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INTELLECTUAL PROPERTY RIGHTS AND INTERNATIONAL TRADE: AN OVERVIEW

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ACRONYMS ACTA Anti-Counterfeiting Trade Agreement **OECD** Organisation for Economic Co-operation and Development **BIRPI** Bureaux Internationaux Réunis pour la protection de la Propriété Intellectuelle R&D Research and Development EU TRIPS Agreement on Trade-related Aspects of European Union **Intellectual Property Rights GATT** General Agreement on Tariffs and Trade UNESCO United Nations Educational, Scientific **GIs** geographical indications and Cultural Organization **NAFTA** North American Free Trade Agreement **WIPO** World Intellectual Property Organization WTO World Trade Organization

SUMMARY

There have been extraordinary changes in intellectual property (commonly referred to as IP) law and policy over the last 20 years, many as the result of their intersection with international trade and the numerous international trade agreements brought into force during this period. The increase in cross-border exchanges of goods, services, capital and knowledge is one reason for this shift; structural changes in all economies — with knowledge emerging as society's most important tradable economic asset — are another. Underlying this activity are changes to intellectual property rights laws and policies.

Since economic activity and human well-being are increasingly based on knowledge creation and innovation, ensuring that everyone in the globally connected world has equal access to this knowledge is a central issue. What steps should individual countries and the community of nations take? What criteria should be used to assess how trade and intellectual property regimes should proceed in areas where they intersect? How can the ultimate balance between the needs of innovators and creators and those of users best be achieved? Informed by a review of the economic theory and available empirical evidence, as well as the author's experiences overseeing or participating in trade negotiations, this paper attempts to answer these questions. It includes a brief examination of economic theory and evidence through a discussion of the most relevant literature and provides a series of economic indicators that policy makers or negotiators might find useful in determining, from an economic standpoint, which issues in this rapidly evolving area are the most important. The trade-related intellectual property issues most commonly negotiated in recent bilateral, regional, plurilateral and multilateral trade agreements are also considered.

The paper concludes that intellectual property rights will remain a part of international trade agreements in the future, but that global activity in this area will likely be characterized by varying standards and improved enforcement, reflecting evolution in social, cultural and political attitudes, and a deeper understanding of the relationships among innovation, creation and the wider, more efficient distribution of intellectual property. Increased cooperation might occur at the governance level. It remains to be seen, however, what impact the ongoing changes discussed in the paper will have on trade-related intellectual property law and policy.

INTRODUCTION

Many of the rapid and unprecedented changes in intellectual property law and policy over the past two decades are due to their intersection with international trade and the numerous international trade agreements negotiated and brought into force during this period. This increased activity with respect to international trade agreements is partly the result of the explosion in cross-border exchanges of goods, services, capital and knowledge that has taken place since World War II. During this period, global trade transactions have grown at a rate that is at least twice as fast, in most years, as the increase in many countries' domestic output.

Another reason for the increased significance of intellectual property rights in international trade is that structural changes have taken place in all economies, albeit at different rates. In particular, knowledge — technology, ideas, methods and techniques — is quickly becoming society's most important economic asset. The growth of knowledge as a tradable asset, which takes many forms in its creation, dissemination and movement across borders, is now an established feature of all economies.

A third factor underlying this rapid evolution is that major countries that export intellectual property rights have, in response to their domestic business interests, pressured other countries to change their existing —

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sometimes very weak or non-existent — intellectual property rights-related policies, laws and enforcement procedures to accommodate the exporters' interests. They have often made the case that the country under pressure will also benefit economically from the changes being advocated.

Increased international trade activity, reflecting the growing convergence between global trade and intellectual property rights, has been linked to the successful negotiation of the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS), in the mid-1990s, as part of the outcome of the multilateral Uruguay Round, a key component of the then newly created World Trade Organization (WTO). TRIPS was followed by the inclusion of intellectual property rights standards and enforcement obligations in many regional and bilateral trade agreements, and in stand-alone plurilateral arrangements, such as the recently concluded Anti-Counterfeiting Trade Agreement (ACTA) involving nearly 40 countries.¹

The heightened policy interest in trade-related intellectual property rights is not due entirely to the increased level of trading activity. As the knowledge-driven economy has grown, new perceptions have arisen about the importance of innovation and creativity in society, and how it should best be promoted. Further, public opinion in many countries has become more concerned about issues such as the public commons; public health; the distribution of income; and the sources, nature and implications of economic growth on human well-being — all matters affected by the ownership and distribution of intellectual property rights.

Debate and discussion on the intersection of trade and intellectual property rights thus involves consideration of many variables — social, cultural, humanitarian, political and even constitutional considerations are part of the equation — in addition to economic considerations. The perspective taken and the positions advanced with respect to intellectual property rights, particularly the relationship to international trade and related investment, will be influenced by whether the overriding preoccupation of the observer, policy maker or analyst is primarily economic, legal, cultural, social or political.

Among those who have joined in the debate or thought about the issues, two contending, overriding objectives have been salient: the desire to maximize the economic self-interest of a particular country, region, industry, sector, firm or individual through the development and use of intellectual property rights; or the desire to harness and utilize humankind's innovative and creative forces to improve the human condition, through conditions pertaining to granting and exercising intellectual property rights. The challenge has been, and remains, how to balance these often conflicting objectives within each domestic society and within the world community as a whole.

With economic activity and human well-being increasingly based on knowledge creation and innovation, and with some countries, firms and individuals having — or likely to have — more of this knowledge than others, the central question is how to ensure that everyone in the globally interconnected world gets access to this ever-increasing knowledge in reasonable time and at a reasonable cost, while simultaneously ensuring the continuation of innovation and creativity worldwide. Given the reality of globalization, how should individual countries and the community of nations proceed? What yardsticks or criteria should be used to assess how the trade and intellectual property regimes should evolve in areas where they intersect? And who or what organization will determine the ultimate balance between, on the one hand, the needs of the innovators and creators and, on the other, the needs of users across international boundaries?

This paper attempts to address these questions based on a review of the economic theory and the available empirical evidence, as well as on the author's experience overseeing or participating in trade negotiations that have touched on these matters. It is not a study of intellectual property rights per se, as there are many such studies, but rather of trade-related intellectual property rights. As will become evident, the boundary between what is a "pure" intellectual property issue and what is a significantly trade-related one and, therefore, subject or related to possible international trade negotiations, including enforceable rules, is vague and ever-shifting, especially as new technologies — new ideas, new public- and private-sector actors — and new ways of

¹ Not all countries that participated in the ACTA negotiations from 2007 onward have ratified and implemented the agreement; at the time of publication, 20 countries have done so.

doing things evolve. In addition, the paper sets forth a number of economic indicators that policy makers or negotiators might find relevant in determining which issues in this rapidly evolving area are important than others, from the standpoint of economic performance.

Following a brief review of the respective international governance regimes covering international trade and intellectual property respectively, the paper will summarize and highlight the most relevant literature, the earliest dating back 60 years or more, as a body of ideas reflecting the principal perspectives put forth by a wide range of writers.² The paper will then examine the trade-related intellectual property issues most commonly negotiated in recent bilateral, regional, pluri-lateral and multilateral trade agreements. The positions and/or interests of various countries will be briefly examined from an economic standpoint.

THE EVOLUTION OF TWO GLOBAL GOVERNANCE REGIMES

THE LAW, REGULATIONS AND RULES OF INTERNATIONAL TRADE

The exchange and movement of goods, services, ideas, technologies and people across borders has gone on from time immemorial; its composition, however, has changed over time, as has the means of delivery and the institutions and rules that govern this increasingly globalized commercial activity.³

Today, the export and import of finished goods and services is steadily being replaced by "trade in bits and pieces" — what may also be referred to as "trade in tasks" — via the global or regional value or supply chain, whereby the various functions of conceptualization, development, production, distribution and follow-up servicing of goods and services are becoming increasingly fragmented within or across national boundaries. Basic research is, more and more, being conducted in one or several countries; design, development, and commercialization is often done in another country or countries; raw materials and other resources used to produce goods are exploited in another; production is carried out in another; while assembly, distribution and after-service activity might well be undertaken in any number of different countries. As the world economy becomes ever more integrated, therefore, the concepts of exports and imports are less and less relevant.

The rules governing all this cross-border, increasingly fragmented activity — the regulatory framework that governments provide — are both domestic and international, the latter having been negotiated, modified and updated since World War II in various global, regional and bilateral international trade, investment, science and technology or other arrangements. From an international trade perspective, the centrepiece of the global institutional regime is the Geneva-based WTO, which evolved from the General Agreement on Tariffs and Trade (GATT) in 1995, and comprises political (largely in the form of negotiations), legislative and judicial elements (the mandatory dispute settlement system, which distinguishes the WTO from other international economic governance regimes).

Importantly, not all legitimate cross-border commercial activities are covered by the WTO — some are covered, for example, by the Organisation for Economic Co-operation and Development (OECD) Codes of Conduct or guidelines. In addition, much cross-border activity remains outside negotiated international trade rules, subject to private contract law or even to widely accepted norms of expected behaviour — the so-called "socialization" effect, due to ongoing commercial interchange between and among individuals, businesses or nations. Further, there are some 30 countries that are not yet WTO members; for these non-members, the lengthy process required for "accession" can take as long as two decades.

The now-155 WTO member states continue to try periodically to expand coverage of global trade arrangements through concerted, comprehensive "rounds" of negotiations — the current effort, the Doha Development Round, is the seventh such round since 1947. This latest set of multilateral or global trade negotiations, dating from November 2001, has effectively been at an impasse since July 2008. Some participants and observers now

² The most policy-relevant work is listed in the bibliography at the end of the paper.

³ Some migration over the centuries, particularly from the seventeenth century on, has been commercially driven; some has been driven by social, cultural or other factors; and some has been forced by external or internal forces.

believe that the all-inclusive, single undertaking approach to global trade negotiations ("nothing is agreed until everything is agreed") characteristic of the earlier, successful Uruguay Round (1986–1994) might not be the most effective method of updating the rules and practices of the worldwide trade regime.⁴

Underpinning the WTO and the now almost 300 regional or bilateral trade agreements is the fact that the bulk of the trade rules agreed upon, implemented and enforced through a formal, mandatory dispute resolution process are primarily related to removing or eliminating restrictions at the border on a transparent and non-discriminatory basis. At the core of existing international trade agreements, therefore, is the fact that trade rules are primarily directed at what governments should *not* do with respect to goods, services, technology and ideas that cross borders. The introduction of intellectual property into this mix for the first time in the mid-1990s — both in the North American Free Trade Agreement (NAFTA) and almost simultaneously as a trade-related intellectual property chapter in the multilateral Uruguay Round — was thus revolutionary and game-changing. These two agreements set out in detail the intellectual property standards and enforcement mechanisms that member governments had to adopt domestically as legal obligations and component elements of the overall trade agreement. Not only was an entire regime of domestic, "inside-the-border" intellectual property rights-related rules, regulations and enforcement procedures introduced into a major trade agreement for the first time, but also these standards and enforcement provisions were to be harmonized at a high level, irrespective of the signing member's level of economic, social or cultural development, and of their technical or institutional capacity to implement their obligations.

THE LAW, REGULATIONS AND RULES OF INTELLECTUAL PROPERTY RIGHTS

In contrast to international trade agreements, standards and enforcement procedures pertaining to intellectual property rights date back much farther. While domestic laws to protect private property begin in 1474 with the Venetian Statute and in England from the very early eighteenth century, they covered primarily printed works. Some years later, the Paris Convention on the Protection of Industrial Property, concluded in 1883, was the first international instrument to cover patents on industrial innovations. The Berne Convention for the Protection of Literary and Artistic Works was established three years later to cover copyright, and the Madrid Agreement Concerning the International Registration of Marks, dealing with trademarks, was concluded five years later. Even today, the subject matter of these three agreements covers the principal categories of intellectual property, although industrial designs, geographical indications (GIs), computer circuit topographies and plant breeders' rights, as well as traditional knowledge, access to genetic resources and trade secrets, have become increasingly important as stand-alone categories in the past two decades.

The three late-nineteenth century agreements noted above became part of a larger umbrella organization, the Bureaux Internationaux Réunis pour la Protection de la Propriété Intellectuelle (BIRPI), in 1893; in the post-World War II era this evolved into the Geneva-based World Intellectual Property Organization (WIPO), which became a formal part of the United Nations system in 1974. The focus of WIPO, and BIRPI before it, is intellectual property standards, as high and as harmonized as the dominant members of the organization can agree upon. In contrast to the strong consultative and judicial provisions accompanying mutually agreed upon rules in the international trade system, however, enforcement provisions in WIPO remain non-existent for all practical purposes.

Whereas the principle of non-discrimination between domestic and foreign goods and services — a core element of global international trade arrangements — has always been part of international intellectual property conventions, international trade concerns and issues have not been central to the ongoing operation of WIPO. To the extent that trade has been involved, enforcement of intellectual property rights standards and norms has

⁴ Plurilateral outcomes, which in specific agreements may bind only those countries wishing and able to meet all the obligations, are one way of moving forward. One such agreement covering government procurement was agreed to at the WTO Ministerial Meeting in Geneva in December 2011.

⁵ For example, the Statute of Anne or "An Act for the Encouragement of Learning and for Securing the Property of Copies of Books to the Rightful Owners Thereof" (1710).

taken place at national borders with measures such as Section 337 of the United States Tariff Act of 1930⁶ and Section 301 of the United States Trade Act of 1974.⁷ Using the threat of trade sanctions, Section 301⁸ continues to be instrumental in coercing agreements on US-preferred intellectual property standards and enforcement measures in bilateral trade arrangements, and was used, for example, to induce Brazil and India to agree to TRIPS as part of the Uruguay Round outcome some 18 years ago. Successive US administrations' highly discriminatory and aggressive advocacy of higher intellectual property standards and enforcement provisions, echoed by the European Union (EU), Japan and Switzerland, have helped set the stage for intellectual property rights now becoming an integral part of various trade agreements.

LITERATURE REVIEW: THEORY AND EVIDENCE

Good policy development in complex areas, in particular those related to economics, is based on both theory and evidence. This is especially the case with trade-related intellectual property, given the long history of domestically driven intellectual property rights development and the dominance of the legal profession in promoting and enforcing its standards as a civil or criminal matter. The legal perspective on these matters focuses particularly on the property, rather than on the policy, aspects — issues, for example, of ownership, control and legitimate, as well as illegitimate, access to information. Economics, on the other hand, focuses predominantly on the policy aspects of intellectual property rights, offering the possibility that potential gains and losses that result from any changes in policy can and should be assessed qualitatively and, when data permits, quantitatively. Economics can also help establish causality where it exists, as well as patterns of probability. There are no absolutes in economics; the question is not whether domestic or international legal obligations are being met, but whether the benefits to the individual creator/innovator and ultimately to society outweigh the costs to society in terms of potentially higher costs, lower output, less innovation and creativity, or reduced/delayed access by users because of the exclusive intellectual property monopoly rights granted by government — even if, except for trademarks and GIs, these are time-limited.

In economic theory, the restriction-free movement of goods, services, technology, ideas and people — in short, free or open trade — is considered optimal. Specializing in activities that a nation as a whole does best, and then trading that output for goods and services that are not developed, produced or distributed as efficiently in that country, leads to the greatest national welfare and human well-being according to the broad mainstream of economists. Imposing intellectual property standards or other domestic regulations such as health and safety standards, to the extent that they reduce the volume of trade, is thus seen to inhibit trade and to be, in essence, anti-competitive. In principle, therefore, most economists oppose the insertion of intellectual property standards and procedures in market-opening trade agreements. Some trade economists believe that the introduction of such standards and enforcement procedures into trade agreements was, and remains, wrong, particularly in the WTO — whose members are at many different stages of development — and has tilted the balance of advantage to producers and creators away from consumers, particularly from consumers in poorer countries. They assert that current trade agreements that include intellectual property rights have created a "system imbalance" that will need to be rectified in the future.

Other theoretical work, however, has been more nuanced. It has been argued that weak or non-existent intellectual property standards or enforcement measures can have the effect of a non-tariff trade measure,⁹

⁶ This lack of enforcement provisions is characteristic of all contemporary international economic governance arrangements, except with respect to the international trade regime (both multilateral as part of the WTO and in many regional trade arrangements such as NAFTA). It is a reason why many environmental and human rights advocates, for example, keep urging that these and related socio-cultural issues be dealt with under the aegis of international trade agreements.

⁷ Provisions under this Act gave US border authorities the right to seize suspected goods — goods alleged to be in violation of US intellectual property provisions — before any domestic legal proceedings. Many observers referred to this procedure as "double-jeopardy" and in violation of US national treatment trade obligations.

⁸ This provision includes an annual "watch list" (a warning) of intellectual property rights practices by foreign governments deemed to be infringing, or likely to infringe, US intellectual property laws and thus subject to unilateral, punitive action by the US government.

⁹ Economists often refer to this as a non-tariff barrier with exactly the same meaning and implication.

resulting in less international trade than would otherwise be the case — through a complex mix of reduced direct foreign investment, less technological transfer, fewer joint ventures or licensing agreements, and lower demand. Further, the proponents of including intellectual property in trade agreements argue that strong and predictable intellectual property laws and practices in one jurisdiction must not be undercut by weaker standards or lesser enforcement procedures in others. This is necessary to ensure that the collective, worldwide interest in ever-increasing innovation, creativity and improved well-being is sustained.

A review of the literature suggests that the impact of intellectual property on innovation, creativity, international trade and on the economy more generally, depends on the unique circumstances and the particular economic sector, as well as on the specific intellectual property rights measure, among other variables. Additional influencing factors include a country's innovative potential, such as its adaptive capacity, the educational level of its workforce, the structure and funding of research and development (R&D), the management of assets and the institutions involved.

A direct link between trade and intellectual property rights appears to be even weaker when examined on empirical rather than on theoretical grounds. Yet some support may exist for an indirect link through the impact of patents in a few clearly identifiable sectors, copyright in several sectors and, to a lesser extent, trademarks. For example, an empirical tie can be established between strengthened patent protection and innovation in the pharmaceutical and chemical sectors. The empirical link between trade and intellectual property, particularly with regard to patents, is also evident in the newer fields of nanotechnology and genetic engineering, and in the "older" non-electrical machinery, transportation, office equipment and metals sectors. In these and other sectors, however, factors such as conventional trade and investment policies, the tax system, production incentives (subsidies), and competition laws and practices — which can all be shown to influence the rate of knowledge creation and its adaptation to product design and production technologies — appear to be more important than intellectual property rights in stimulating innovation and commercialization; thus, the quality and, perhaps, even the volume and value of goods and services traded.

The broader economic framework policies noted above are probably even more important than intellectual property rights with respect to copyright, especially in the current era of intensifying information and knowledge development. Since the link between copyright standards and creativity appears to be empirically weak, support for copyright protection — whether of a qualitative or quantitative nature — needs to be based far more on desired outcomes relating to income distribution and on social and cultural objectives than on purely economic factors. Indeed, as information industries evolve, standard copyright provisions might become an impediment to innovation and creativity, particularly if digital locks restrict access to previous software developments or if the price of copyrighted products becomes too high for consumers.

Finally, the relationship between trademarks and, by extension, GIs — categories of intellectual property rights that assure consumers of the authenticity and safety of goods and services in the marketplace through reputation and trust — to international trade has not been proved empirically. While loss of income to the trademark or GI owner and questions of fairness come into play, there is limited economic justification for this link in terms of efficiency and competitiveness, especially since there is no time limit on the market exclusivity afforded by the grant of a trademark and/or GIs, as previously noted.

Notwithstanding the foregoing considerations, a country might have compelling economic reasons to consider domestic intellectual property rights changes, whether or not a direct, or even an indirect, link can be made to the volume or nature of international trade flows. These economic reasons have, in the past, related mainly to patents, but increasingly they also apply to "new age" copyright. While strengthened intellectual property measures might or might not increase exports or intermediate goods or services imports, a well-functioning intellectual property regime could encourage more high technology focused investment, and, in particular, more imports of now-protected goods and services, as regional and global supply chains evolve.¹⁰

¹⁰ As noted in the section "The Evolution of Two Global Governance Regimes" earlier in this paper, "trade in tasks" or fragmented production leading to new forms of business organization are increasingly common.

Importantly, combined with the other policy measures noted above, they might lead to a greater number of joint ventures and/or more licensing agreements in the country in question, thereby contributing to economywide productivity and income growth.

Researchers have used various economic indicators to infer where intellectual property laws might be changed to strengthen economies or the international economic system as a whole. Metrics used by a number of authors include: investment and/or R&D expenditures as a percentage of GDP; business enterprise expenditures on R&D; higher education expenditures on R&D; government expenditures on R&D; numbers of R&D personnel; the balance of trade or of income derived from royalties and other payments; the number of patent filings; and the volume of copyright or trademark registrations held either by residents or non-residents (although copyrights do not need to be registered). None of these metrics, however, are particularly useful or have economic merit on their own; they appear to lack correlation and are not persuasive in establishing causality in terms of the desired outcome of more innovation or creativity than might otherwise be the case. The most that can be said is that, in commercial sectors driven by research, carefully circumscribed intellectual property rights protection can be important if it is accompanied by other economic policies and sound administrative practices; in other sectors, income distribution and fairness considerations appear to be more important than the innovation or creativity engendered by the time-limited market exclusivity granted through intellectual property rights.

INTELLECTUAL PROPERTY ISSUES AND ECONOMIC INDICATORS

As discussed above, there are few unambiguous economic indicators that conclusively measure trade-related intellectual property. One indicator employed at times by politicians, the media and business groups is that of a national or sector trade balance. Most economists have rejected this measure on the grounds that it is purely an accounting phenomenon and, therefore, not appropriate or meaningful for policy purposes, where causality is the issue, not static balances. The same holds true when trying to measure the success of intellectual property by comparing the number of patent filings or copyright registrations in one country with others.

Even where causality can be shown, the economic impact of augmented patent protection is ambiguous at best; probably the best overview or comprehensive study done to date, the OECD's Science and Technology Indicators Database project, provides only limited evidence that patent protection might have some differential impact on invention by broadly defined industry-sector groupings. Communication equipment, aircraft and motor vehicles, office and computer equipment, as well as chemicals, pharmaceuticals and metals appear in this study to be more directly affected by intellectual property provisions than, for example, consumer products or the wood and furniture sector. The economic analysis by the OECD and individual researchers is not calibrated finely enough, however, to demonstrate whether differential patent standards, including duration, should be adopted by individual countries and made part of international agreements in the future.

The economic impact of copyright provisions is even less clear; economic analysis is not even able to tell if increased or lowered copyright provisions will lead to the publication of more or fewer books; the development of more or fewer websites; the creation of new media; the production of new films and videos; the development of new software; or if pro- or anti-competitive business practices will be unleashed. Nevertheless, to the extent that income distribution is affected by the strength or weakness of copyright provisions and that the pattern of income distribution can be considered a matter of economic rather than of social policy, a case can be made that there is at least some economic impact arising from copyright protection, even only if at the margins.

As with patent and copyright laws, trademark and related GI provisions can also have an income distribution effect: shifting commercial revenue from one producer to another; from consumers to intellectual property owners; or from one country to another. The Parma ham dispute between Canada and the European Union (Italy) is a clear example of what is at stake and what economic analysis can or cannot tell us. If a distinction is not made between Italian-sourced Parma ham and Parma ham of Canadian origin, will consumer confusion or uncertainty over what is Parma ham, for example, result in less supply of this ham in the international, Canadian or Italian markets than would otherwise be the case? If the GI were changed to cover only ham made

in the Parma region of Italy, how would existing Canadian producers of the product, or Canadian consumers, fare in terms of price, availability and quality? And how much better off would the Italian producers of Parma ham be? These micro-issues involving GIs require more detailed research, both to inform policy and to make changes, on the basis of sound analysis, over and above the highly political factors that come into play on the issue, particularly in recent years.

Overall, should the worldwide supply of innovative, knowledge-intensive goods and services be insufficient, the solution could well be increased intellectual property rights protection, involving both standards and enforcement, among other economic policy measures. But findings from the extensive literature and from current practice suggest that structural factors affecting the potential supply of new and improved goods and services could be as, or more important, and have a much more direct economic impact, than strengthened intellectual property rights. These other factors include: the degree of openness of any given economy; the amount of competition in each economy and in the world generally; tax policies; the quality and quantity of labour; the structure and funding of R&D; the existence of strong administrative and judicial institutions to support the granting and enforcement of intellectual property rights; and, importantly, the willingness and capacity of each society to create, adapt and absorb new ideas, technologies, cultural influences and techniques. A well-modulated framework of policies, laws, regulations and enforcement provisions will be a necessary, although not sufficient, element of this broader policy package to keep any given economy at the leading edge.

THE POST-TRIPS INTELLECTUAL PROPERTY ENVIRONMENT

Since the implementation of the TRIPS chapter as part of the Uruguay Round outcome in 1995, there has been much activity, but not much forward movement, in trade-related intellectual property rule making at the multilateral level. Perhaps the most important development in terms of standards has been the 2003 Doha Declaration on the TRIPS Agreement and Public Health. Under this exception, negotiated with great difficulty and used only once by a single country to date (Canada in 2005), domestic patent provisions in any WTO member country can be amended to allow generic pharmaceutical companies to obtain compulsory licenses to manufacture and sell medicines to least-developed countries facing public health crises in the three carefully defined and circumscribed medical categories of HIV/AIDs, malaria and tuberculosis.

More recently, in response to "theft" and "piracy" concerns and the desire of some countries to bypass the WTO, where negotiated outcomes have been slow or non-existent, tougher standards and, more importantly, stronger enforcement and coordination mechanisms to combat counterfeiting were agreed to in negotiations that led to the ACTA, concluded in October 2010. This plurilateral initiative involved some 40 countries, including all 27 EU member states, Australia, Canada, Japan, Korea, Mexico, Morocco, New Zealand, Singapore, Switzerland and the United States, although to date only 20 countries have passed the necessary legislation. Separately, several countries have launched dispute settlement actions involving intellectual property, or threatened to do so, in recent years. The most significant of these actions have been brought against China by the United States for weak copyright and trademark standards, and in particular, for ineffective civil, customs and criminal enforcement of intellectual property rules. The results of these judicial actions have been mixed, with dispute panels tending overall to insist on higher copyright standards and better enforcement by China in meeting its WTO obligations.

As well, the United States and the European Union have insisted on including "TRIPS-plus" provisions, such as lengthened patent data requirements, strengthened copyright provisions and expanded coverage for GIs in new regional and bilateral trade agreements to which they are a party.

The sole additional initiative in recent years concerns intellectual property standards relating to aboriginal or folkloric material (traditional knowledge). These cultural and social aspects of intellectual property rights have evoked interest from civil society and non-governmental organizations and have involved increasingly the United Nations Educational, Scientific and Cultural Organization (UNESCO). One outcome of this international

¹¹ See WTO (2005). "Amendment of the TRIPS Agreement: Decision of 6 December 2005." WTO document no. WTO\L\641. December 8.

activity was the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions completed in 2005.

The "Development Agenda" proposed as part of the reform process underway in WIPO could have a major impact on intellectual property standards in the future. In essence, "the one-size fits all" or "the higher the better" approach to intellectual property standards is increasingly at variance with WIPO's Development Agenda. The large, and progressively more influential, emerging economies such as Brazil, China and India, with rapidly developing high-tech sectors, are becoming less inclined to support comprehensive and harmonized intellectual property standards at the levels favoured by the United States, the European Union and other developed countries. Such standards are not, in any case, easily enforceable in low-income countries.

There are some initiatives, treaties and conventions that are less directly trade-related, but nonetheless, highly relevant to the movement of intellectual property across borders that are either underway or have been completed in recent years. These include the WIPO Internet Treaties (1996), the Internet Corporation for Assigned Names and Numbers ongoing initiative to develop a Uniform Domain-Name Dispute-Resolution Policy and the Nagoya Protocol to the Convention on Biological Diversity. In addition, serious discussions are underway about a new WIPO Substantive Patent Law Treaty, which could allow the patenting of biomedicines, genetic resources and related elements, and extend exclusive data protection to the pharmaceutical and, perhaps, to other sectors. There is, as well, increasing pressure from private sector interests in developed countries, supported by their governments, to extend copyright terms to 75 years from 50 years, to introduce a stronger "notice and takedown" system targeted at internet service providers, and for technological protection measures or "digital locks" to curtail unauthorized copying, distribution, performance and display of content. Many users, such as libraries, universities and some in the literary community, have objected strongly to these proposed and possible future restrictions. To deal with the problems that have arisen, they advocate broader exemptions to copyright rules, such as expanded fair dealing or fair use provisions, aimed at ensuring a wider diffusion of ideas and knowledge without the threat of expensive litigation or restrictions on interoperability.

EXPECTED TRENDS REGARDING INTELLECTUAL PROPERTY AND FUTURE TRADE AGREEMENTS

Putting aside more instances of intensive and highly politicized activity under the 2003 TRIPS Agreement on Public Health, very little change to intellectual property rights is to be expected under the aegis of the WTO for the foreseeable future. The WTO agenda is full to overflowing, and the political will to advance new rules in any area of trade remains wanting at the moment. "Old" issues such as agriculture and non-agricultural market access, technical barriers to trade, phyto-sanitary measures, trade facilitation and aid for trade — all part of the Doha Development Round — are to intents and purposes shelved or will need inclusion in new trade liberalization initiatives either within the fold of the WTO or outside it. New issues that the world must tackle over the coming decade, within or outside the WTO, include business services, regulatory alignment, further trade facilitation, trade-related climate change (carbon taxes and permit trading), trade and economic development, expanded aspects of investment and, perhaps, the beginning steps towards international competition law. A full trade agenda, including the old and the new, lies ahead.

Outside WTO-based multilateral or bilateral discussions, it is clear that trade-related intellectual property activity, possibly unrelated to trade rules, will continue in other contexts in the near and medium term, given private-sector pressures and the logic of the globalized knowledge-based, networked world economy. The successful initiative by a like-minded bloc of countries resulting in tougher standards and enforcement through the Anti-Counterfeiting Treaty, operating outside the WTO, has already been noted. There are likely to be other such ad hoc initiatives.

¹² An excellent review of the issues at stake and some proposed strategies is in de Beer (ed.), 2009.

¹³ Legislative steps to strengthen copyright are under discussion in various countries. A controversial example is the proposed Online Protection and Enforcement of Digital Trade Act in the United States. This would permit the US International Trade Commission to investigate whether a foreign website was dedicated to piracy.

The United States can be expected to continue leaning on its negotiating partners to obtain additional, stronger or longer intellectual property protection (especially in the copyright area) and better enforcement through new bilateral trade agreements. ¹⁴ The European Union will also sustain the pressure on its trading partners in selected areas of copyright, such as: music, films and videos/DVDs; GIs; ¹⁵ and the protection of patent data for longer periods of time. Japan, another traditional intellectual property "hawk," but never up-front as a *demandeur* in any international economic issue area, will continue to follow the US and EU leads, supporting stronger patent and trademark norms where they arise, although not aggressively advocating them.

Reflecting global power shifts and the importance of trade-related investment and licensing, Korea, Chinese Taipei (Taiwan), Brazil, India and, more and more, China and several Central and East European nations, will likely increase their interest in trade-related intellectual property matters, in WIPO and elsewhere, as their economies take on the characteristics of the more industrialized economies. Conversely, the tendency of developed economy exporters such as the United States, the European Union, Japan and Switzerland to push over time for stronger intellectual property rights, might well weaken as these currently dominant exporters of intellectual property take measures to protect the interests of their established industrialized sectors against the new high-tech competitors.

CONCLUSION

It is a new era for trade-related intellectual property. The world has advanced; it will not shift backwards — intellectual property rights will remain part of international trade agreements, but varying standards combined with improved and less discriminatory enforcement will characterize future global activity in this area. This changed approach will be more complex, more nuanced, less absolutist, more political, more cooperative and less frequently rules-based than it has been over the past two decades. This transformation in approach to trade-related intellectual property rights reflects the evolution of social, cultural and political mores and attitudes, as well as a more finely tuned understanding of the relationships among innovation, creation, and wider, more efficient, dissemination of intellectual property.

Increasingly, health, education, heritage and the global commons, including environmental considerations, are concerns in the context of changing demographics and shifting public opinion; new ways to involve broad publics through consultations, round tables, discussions, focus groups and social media will enhance, and at times, perhaps overtake legislative options. It is also likely that at the government-to-government or governance levels, increased cooperation and consultation may well supplement treaty making, particularly as more non-governmental actors and stakeholders become involved in this significant area of public policy.

The movement of legitimate goods, services, capital, ideas and skilled persons will, undoubtedly, intensify as the world continues to emerge, slowly and fitfully, from the Great Recession of 2008-2009 and resumes its process of integration. But the ultimate impact of the ongoing global transitions discussed in this paper on trade-related intellectual property law and policy remains very unclear.

¹⁴ The US-Australia Free Trade Agreement was characterized by strong intellectual property rights provisions, insisted upon by the United States. These provisions almost caused its defeat in the Australian lower House of Parliament.

¹⁵ This is one of the key European Union "asks" in the current Canada-European Union trade negotiations.

BIBLIOGRAPHY

- Amani, B. (2009). State Agency and the Patenting of Life in International Law: Merchants and Missionaries in a Global Society. Ashgate.
- ——— (2002). "Patents and Public Health: International Trade Obligations and Domestic Policy Development." Health Law in Canada 22, no. 3: 76–84.
- Anderson, R., P. Feuer, B. Rivard and M. Ronayne (1998). "Intellectual Property Rights and International Market Segmentation in the North American Free Trade Area." In *Competition Policy and Intellectual Property Rights in the Knowledge-Based Economy*, edited by R. Anderson and W. Gallini. University of Calgary Press.
- Arrow, K. (1962). "Economic Welfare and the Allocation of Responses for Innovation." *The Rate and Direction of Innovative Activity: Economics and Social Factors*. National Bureau of Economic Research.
- Baldwin, J. (1997). Innovation and Intellectual Property. Statistics Canada Research Paper, Cat. No. 88-515.
- Baldwin, J., P. Hanel and D. Sabourin (2000). *Determinants of Innovative Activity in Canadian Manufacturing Firms: The Role of Intellectual Property Rights*. Statistics Canada Research Paper, Cat. No. 11.
- Bhagwati, J. (2004). In Defense of Globalization. Oxford University Press.
- Benkler, Y. (2006). The Wealth of Networks. Yale University Press.
- Birnhack, Michael D. (2008). "Trading Copyright: Global Pressure on Local Culture." In *The Development Agenda: Global Intellectual Property and Developing Countries*, edited by Neil Netanel. Oxford University Press.
- Boon, M. (2010). In Praise of Copying. Harvard University Press.
- Canadian Intellectual Property Council (2008). A Time for Change: Toward a New Era for Intellectual Property Rights in Canada.
- Carr, D., J. Markusen and K. Maskus (2001). "Estimating the Knowledge-Capital Model of the Multinational Enterprises." *The American Economic Review* 91, no. 3: 693–708.
- Charles, S., G. McDougall and J. Tran (2001). "The Importance of Intellectual Property Instruments in the Canadian Economy." Industry Canada.
- Chin, J. and G. Grossman (1990). "Intellectual Property Rights and North-South Trade." In *The Political Economy of International Trade*, edited by R.W. Jones and A. Krueger. Oxford, Basil Blackwell.
- Choate, P. (2005). Hot Property: The Stealing of Ideas in an Age of Globalization. Alfred Knopf.
- Commission on Intellectual Property Rights (2002). *Integrating Intellectual Property Rights and Development Policy*. Available at: http://iprcommision.org/papers/pdfs/final_report/CCPR.
- Convention on Biological Diversity (1992). 1760 UNTS 143, 3/ILM818.
- De Beer, J. (ed.) (2009). *Implementing the World Intellectual Property Organization's Development Agenda*. CIGI, IDRC and Wilfrid Laurier University Press.
- De Beer, J. and M. Geist (2007). "Developing Canada's Intellectual Property Agenda." In *Canada Among Nations* 2007, edited by Jean Daudelin and Daniel Schwanen. McGill-Queen's University Press.
- Deardroff, A. (1990). "Should Patent Protection Be Extended to All Developing Countries?" The World Economy 13.
- ——— (1992). "Welfare Effects of Global Patent Protection." Economica 59, no. 233: 35–51.

- Diwan, I. and D. Rodrik (1991). "Patents, Appropriate Technology and North-South Trade." *Journal of International Economy* 30.
- Doha Ministerial Declaration (2001). Doc. WT/MIN (01). DEC 1.
- Drahos, P. (2005). "Intellectual Property Rights in the Knowledge Economy." In *Handbook on the Knowledge Economy*, edited by D. Rooney, G. Hearn and A. Ninan. Edward Elgar Publishing.
- ——— (2002). "Developing Countries and International Intellectual Property Standard-Setting." Journal of World Intellectual Property 5.
- ——— (2002). "Negotiating Intellectual Property Rights: Between Coercion and Dialogue." In *Global Intellectual Property Rights: Knowledge, Access and Development*, edited by P. Drahos and R. Mayne. Palgrave Macmillan.
- Drahos, P., and J. Braithwaite (2002). Information Feudalism. The New York Press.
- Eaton, J. and S. Kortun (1996). "Trade in Ideas: Patenting and Productivity in the OECD." *Journal of International Economics* 40.
- Ferrantino, M. (1993). "The Effect of Intellectual Property Rights on International Trade and Investment." Weltwirtschaffliches Archive 129.
- Fink, C. (2008). "Intellectual Property and Public Health: An Overview of the Debate with a Focus on US Policy." Center for Global Development Working Paper Number 146.
- Fink, C. and Keith Maskus (eds.) (2005). *Intellectual Property and Development: Lessons from Recent Economic Research*. World Bank and Oxford University Press.
- Finger, J. Michael and Philip Schuler (2003). *Poor People's Knowledge: Promoting Intellectual Property in Developing Countries*. World Bank and Oxford University Press.
- Friedman, D., W. Landes and R. Posner (1991). "Some Economics of Trade Secret Law." *Journal of Economic Perspectives* 5.
- Ganslandt, M. and K. Maskus. (2007). "Intellectual Property Rights, Parallel Imports and Strategic Behaviour." Social Services Research Network.
- Geist, M. (ed.) (2010). From "Radical Extremism" to "Balanced Copyright": Canadian Copyright and the Digital Agenda. Irwin.
- Geist, M. (2009, 2008, 2007, 2005, and 2004). Articles in the Ottawa Citizen and the Toronto Star.
- Gervais, D. (2002). "The Internationalization of Intellectual Property: New Challenges from the Very Old and the Very New." Fordham Intellectual Property Media and Entertainment Law Journal 12, no. 4.
- ——— (2009). "TRIPs and Development." In *Intellectual Property, Trade and Development Strategies to Optimize Economic Development in a TRIP-Plus Era*, edited by D. Gervais. Oxford University Press.
- Gillespie, T. (2007). Wired Shut: Copyright and the Shape of Digital Culture. The MIT Press.
- Gould, D. and W. Gruben (1996). "The Role of Intellectual Property Rights in Economic Growth." *Journal of Development Economics* 48.
- ——— (2008). Canada-Peru Free Trade Agreement.

- ——— (2009). "The Anti-Counterfeiting Trade Agreement Summary of Key Elements under Discussion." Available at: www.international.gc.ca/trade-agreements-accords-commerciaux/fo/key-summary-resume-cle.aspx?lang=en&view=d.
- ——— (2011). "Global Value Chains: Impact and Implications." *Trade Policy Research* 2011. Ministry of Public Works and Government Services Canada.
- Government of Canada-European Union (2008). "Assessing the Costs and Benefits of a Closer EU-Canada Partnership: A Joint Study by the European Commission and the Government of Canada." Available at: http://trade.ec.europa.eu/doclib/docs/2008/october/tradoc_141032.pdf.
- Gruben, W. (1992). "Trade Policy and Intellectual Property Protection: The North South Dispute." Federal Reserve Bank of Dallas Economic Review 4.
- Handa, S. (2002). Copyright Law in Canada. Butterworths.
- Hanel, P. (1998). Current Intellectual Property Protection Practices of Manufacturing Firms in Canada. Industry Canada, Micro-economic Policy Analysis Branch. Chapter 4.
- Hayhurst, W. (1996). "Intellectual Property Laws in Canada: The British Tradition, the American Influence and the French Factor." *Intellectual Property Journal* 10.
- Helfer, L. (2004). "Regime Shifting: The TRIPs Agreements and New Dynamics of International Intellectual Property Lawmaking." *Yale Journal of International Law* 29.
- Hoekman, B and M. Kostecki (1995). *The Political Economy of the World Trading System: From GATT to WTO*. Oxford University Press.
- Hyde, L. (2010). Common as Air: Revolution, Art and Ownership. Farrar, Straus and Giroux.
- Jackson, J.H., W.J. Davey and A.O. Sykes, Jr. (2005). Legal Problems of International Economic Relations. Thomson-West.
- Jacob, R. (1997). "Industrial Property Industry's Enemy." Intellectual Property Quarterly 1, no. 3.
- Jaffe, A. and J. Lerner (2004). Innovation and its Discontents. Princeton University Press.
- Kaminski, M. (2011). "An Overview and the Evolution of the Anti-Counterfeiting Trade (ACTA)." PIJIP Research Paper no. 17. American University Washington College of Law, Washington, DC.
- Knoll, M. (1986). "Gray-market Imports: Causes, Consequences and Responses." *Law and Policy in International Business* 18, no. 145.
- Korenko, G. (1999). "Intellectual Property Protection and Industrial Growth." *Journal of World Intellectual Property* 2.
- Landes, W. and R. Posner (1987). "Trademark Law: An Economic Perspective." Journal of Law and Economics 30, no. 2.
- Landes, W. and R. Posner (1989). "An Economic Analysis of Copyright Law." Journal of Legal Studies 30.
- ——— (2003). The Economic Structure of Intellectual Property Law. University of Chicago Press.
- Lanjouw, J. (1998). "The Introduction of Pharmaceutical Product Patents in India: Health Exploitation of the Poor and Suffering?" NBER Working Paper 6366.
- Lazarus, G. (2001). "On the Role of Patenting in Innovation for the Biotechnology Industry in Canada." In *Intellectual Property and Innovation in the Knowledge-based Economy*, edited by J.D. Putnam. Industry Canada.

- Lee, J-Y and E. Mansfield (1996). "Intellectual Property Protection and US Foreign Direct Investment." *Review of Economics and Statistics* 78.
- Li, Xuen (2007). "Demystifying Explosion in Patenting Growth Rate." *South Bulletin: Reflections and Foresights* 1, no. 7.
- Knopf, H. (2006). "CRIA Spinning on the WIPO Treaties," Excess Copyright. Cited in de Beer and Geist (2007).
- Koury-Menescal, A. (2006). "Changing WIPO's Ways? The 2004 Development Agenda in Historical Perspective." *Journal of World Intellectual Property* 8, no. 6.
- Mansfield, F. (1993). "Unauthorized Use of Intellectual Property: Effects on Investment, Technology Transfer and Innovation." *Global Dimensions of Intellectual Property Rights and Science and Technology* NRC 107.
- Machlup, F. (1958). "An Economic Review of the Patent System." Study commissioned by the Subcommittee on Patents, Trademarks and Copyrights of the Committee on the Judiciary, 85th Congress, 2nd session. Study no. 15.
- Maskus, K. and M. Penubarti (1991). "Comparing International Trade Data and Product and National Characteristics Data for the Analysis of Trade Models." In *International Economic Transactions: Issues in Measurement and Empirical Research*, edited by Paul Hooper and J.D. Richardson. University of Chicago Press.
- Maskus, K. and D. Eby-Konan (1994). "Trade-related Intellectual Property Rights: Issues and Exploratory Results." In *Analytical and Negotiating Issues in the Global Trading System*, edited by A. Deardroff and R. Stern. University of Michigan Press.
- Maskus, K. and M. Penubarti (1995). "How Trade-Related are Intellectual Property Rights?" *Journal of International Economics* 39.
- Maskus, K. (1997). "Patents and International Trade." In *Quiet Pioneering: Robert M. Stern and His International Economic Legacy*, edited by K. Maskus and R.M. Stern. University of Michigan Press.
- Maskus, K. (2000). Intellectual Property Rights in the Global Economy. Institute for International Economics.
- ——— (2000). "Intellectual Property Rights and Foreign Direct Investment." Center for International Economics Short Working Paper, no. 23.
- ——— (2000). "Regulatory Standards in the WTO." Peterson Institute for International Economics Working Paper 00-1.
- Matthews, D. (2002). Globalizing Intellectual Property Rights: The TRIPs Agreement. Routledge.
- May, C. (2007). The World Intellectual Property Organization: Resurgence and the Development Agenda. Routledge.
- ——— (2007). "The Hypocrisy of Forgetfulness: The Contemporary Significance of Early Innovations in Intellectual Property." *Review of International Political Economy* 14.
- Mazzoleni, R. and R. Nelson (1998). "Economic Theories about the Benefits and Costs of Patents." *Journal of Economic Issues* 32.
- McFetridge, D. (1998). "Intellectual Property, Technology Differences, and Growth in the Canadian Economy." In *Competition Policy and Intellectual Property Rights in the Knowledge-based Economy*, edited by D. Anderson and N. Gallini. University of Calgary Press.
- Musungu, S.F. and Graham Dutfield (2003). *Multilateral Agreements and a TRIPs-plus World: The World Property Organization*. Cited in de Beer (ed.) (2009).

- OECD (2008). Handbook on Constructing Composite Indicators: Methods and User Guide. STD/DOC (2005) 3. Paris: OECD.
- Park, W. and J. Ginarte (1997). "Intellectual Property Rights and Economic Growth." *Contemporary Economic Policy* 15.
- Pazderka, B. (1999). "Patent Protection and Pharmaceutical R&D Spending in Canada." Canadian Public Policy 25.
- Penrose, E. (1951). The Economics of the International Patenting System. Cambridge University Press.
- Roberts, R.J. (1995). "Technology Transfer Agreements and North America Competitive Law." *Intellectual Property Journal* 9.
- Rafiquzzaman, M. and S. Ghosh (2001). "The Importance of Patents, Trade-marks and Copyright for Innovation and Economic Performance: Developing a Research Agenda for Canadian Policy." In *Intellectual Property and Innovation in the Knowledge-based Economy*, edited by J.D. Putnam. Industry Canada.
- Rafiquzzaman, M. and L. Whewell (1998). "Recent Jump in Patenting Activities: Comparative Innovation Performance of Major Industrial Countries, Patents and Explanations." Working Paper No. 27, Industry Canada.
- Rapp, R. and R. Rozek (1990). "Benefits and Costs of Intellectual Property Protection in Developing Countries." *Journal of World Trade* 24.
- Rivera-Batiz, A. Luis and P. Romer (1991). "International Trade with Endogenous Technological Change." European Economic Review 35.
- Ryan, M. (1998). Knowledge Diplomacy: Global Competition and the Politics of Intellectual Property. Brookings Institution Press.
- Sassen, S. 2011. "Foreword: In the Penumbra of Globalization." In *The Dark Side of Globalization*, edited by J. Heine and R. Thakar. United Nations University Press.
- Saunders, R. (1999). "Does Canadian Patent Practice Impair Technological Development?" Canadian Intellectual Property Review 15.
- Schumpeter, J.A. (1934). The Theory of Economic Development. Harvard University Press.
- Schwartz, M. (1991). "Patent Protection through Discriminatory Exclusion of Imports." Review of Industrial Organization 6.
- Sell, S. (2002). "Post-Trips Developments: The Tension between Commercial and Social Agenda in the Context of Intellectual Property." *Florida Journal of International Law* 14.
- ——— (2003). Private Power, Public Law. The Globalization of Intellectual Property Rights. Cambridge University Press.
- ——— (2010). "The Global IP Upward Ratchet, Anti-Counterfeiting and Piracy Enforcement Efforts: The State of Play." PIJIP Research Paper 10-15. American University Washington College of Law.
- Seymour, B. (1996). "The Impact of Intellectual Property Rights on Foreign Direct Investment." Columbia Journal of World Business 31.
- Sherwood, R. (1997). "Intellectual Property Systems and the Investment Stimulation: The Rating of Systems in Eighteen Developing Countries." *IDEA: The Journal of Law and Technology* 37.
- Siwek, S. (2000). *Copyright Industries in the US Economy:* 2000 Report. Prepared for the International Intellectual Property Alliance. Washington: Economists Incorporated.

INTELLECTUAL PROPERTY RIGHTS AND INTERNATIONAL TRADE: AN OVERVIEW

- Smith, Douglas A. (1998). "Recent Proposals for Copyright Revisions: An Evaluation." Canadian Public Policy 14.
- Smith, P. (1999). "Are Weak Patent Rights a Barrier to US Exports?" Journal of International Economics 48.
- ——— (2001). "How Do Foreign Patent Rights Affect US Exports, Affiliate Sales, and Licenses?" *Journal of International Economics*.
- Stiglitz, Joseph E. (2008). "Economic Foundations of Intellectual Property Rights." Duke Law Journal.
- Taylor, M. Scott (1993). "TRIPs, Trade and Technology Transfer." Canadian Journal of Economics 26.
- United States International Trade Commission (1988). "Foreign Protection of Intellectual Property Rights and the Effect on US Industry and Trade." No. 2065.
- United States Trade Representative. (1987–2009). *National Trade Estimates: Report on Foreign Trade Barriers*. Washington.
- Vaver, D. (2000). Copyright Law. Irwin Law.
- ——— (2001). "Canada's Intellectual Property Framework: A Comparative Overview." In *Intellectual Property* and *Innovation in the Knowledge-based Economy*, edited by J.D. Putnam. Industry Canada.
- Vaver, D., G. Agostino, C. Ng. and T. Piper (2007). Intellectual Property Law in Canada. Irwin.
- Verzola, R. (2010). "Undermining Abundance: Counterproductive Uses of Technology and Law in Nature, Agriculture, and the Information Sector." In *Access to Knowledge in the Age of Intellectual Property*, edited by G. Kirkorian and A. Kapcyuski. Zone Books.
- WTO (1994). "Agreement on Trade-Related Aspects of Intellectual Property Rights." Marrakesh Agreement Establishing the World Trade Organization," 33I.L.M.
- ——— (2009). Measures Affecting the Protection and Enforcement of Intellectual Property Rights. (DS 362).
- ——— (2010). "Made in the World" Initiative. Available at: http://www.wto.org/english/res_e/statis_e/miwi_e/miwi_e.htm.
- Yang, L. and K. Maskus (2008). "Intellectual Property Rights, Technology Transfer and Exports in Developing Countries." Center for Economic Studies (Colorado) Working Paper No. 2464.
- Yu, Peter K. (2007). "International Enclosure, the Regime Complex and Intellectual Property Schizophrenia." *Michigan State Law Review*.
- ——— (2008). Access to Medicines, BRICs Alliances, and Collective Action. American Journal of Law and Medicine 34.

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