flow of traffic between them. Public programmes enhanced the place of education and research and encouraged private individuals and enterprises to do likewise through their own business instincts or public benefactions and the like. Equally governments sought to foster the development of infrastructures that would improve the chances of businesses in their hunt for profitable returns from their business ventures. And for a host of motives, governments would attempt to enhance the productive capacities of less developed countries abroad through, for instance, aid programmes. As industrialising countries spread their wings in the nineteenth century, capital providers, being in the main private risk-takers, began to look for protected positions in the markets that they sought to exploit.

From early on governments in these states were attracted by ideas for intellectual property rights, concentrating their attention for the most part on their domestic scene. Part of their interest was undoubtedly that their role would primarily be

[10] See H. Chang (2002), Kicking Away the Ladder: Development Strategy in Historical Perspective.

[11] See esp., J.A. Schumpeter (1955), History of Economic Analysis.

confined to maintaining a formal granting procedure; and to providing a court system that would handle enforcement of the rights against infringers. Government did not have to take the lead in the recurrent negotiations with other states that was the crucial element in free trade agreements.

3.2 Exclusive Rights of Exploitation Within Competitive Markets

Just when international trade agreements were spreading in the wake of industrialisation, so were systems of IPRs burgeoning in much the same countries. Initial types included patents for inventions, copyright in literary and artistic works, and protection for trade-marks, trade-names and 'get-up' used to indicate the trade source of products and services.[12] Each type was concerned with the ability to put knowledge to exploitative use, so IPRs were accordingly about factual information that had been developed into intelligent knowledge. Defining the rights was inherently difficult, since knowledge is shareable rather than separable; and these rights aimed to constrict what people other than IPR holders could do with it for commercial purposes. IPRs set boundaries to the general preference for freedom of competitive trading in a market, whether the market was purely local or one that extended beyond the reaches of a national state. They have therefore to be sustained by sufficient arguments in favour of their introduction. This is why one finds detailed laws relating to each IPR in developed countries. However much this throws up repeated disputes about the justifications for IPRs from an economic, legal, political, scientific or philosophical perspective, it is a necessary and important exercise that seeks to balance competing interests and resolve policy tensions in the face of considerable theoretical and empirical uncertainty. Understanding the source and importance of this complexity is one key to appreciating what TRIPS has added to inchoate notions of IPRs, their pitfalls and their dangers.

State legislation at the national level would provide the core of this movement but it would also be given shape and purpose through the decisions of courts, the management of patent and trade mark offices by public servants, the growth of professions primarily concerned with presenting applications for protection to these offices, and the establishment of private collecting societies (for example to collect royalties on performances of music in concerts, theatres, and then film showings and broadcasts). In some jurisdictions, enforcement powers were conferred on police, customs authorities and other public or private investigators. From one perspective

[12] For other, more specific forms of IPRs, see below. For further detail, W. Cornish, D. Llewelyn & T. Aplin (2013), Intellectual Property: Patents, Copyright, Trade Marks & Allied Rights.

these investigators were engaged in consumer protection; but unfair trading could equally injure a competitor that held or ought to hold IPRs.[13] The crucial conception of each form of IPR was that right holders would gain what reward they could, not from any direct funding by the state but by their ability to trade on the basis that they had obtained exclusive use of certain types or embodiments of knowledge.

Many of the "intellectual" novelties that received IPR protection had little chance of generating truly striking levels of profit-making, since relatively few of the rights removed all competition between products or services available in a market. But there would be particular intellectual contributions that would displace all real alternatives by being so much fitter for their purpose. It was then that IP right holders gained real economic power to set prices and other advantages at levels most likely to maximise gains for themselves. The very possibility stimulated the gambling instincts of venture capitalists as well as manufacturing and distributive businesses.

3.3 The Degree of Exclusive Protection

This then was the basic legal model for the various types of protection that IPRs gave against direct competition and it would lead eventually to them being classed together under the banner headline, Intellectual Property.[14]

In a broad sense the rules which define the scope of each type of IPR are more elaborate when the right is capable of preventing unlicensed enterprises from producing and marketing a competing product or service at all (regardless of whether copying is involved). For example patents for inventions typically confer a right to any version of the invention to which the patentees have properly laid claim; and they will be entitled to do so when, at the priority date for their patents, they are the first to apply for protection. In modern patent systems, given the strength of such a patent right against independent inventors (not merely copyists), there has to be an application describing the invention so that there can be examinations by qualified personnel at a national or regional patent office before and in some systems immediately after the patent is granted. The procedures and requirements thus established seek to fulfil the basic purposes of the system; first that they provide incentives for research and development that may lead to commercial exploitation and which otherwise might be deterred by the costs involved; and secondly, if successful, they may advance a flow of information from which an industry as a whole can benefit.

[13] See A. Ohly (2015), TRIPS and Consumer Protection, in H. Ullrich, R.M. Hilty, M. Lamping & J. Drexl (Eds.), TRIPS plus 20: From Trade Rules to Market Principles, p. 681 (this volume).

[14] The wide use of the term became standard once the UN brought together the supervision of the major international IP Conventions under its World Intellectual Property Organisation (to English speakers, WIPO, to the French, OMPI; sited in Geneva). Thus it became accepted as a type of private property right, bringing together forms of IP previously labelled 'industrial property' and 'copyright'. See further below, Sects. 4.2 and 4.3.

How efficient the system is in inducing these results is inevitably a matter of controversy, not least because it has to fit industries of a great many types.

Trade marks by contrast exist primarily to indicate the enterprise that has made or marketed its own products. Competitors can put out their own products without using a mark or any other identifying feature that will confuse the public about its trade origin. Difficulties may of course set in. This is likely when public familiarity with an established trade mark leads to the mark being adopted by an outsider as a supposed extension of the range of the first business or as a description of the product whatever source it comes from. Patents last only for a short period (which TRIPS has today standardised as at least 20 years from the filing date of the patent application.)[15] Trade marks and similar indicators last indefinitely so long as their holder continues to use them. Patents require an application to a patent office. Trade marks are protected through a registration system or (in many countries) through court procedures based on a claimant's reputation from use of a mark in actual trade.

Between the poles of patents and trademarks lies the copyright of authors in their writings, compositions and artistic works. Its scope is limited by a general principle that confines it to copying of the expression of ideas, rather than merely the ideas themselves. Typically copyright does not need any preliminary step of deposit or registration with a public authority, yet it lasts for the authors' life plus at least 50 years from his death.[16] These various characteristics have, until recently, been moulded at the levels of national law-making. With the emergence of economic communities of unfederated states, such as what is now the European Union, there have been considerable and complex movements to settle the terms of IPRs by comparing the previously separate systems operating in the member States. The resulting 'approximation' of rules is then intended to operate both for the national granting systems in EU states and for an equivalent EU right which has effect throughout the whole Union territory. Where registration or grant is a necessary preliminary, the result is a competition between two authorities for the business and many practical questions arise in consequence.

We make these points summarily without attempting to sketch in all the elements defining even the core forms of IPR. We do so to suggest that the generation of substantive law of entitlement to IPRs and of the law that settles the scope of infringing activities must inevitably confront issues of basic principle as well as detailed questions of practical procedure. Many of these rules play major roles in confining IPRs to the limited circumstances that justify making exceptions to the general preference for freedom of competition in states that benefit very substantially from capitalistic enterprise.

[15] See below at Sect. 7.6.

[16] See below at Sect. 7.5.

4 National States and IPRs: "Traditional" International Conventions

4.1 Territorial Scope of IPRs

Free trade was most often justified politically and economically in terms of the national policies of states. As qualifications on that freedom, IPRs were established by individual states for their geographical territory. The holders of IPRs could claim against infringers acting in the country for which the rights were granted by public authority or came into effect without formalities. Thus, the unauthorised user of a patented invention in France had to be sued by the owner of the French patent for that invention; the unauthorised publisher of a book in India needed to be pursued by the owner of the Indian copyright.[17]

Working out the impact of IPRs on trade between states during the latter nineteenth century introduced considerations over and above those that were relevant to their impact in the home territory of the inventor, author, designer or brander. Should a country require that the applicant for a patent or registered trade mark be a national or resident of its territory? The answer tended to be no, for one thing because a less-developed country might consider having such systems only if it could attract technology from more advanced states whose industrialists would need to be entitled to local patents and other IPRs for their own protection. But should foreign applicants be entitled to hold IPRs for a particular country if they did not themselves make use of their exclusive knowledge there and so were not bolstering local industry? The concept of a local working requirement attracted some countries, but tended to prove too complex to be generally popular, whether imposed as a straightforward obligation on the right holder or made the basis for a compulsory licence by the state concerned.

Arguments concerning the detailed application of the law at this level were likely to be heavily influenced by those with legal and administrative experience of technology licensing processes. Many would have authority in their state to act as patent or trade mark attorneys, others would have business skills in their particular fields. In each generation and country, such people tended to advocate legal developments or constraints on the scope of IP systems that chimed with the

[17] Much of the effectiveness of IPRs in practice would depend on the rights being licensed by the right holder. In many legal systems those who took exclusive licences would then acquire rights to pursue infringers of the right themselves, rather than having to oblige the right holder to do so. A right holder might license a single manufacturer or distributor for different countries, in the hope thereby of raising barriers against each licensee directly or indirectly selling on into countries where the authorised licensee was charging higher prices or providing other advantages. To achieve this effect, the IPR in the country of import had to apply a concept of 'first sale' or 'exhaustion of rights' only to sales within that country, not internationally. Whether, and in what circumstances, the scope of an IPR could be used to prevent the practice of parallel importation of 'legitimate' goods was unquestionably 'trade-related'. But the issue would eventually be placed outside the embrace of TRIPS (see Art. 5) simply because it was unassuageably contentious.

interests and assumptions of their professional practices. Politicians and public servants without the relevant specialist knowledge tended to find the whole subject too recondite to warrant their attention. So by the 1870s there emerged a groundswell of opinion, led by right holders and the professionals who guided them, towards establishing international links between the countries with industrial and commercial growth spreading beyond their home markets. Separate international Conventions would bring into existence Unions of participating states in the 1880s which would set some groundwork for the scope of IPRs and smooth their administration across countries, so that claimants could obtain rights in an intellectual 'product' in each of the countries where they were likely to have an exploitative value.

4.2 The Paris Convention for the Protection of Industrial Property

The Paris Convention of 1883 and its revisions related to "industrial property" (patents, industrial designs, trademarks, etc). These rights mainly arose by formal grant from each state to which application had been made. By this period, it was mostly accepted that IPRs should be open to foreigners as well as nationals of the state in question. What the Paris Convention provided was an arrangement, particularly important in patent systems, allowing applicants to file in one state and then for an ensuing period of months to retain the priority date of the first application so as to effect further applications for the same invention in other states.[18] If this were not so, publication of the first application might render later applications in other countries no longer "novel", and thus unpatentable at least in those other countries.

The Paris Union also adopted the principle of national treatment between its member states. This effectively prevented nationals of a Union state from claiming that the courts of a second Union state should apply their "home" IPR; instead right holders would be guaranteed all the rights that the second state accorded to its nationals under its own law. As the first of its kind, the Paris Convention was largely confined to international issues concerning the *acquisition* of national IPRs for the same subject-matter and so it would mostly remain. While it required industrial designs to be protected in its Contracting states, it did not characterise the subject-matter that could count for this purpose, nor did it attempt to define the relationship

[18] Similar priority arrangements were introduced for the registration of trade marks and registered designs: see The Paris Convention for the Protection of Industrial Property (Stockholm Revision 1967–68) Art. 4. For the evolution of the Convention, L.J. Duncan (1997), From Privileges to the Paris Convention, Chs. 5–7; W. Cornish et al. (2010), Oxford History of the Laws of England, pp. 956–963; S. Ricketson (2015), Commentary on the Paris Convention for the Protection of Industrial Property.