COPYRIGHT ACKNOWLEDGEMENT

I acknowledge that a copy of this thesis will be held at the Murdoch University Library.

I understand that, under the provisions s51.2 of the Copyright Act 1968, all or part of this thesis may be copied without infringement of copyright where such a reproduction is for the purposes of study and research.

This statement does not signal any transfer of copyright away from the author.

Signed: .................................................................

Full Name of Degree: .................................................................
e.g. Bachelor of Science with Honours in Chemistry

Thesis Title: .................................................................

Author: .................................................................

Year: .................................................................
US PATENT POLICY AS A BEGGAR-THY-NEIGHBOUR POLICY

HELEN DOLLING

Bachelor of Laws and Bachelor of Commerce

This thesis is presented for the Honours degree of a
Bachelor of Laws of Murdoch University.

2011

I certify that:

i. I have retained an exact copy of this thesis;

ii. Except where I have indicated, that work I am submitting in this thesis is
    my own work and has not been submitted for assessment in another unit.

Signed: ______________________________
US PATENT POLICY AS A BEGGAR-THY-NEIGHBOUR POLICY

ABSTRACT

The United States of America (US) has founded its patent policy on the basis that stronger patent protection engenders more innovation (US Patent Principle). The US Patent Principle overemphasises private rights at the expense of social benefit. Patent systems are intended to promote innovation and the public interest. However, the expansion of the US Patent Principle and US patent policy has had a negative effect on global innovation and development.

The US Patent Principle contradicts the principles of trade liberalisation. Trade liberalisation has been a central feature of international trade and law since the end of World War Two (WWII), largely due to the influence of the US, which has been the main advocate of trade liberalisation principles. The trade liberalisation doctrines condemn policies that encompass "beggar-thy-neighbour" protectionist policies, because of the detrimental effects such policies had on the global economy between the end of World War I (WWI) and WWII. A beggar-thy-neighbour policy is an economic strategy adopted by one country to enhance domestic welfare which can only be realised at the expense of other countries.

This article discusses the beggar-thy-neighbour effect of US patent policy domestically and international. In general the US domestic patent regime is effectively a beggar-thy-neighbour policy, because it benefits domestic inventors and large US multinational corporations at the expense of other foreign inventors. The US-led harmonisation of global patent law is also a beggar-thy-neighbour policy, in that at the expense of the developing nations it principally enhances the
welfare of the profits of large multinational corporations, most of which are headquartered in the US.
TABLE OF CONTENTS

INTRODUCTION .................................................................................................................. 7

PART 1 – DOMESTIC PATENT REGIME: A BEGGAR-THY-NEIGHBOUR POLICY
................................................................................................................................. 15

I. The Unique Characteristic of The United States Domestic Regime ........... 16
   A. The US First-to-Invent System ................................................................. 17
   B. The International First-to-File System .................................................... 18
   C. International Harmonisation Towards the First-to-File System ............. 18
   D. Why the United States has Resisted Conforming ................................... 19
      1. Supporting Big Business System ....................................................... 20
      2. Protecting Domestic Inventors and Innovation ................................. 20

II. Expanding US Patent Protection and Patentee Rights ......................... 23
   A. US Patent Law and Competition Policy .............................................. 24
   B. US Patent Principle and Policy .............................................................. 26
      1. Expanding Patentability through Judicial Reform .............................. 26
      2. Increasing Patent Enforceability and Terms through Legislative Reform ... 27
   C. Critical Commentary ............................................................................ 30

III. Counterbalancing US Patent Principle and the Beggar-Thy-Neighbour Policy ... 32
   A. Judicial Reforms – Limiting US Patentee Rights ............................... 32
      1. Patentee Rights .............................................................................. 33
      2. Patenable Subject Matter ................................................................. 34
   B. Reducing Section 104 Discrimination ................................................. 35
   C. Conforming to the Trend - America Invents Act 2011 ....................... 36

IV. Summary ........................................................................................................... 37

PART 2 - GLOBALISING A BEGGAR-THY-NEIGHBOUR POLICY ......................... 38

I. Harmonisation and US Patent Right Protectionism ............................... 39
   A. Paris Convention for the Protection of Industrial Property ................. 40
   B. The Patent Cooperation Treaty ........................................................... 41
C. Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) 42

II. Contradicting Trade Liberalisation US Trade Policy and Patent Rights Protection 43
   A. Bretton Woods – The New International Monetary Arrangement 43
   B. Protectionism and the Trade Act 1974 45
   C. US Coercion 46
   D. WTO - A Strategic Choice? 48
   E. The Dichotomy in US Trade and Patent Policy 51

III. Summary 53

PART 3 - TRIPS MAKES BEGGARS OF OUR DEVELOPING NEIGHBOURS 54
I. Patent Protection and TRIPS 55
   A. The Patent Protection Requirements of TRIPS 55
   B. Patent Enforcement 58

II. US Patent Principle: One Size Does Not Fit All 60
   A. Economic Differences 60
      1. Technology Transfer and FDI 60
      2. Domestic Innovation 61
   B. Costs of Implementation and Enforcement 63

III. Failed Flexibilities Cost Developing Nations 65
   A. Article 1.1 67
   B. Article 7 and 8 68
   C. Article 41.5 70

IV. Reducing Access to Public Health 72
   A. TRIPS Provision Affecting Access to Medicines 72
   B. The WTO Ministerial Meeting in Doha 74
      1. Public Health Declaration 75

V. TRIPS Was Only the Minimum Standards 76
   A. TRIPS-Plus Agreements 78
      1. More Stringent Standards 79
      2. Transitional Periods 79
      3. Most Favour Nation Principle 81
VI. Summary ......................................................................................................................... 83

PART 4 – IMPROVING A BEGGAR-THY-NEIGHBOUR PATENT POLICY .......... 84

I. Improve Patent Disclosure and Transparency ............................................................ 86
   A. Improving National Transparency ......................................................................... 87
   B. Creating Global Standards of Patent Transparency .............................................. 88

II. Incorporating the Development as Freedom Model Within the Global System ...... 90

III. Summary ..................................................................................................................... 94

CONCLUSION .................................................................................................................... 96

IV. Bibliography .............................................................................................................. 100
   A. Articles/Book ........................................................................................................... 100
   B. Case Law ................................................................................................................. 112
   C. Legislation ............................................................................................................... 112
   D. Treaties ..................................................................................................................... 113
   E. Other ....................................................................................................................... 113
INTRODUCTION

Innovation and imitation are predictable competitive behaviours in market economies. Innovation involves uncertainty and risk, whereas imitation takes advantage of an established market. In the absence of regulation, imitation occurs because it circumvents the inherent uncertainty and risk of innovation. Innovation requires the diversion of scarce resources from other activities. The essential value of an innovation lies in its know-how or the information it contains. Once the information has been disclosed, through writing or creating the invention, it becomes a public good which is both non-excludable, and non-rivalrous. Innovation, as a ‘public good’, carries with it a risk of immediate exploitation by competitive imitation. Patent law prohibits competitive imitation in ‘patentable circumstances’. Patentable circumstances require an inventor to demonstrate that their invention is new, involves an inventive step and is capable of industrial application. Once successfully demonstrated, a patent is granted by the State. A patent provides the inventor with monopoly rights to exclude others from making, using, selling or importing that invention. The justification for the state

---

2 Philipp Koellinger, ‘Why are some entrepreneurs more innovative than others?’ (2008) 31(1) Small business economics 21, 23.
3 van Caenegem, above n 1, vii.
4 Non-excludable because it is impossible, or prohibitively costly, to exclude someone from receiving the benefit of the invention’s information after it has been disclosed. Roger A Arnold, Microeconomics (Cengage Learning, 2010), 378-378.
5 Non-rivalrous because the consumption of the information by one person does not reduce the consumption of another. Ibid.
6 Van Caenegem, above n 1, vii.
interference in the free market, by the granting of patents, is that social welfare is improved when the ‘natural’ balance between imitation and innovation is pushed to favour innovation.9

Patent law is supposed to be the principal policy tool of governments for promoting innovation, fostering the development of new technologies and increasing the fund of human knowledge.10 The exchange bargain of patent law involves the state granting an inventor with a patent for a limited time, in return for the disclosure of that invention.11 In theory the ultimate beneficiary of a patent is not the patentee but the public, to whom the invention is disclosed.12

Traditionally, patent policymaking was a national affair. States could make policy judgements about what would best promote innovation and the dissemination of new information in their country.13 These judgements would mould patent laws into a tailored national patent system. The systems were tailored to the nation’s level of wealth, economic structure, technological capability, political system and cultural tradition.14 Globalisation and the growing internationalisation of life have blurred the lines between foreign and domestic affairs.15

The US is the world’s largest economy. The ‘robust economic competitiveness’ demonstrated by the US during the last century has been attributed to its capacity

---

9 van Caenegem, above n 1, 1.
12 Ibid 126-7.
14 Ibid
for innovation. Leading economists predict enduring world dominance by the US with respect to volume and quality of new inventions.

However, the US patent policy has been widely criticised as intentionally and blatantly discriminating against foreigners in order to foster domestic innovation and promote national economic growth. Critics of the US system believe that the US patent policy is not only ‘unfair’ - which, in the context of a free-market, is largely irrelevant - but also substantially detrimental to the expansion of knowledge and the advancement of modern technology. Keith Maskus, a 2006 representative of the US Council on Foreign Relations, advocates rejecting the modern notion of intellectual property rights as being private rights. Maskus promotes returning to the tradition of limiting the scope of patents in order to encourage innovation and the development of new technologies.

Proponents of the US system, such as large businesses and multinational corporations (MNCs), advocate the preservation of the modern version of Lockeian principles. Historically, Lockeian natural rights shaped both the way in which the US Constitutional Framers understood patent law, and the judicial reasoning of the US courts in patent cases. Modern US patent policy has diminished the

---

19 Maskus, above n 16, 6.
natural law basis and focus on the notion of patents as a form of private property. In recent decades, the Lockean notion of patents as private property has been used to validate the unreasonable expansion of patent rights and stronger patent protection.

The current US system protects and favours large corporations by allowing them to profit through exploiting what are effectively private monopoly rights. As a result, they have had strong incentives to manipulate the patent regime to protect their own interests. Their success in doing so is evident: since the early 1980s, US legislators and judges have adopted and operated on the US Patent Principle; that is, the fundamental principle that stronger patent protection engenders more innovation. In practice there is little probative evidence that the US Patent Principle actually succeeds in promoting more innovation. In fact, patents may even be counterproductive to innovation because they impose additional R&D costs, and promote litigation and wasteful attempts of cumulative innovation, through attempts to invent around patents.

Internationally the US has pushed for the harmonisation of national patent laws. The most recent harmonisation treaty to be introduced by the US is contrary US international trade policy. Trade liberalisation is the avoidance of protectionist domestic policies which lead other states to reinstate trade barriers in a competitive

(discussing the strong Lockean influences on early intellectual property law in the United States and England).


23 Ibid.

24 Maskus, above n 16, 3.

25 Burk and Lemley, above n 10, 1580.

reaction which impairs the global economy and global development (trade liberalisation principle).\textsuperscript{27} Post WWII, the US was convinced that beggar-thy-neighbour policies had been a cause of both the Depression and the War.\textsuperscript{28} As a result the US took initiative and showed international leadership in creating international trade agreements which promoted a stable world economy and global development.\textsuperscript{29}

International trade agreements since WWII have focused on the trade liberalisation principle and ‘negative integration’, or the liberalising of trade by reducing tariffs and stripping away regulatory barriers.\textsuperscript{30} In the 1980s, the US and MNCs, led the campaign to link patent protection and intellectual property rights to the General Agreement of Trade and Tariffs (GATT).\textsuperscript{31} The Agreement on Trade Related-Aspect of Intellectual Property (TRIPS)\textsuperscript{32} signalled a controversial shift for the GATT to a ‘positive integration’ approach. This contradicts the US Trade Liberalisation Principle. TRIPS goes beyond de-regulation to affirmatively re-regulate, by imposing global patent standards in place of national ones.\textsuperscript{33} Attaching TRIPS to the GATT had created a dichotomy in US international trade and patent policies.

The US, since the 1970s, had adopted a beggar-thy-neighbour patent policy. The US domestic patent regime benefits domestic inventors and delivers US national

\textsuperscript{27} Robert Howse ‘From Politics to Technocracy – And Back Again: The Fate of the Multilateral Trading Regime’ (2002) 96 American Journal of International Law 94, 94-95.
\textsuperscript{28} John Braithwaite and Peter Drahos, Global Business Regulation (Cambridge University Press, 2000) 177.
\textsuperscript{31} Sell, above n xx.
\textsuperscript{32} TRIPS, above 7.
\textsuperscript{33} Pager, above n 30, 217.
economic and competition objectives, at the detriment of foreign inventors. The US has also aggressively pursued an international patent law harmonisation campaign. TRIPS, the most recent agreement governing international patent law protects the economic interests and welfare of developed nations and the profits of large MNCs at the expense of the developing nations.

The US system ensures that developed countries such as the US continue to develop and exploit new technologies which provide a better standard of living and improve economic growth. Developing nations remain in a position of disadvantage. They are denied access to advancements in medical, communications and other technologies because they cannot afford patent monopoly prices. They are also unable to exploit new inventions by imitation or ‘piracy’. The US has removed the ability of States to regulate their patent policies. Due to the inclusion of TRIPS in GATT agreements, States must agree to be bound by US patent policy, or cease to have trade agreements with the US. Many countries are net importers of US commodities, so are effectively forced to adopt the US patent policy. These countries must endure the interference in the free market, and the effective interference with the exercise of sovereignty, but do not enjoy any social benefits. Stuart MacDonald addresses this fundamental problem by stating: “The real pirates are not those who steal innovation from patent owners, but those who steal the system of encouraging innovation from the public.”34

This thesis examines the role of the US patent policy. Part 1 discusses how US domestic patent policy is effectively a beggar-thy-neighbour policy. It will compare

---

the US 'first-to-invent' patent priority system to other systems and examines why
the US has resisted changing its unique priority system. Having established the
inherent bias of the US domestic regime towards large businesses and domestic
inventors, Part 1 moves to explore the era of expanding the US Patent Principle and
the counterbalancing reforms which have removed some of the inherent bias and
reduced the strength of US patentee rights.

Parts 2 and 3 consider the globalising of US patent policy and how TRIPS provides
benefits to MNCs and developed nations at the expense of the developing
countries. Part 2 starts by considering patent law harmonisation and US patentee
right protectionism. It then discusses how the US created a dichotomy between its
international trade policy and patent policy.

Part 3 explores the effect of US the beggar-thy-neighbour policy on developing
nations. Part 3 begins by introducing the patent protection requirements of TRIPS
and the how the agreement ensures compliance with its patent provisions. It then
elaborates on how TRIPS protects the interests of developed nations and MNCs
while it fails to provide developing nations with promised economic benefits and
implementation flexibilities. The subsequent discussion considers how TRIPS
reduces the access of developing nations to public health and how after TRIPS was
implemented developed nations have continued to raise the standard of patent
protection through other agreements.

Finally, Part 4 presents two key ideas for reforming the US patent system and
explains how they would effectively reduce the application of the beggar-thy-
neighbour policy and bring patent law into conformity with trade liberalisation.
These ideas centre on increasing patent disclosure and system transparency, and amending international patent treaties to focus on a new model of development for a more wholesome global development essential for global welfare.
PART 1 – DOMESTIC PATENT REGIME: A BEGGAR-THY-NEIGHBOUR POLICY

This part will consider the unique characteristic of the US domestic patent regime, why the US has resisted domestic reforms towards international patent law harmonisation, patent law’s link to competition policy and the expansion of patent protection under the US Patent Principle.

The American colonies laid the foundations of the US patent system. These colonies protected and rewarded technological advancements by granting monopoly rights to inventors.\textsuperscript{35} The \textit{Constitution of the United States} (US Constitution) declares that “Congress shall have power… to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”\textsuperscript{36} Exercising this grant, Congress enacted the \textit{Patent Act} 1790.\textsuperscript{37} The first patent was awarded that very year, by Thomas Jefferson, who was an inventor and the first patent examiner in the US.\textsuperscript{38} While the US Constitution institutionalised patent protection for its citizens in the late eighteenth century, these protections were not extended to foreigners until much later.\textsuperscript{39} The US domestic patent regime has predominately offered lax protection to foreigner inventors and consequently the US built much of its industrial prowess by pirating British technologies in particular.\textsuperscript{40} US industrialists were given a free reign to appropriate foreign inventions as part of a

\textsuperscript{36} \textit{US Constitution} art I § 8.
\textsuperscript{37} Oliver Mills \textit{Biotechnological Inventions: Moral Restraints and Patent Law} (Ashgate, 2\textsuperscript{nd} ed, 2010) 42.
\textsuperscript{38} John W Klooster \textit{Icons Of Invention: The Makers Of The Modern World From Gutenberg To Gates} (Greenwood, 2009) xxix.
process of technological transfer that enabled the nation to climb to the summit of global industrial power less than two centuries later.\footnote{Donald G Richards, above n 39, 276.}

Since the 1980s, the US domestic patent regime has made the existing beggar-thy-neighbour policy worse. US policymakers, backed by US corporations and business organisations, have used the US Patent Principle as a tool for national economic development at the expense of international development.\footnote{May and Sell, above n 18, 1.} In response to US domestic pressure, and the demands of other developed nations, the US has embarked upon implementing reforms which reduce the magnitude of patent protection under the US Patent Principle and reduce the beggar-thy-neighbour policy of the US domestic patent regime.

I. **The Unique Characteristic of The United States Domestic Regime**

There exists a significant difference between the US domestic patent regime and foreign patent regimes. It is significant because it is argued that the differences discriminate against foreigners in order to foster US domestic innovation and economic development.\footnote{R Carl Moy, ‘Essay: Patent Harmonization, Protectionism, and Legislation’ (1992) 74 Journal of the Patent and Trademark Office Society 777, 787.}

All patent regimes contain rules for determining patent priorities. Should two or more inventors independently develop an identical, or similar invention, at approximately the same time, the priority rule establishes which of these inventors obtains the patent rights.\footnote{Roger E. Schechter and John R Thomas, Principles of Patent Law (Concise Hornbooks 2d ed. 2004) § 1.2.5.} The US domestic patent regime’s priority rules are
unique. The US has a first-to-invent system, while the rest of the world’s patent
systems are first-to-file.45

A. The US First-to-Invent System

Under the US first-to-invent system, the patent rights are awarded to the first
inventor.46 On the date the patent application is filed, the patent applicant is prima
facie given a date of invention. Under the first-to-invent system, the timing of real-
world events, such as the date a chemist conceived of a new compound or a
machinist constructed a new engine, are significant.47 The first-to-invent system
can allow a party who is second to file to establish priority, if the second to file can
prove an earlier date of invention.48 The second applicant may establish an earlier
pre-filing date of invention by showing that the invention was made before the
competitor's date of invention, or proving a publication date of a third party's
invention. There are conditions on this rule, such as that the party who was the
first-to-invent must not have abandoned, suppressed or concealed the invention.49

Where there is a dispute as to the priority of an invention, a patent interference
proceeding is held to settle the matter. A patent interference proceeding is an
administrative proceeding before the US Patent and Trademark Office (USPTO) to
determine priority of an invention where an application may conflict with a
pending application or unexpired patent.50 The purpose of an interference

47 Charles E. Gholz, 'First-to-File or First-to-Invent?' 82 Journal of the Patent and Trademark
Taiwan University Law Review 27, 31.
proceeding is to resolve the priority of invention when more than one applicant seeks a patent on substantially the same invention.51

B. The International First-to-File System

Unlike the US, the patent regimes which have been adopted by the rest of the world award patent rights mechanically to the first applicant to file an application. The first-to-file system creates no need for investigations and evidence of priority of invention.52 European countries historically have always had a first-to-file system under which the date of invention is conclusively evidenced by the filing date. The great benefit of first-to-file is certainty. The courts that operate in first-to-file jurisdictions do not need to address problems of burden of proof or examine supporting evidence to determine which litigant has priority, because ownership of a patent is controlled by the date of filing.53 All parties know at an early date where they stand. This ultimately saves on the administrative costs of a patent regime.54

C. International Harmonisation Towards the First-to-File System

Historically, Japan, Canada and the Philippines were all first-to-invent countries. Japan switched to first-to-file systems in 1919.55 Canada enacted legislation in 1987 to move to the harmonisation model that was emerging in Geneva, which

51 Hseih above n 48, 44.
included adoption of the first-to-file system. The most recent nation to switch from a first-to-invent is the Philippines, where the first-to-file system came into effect on 1 January 1998. Jordan may remain as a first-to-invent nation, however, strong claims have been made to the contrary, so its exact classification remains a matter of debate.

D. Why the United States has Resisted Conforming

Compared to the first-to-file system, the US first-to-invent system is more complex in terms of its novelty and priority determination mechanisms. The US system is also more costly because the courts must decide questions about the burden of proof and ancillary evidence in determining priority of inventorship. So why has the US resisted the international trend towards priority mechanism harmonisation? The answer lies in the fact that the US first-to-invent system benefits large corporation and acts as a discrimination provision against foreign applicants.

---

56 Wegner, above n 54, 543.
59 Sedia, above n 55, 89.
60 Hsieh, above n 48, 31.
1. *Supporting Big Business System*

The relative merits of the first-to-invent and first-to-file priority rules have been the subject of a lengthy debate within the US patent community.\(^63\) One argument for retaining the first-to-invent system is that it is favourable to small entities, mainly independent inventors, small businesses and non-profit institutions, who need longer to prepare an application.\(^64\) This argument is statistically unsound. During 1983 and 2000, there were 2,858 interference cases brought to court; 1917 of these were resolved in favour of the first party to file and 941 decisions in favour of the second party to file.\(^65\) Of the 941 decisions in favour of the second party to file, 203 favoured small entities and 738 favoured large entities.\(^66\) In summary, the USPTO data confirms that the current first-to-invent system does not favour small entities. Large corporate entities are more frequently awarded patent priority in interference proceedings. The first-to-invent system benefits large corporate entities and it has been in their interest to lobby the US legislators to retain this system.

2. *Protecting Domestic Inventors and Innovation*

All US MNCs who operate in patent industries, such as biotechnology, chemical, pharmaceutical, software and semiconductor,\(^67\) and who want to protect their technology internationally must predominately operate under the first-to-file rule. This is apparent because all nations except the US have a first-to-file system. To not operate under the first-to-file rule would be a commercial disaster. The failure to file early, and first, would lead to a forfeiture of their international patent

---


\(^{65}\) Mosinghoff, above 58, 429.

\(^{66}\) Ibid 426.

\(^{67}\) Burk and Lemley, above n 10, 1580.
rights.\textsuperscript{68} Second to file US inventors lose their patent protection outside the US. Interestingly, many of these same MNCs are strongly opposed to patent harmonisation. The reason is subtle, but very important. The first-to-invent provision acts as a discriminatory provision on establishing a date of invention against foreign companies in the US domestic regime.

Historically the first inventor system could not generally be used by foreign corporations in interference proceedings.\textsuperscript{69} Section 104 of the Patent Act 1952,\textsuperscript{70} a predecessor to the 1970, provided that "in [patent interference] proceedings...an applicant for a patent...may not establish a date of invention by reference to knowledge or use [of invention]...in a foreign country."\textsuperscript{71} Foreign inventors who could not demonstrate that they had invented a product or process in the US had to rely on their application filing date for priority.\textsuperscript{72} If an invention was made abroad and later brought into the US, the US priority date was the date of first action in the US.\textsuperscript{73} Foreign inventors as a result of this provision were at a significant disadvantage in proving priority in interference proceedings against domestic opponents.\textsuperscript{74}

After an inventions discovery point, or 'eureka moment', time is needed to understand the scope of the invention and have the patent application written by

\textsuperscript{68} As stated above the first-to-invent system is unique to the USA.
\textsuperscript{69} Patent Act 1952 35 USC §102(g)
\textsuperscript{73} Ibid
\textsuperscript{74} Ibid
patent attorneys. Patent applicants therefore generally file their applications a few months after the invention has been made. This time period before filing enables US inventors who filed their patent applications after their foreigner counterparts, to gain patent priority. US inventors had a good chance of gaining the exclusive patent rights in the US because of the discrimination in interference proceedings.\(^\text{75}\)

The US is the most important domestic patent market in the world.\(^\text{76}\) The ever increasing global nature of trade and commerce means that a US inventor who only legally gains domestic patent rights, because they were second to file, also gains leverage for international patent rights. A foreigner inventor, who is first-to-file and wins patent protection in all other jurisdictions, has two options if he or she wants to gain access to the US domestic market. He or she can contest the US inventor’s patent rights in an interference proceeding, or enter into a global settlement which results in a shared market position for both inventors.\(^\text{77}\) The risky nature of patent litigation in the US means that settlement is often the favoured outcome in patent rights disputes. Carl Shapiro noted that “the lion’s share of patent disputes are settled rather than litigated to a resolution in court”.\(^\text{78}\) Other studies reveal that 95% of patent lawsuits are settled prior to a court judgment.\(^\text{79}\) Not wanting to be excluded from the US domestic market, the foreign inventor it is highly likely to enter into a global settlement with the US inventor. The unique US patent priority mechanism, the risky nature of litigation and the discrimination against foreigners

\[^\text{75}\text{Wegner, above n 54, 544.}\]
\[^\text{76}\text{Ibid}\]
\[^\text{77}\text{Ibid.}\]
\[^\text{78}\text{Carl Shapiro, ‘Antitrust limits to patent settlements’ (2003) 34(2) RAND Journal of Economics 391, 392.}\]
in US interference proceedings means that US MNCs are protected in the domestic regime.

The importance of section 104 to the US pharmaceutical companies during the 1980s is evident in the frank admission of David Mugford, a retired vice-president of a US pharmaceutical leader, who was one of the strongest critics of first-to-file system. Mugford considered that: “blocking positions [occur] on a worldwide basis because of the 'first-to-invent' patent system in the [United States] as opposed to the 'first-to-file' system”. He also notes that “[s]ince all of the research-based pharmaceutical companies and most of the now-emerged biotechnology companies are in global markets, and the US represents approximately one-third of such market, a reasonable solution to this global market blocking situation would be to unblock by cross-licensing each other.”

II. EXPANDING US PATENT PROTECTION AND PATENTEES RIGHTS

Cycles of strength and weakness have long characterised US patent policy. The US favoured weak protection in the nineteenth century, until US firms began achieving significant technological breakthroughs in the latter second half of the century. The economic power of patents reached its peak at the end of the nineteenth century and the early twentieth century. During this time the

---

80 Wegner, above n 54, 545.
82 Ibid 433-4.
85 Sell and May, above n 40, 486.
monopoly rights of patents were elevated to unacceptable levels. This level of patent power was short lived.

A. US Patent Law and Competition Policy

The Sherman Antitrust Act 1890 (Sherman Act) on competition policy marked the start of 75 years of weak patent protection in the US. Several factors are thought to have contributed to the era of weak patents. These include an anti-monopoly sentiment, judicial hostility towards patents, doubt that the patent examination process effectively found non-deserving applications, and the inconsistency among the various federal appellate circuits. Patents were also frequently invalidated, remedies for infringement were difficult to obtain, and rampant forum shopping made patent protection even weaker in practice than it seemed in theory.

Late in the 1970s, the US became acutely aware of an erosion of its competitive edge as an economic super power. At this stage there were also growing concerns that the US was lagging behind other industrial nations and that policy needed to be introduced to encourage more innovation. Suddenly the rights of patent owners increased in importance. Patents rights were expected to deliver the economic development and competitive objectives valued by the US government.

In the 1980s, competition law regarding patent rights shifted fundamentally so that patents were no longer viewed as conferring "monopolies or even market power in

---

86 Ibid
87 Sherman Antitrust Act of 1890 15 USC § 1-7 (1890).
89 Farrand et al, above 83, 359.
90 Ibid.
91 Kastriner, above n 88, 6.
93 Sell, above n 84, 67.
any relevant market”. The US Department of Justice acknowledged this shift, stating “market power or even a monopoly that is the result of superior effort, acumen, foresight, or luck does not violate the anti-trust laws. The owner of intellectual property is entitled to enjoy whatever market power the property itself may confer.” Under the Reagan Administration, “the executive agencies viewed the economic incentives provided by intellectual property rights as legitimate means of extracting the full economic benefit from innovation.”

Also during the 1980s, representatives from the most senior levels of big business within the US were appointed by the President to serve on the Advisory Committee on Trade Negotiations (ACTN). The ACTN was established to provide policy advice to the US Trade Representatives. ACTN’s basic message to the US Government and Trade Representatives was that every lever at its disposal should be used in order to obtain the right result for US patentees domestically and internationally. This contradicts the US Trade Liberalisation Principles and fostered the beggar-thy-neighbour policy which is now entrenched in US patent policy. The 1980s saw a re-dedication to the concept of patent rights as private rights. The patent regime was seen as a system of protection and exclusion, rather than one based on competition and the diffusion of information. Changes in the

96 Sell, above n 84, 67.
97 Drahos and Braithwaite, above 97, 209.
99 Drahos and Braithwaite above n 97, 209
domestic regime were embedded in a broader set of concerns raised by the changing structure of US global capitalism.\textsuperscript{100}

B. US Patent Principle and Policy

A number of changes to the patent system, both judicially and legislatively, took place during the 1980s and 1990s. American legislators and judges adopted the US Patent Principle.\textsuperscript{101} A series of court decisions expanded the legitimate scope of patentable subject matter. Legislative changes increased the ability of patent holders to enforce their patents and extended the length of patent terms. The enforceability of patent rights was increased by the creation of specialised patent court, the Court of Appeals for the Federal Circuit (CAFC).

1. Expanding Patentability through Judicial Reform

In 1980, the Supreme Court in \textit{Diamond v. Chakrabarty}\textsuperscript{102} extended patentability to include genetically engineered bacteria. The bacteria was undeniably useful because it could be used to treat oil spills, however, the US Patent and Trademark Office (USPTO) had rejected the patent application because the bacteria, being a living organism, was excluded from patentability.\textsuperscript{103} The Supreme Court disagreed, deciding by a five-to-four majority that a patent may be obtained on "anything under the sun that is made by man."\textsuperscript{104} This decision marked the opening of the 'patentable subject matter' floodgates. Traditionally, computer software, business methods, immoral inventions, gene sequences, and biological material were all

\textsuperscript{100} Sell, above n 84, 74
\textsuperscript{101} Maskus, above n 16, 3.
\textsuperscript{102} \textit{Diamond v Chakrabarty 447 US 303 (1980)}
\textsuperscript{104} \textit{Diamond v Chakrabarty}, above n 102, 309.
restricted from patent eligibility.\textsuperscript{105} In 1981, the Supreme Court approved patentability of software in \textit{Diamond v. Diehr}.\textsuperscript{106} In 1998, the CACF affirmed the patentability of business methods and financial service products in \textit{State Street Bank and Trust v. Signature Financial Group}.\textsuperscript{107} The decision validated the patent on Signature’s software system for evaluating and managing mutual funds.\textsuperscript{108} The ratio of the decision was that business methods were now of ‘statutory subject matter’ status.\textsuperscript{109} Since 1998, business methods receiving patent protection have included Amazon.com’s one click internet ordering process,\textsuperscript{110} Priceline.com’s reverse auction method for booking airline tickets\textsuperscript{111} and other products on the Internet.\textsuperscript{112} These judicial rulings removed many of the restrictions of patent eligibility and effectively expanded the legitimate scope on patentable subject matter.

2. \textit{Increasing Patent Enforceability and Terms through Legislative Reform}

Following implementation of the Sherman Act in 1890, the US experienced an era of anti-patent sentiment which continued during the 1960s and 1970s. The rule of competition policy during this time and the low probability of patents being upheld in litigation contributed to this sentiment.\textsuperscript{113} Prior to 1982, patent cases were heard


\textsuperscript{106} \textit{Diamond v Diehr}, 450 U.S. 175 (1981).

\textsuperscript{107} \textit{State Street Bank and Trust v. Signature Financial Group}, 149, F.3d 1368 (Fed Cir. 1998).

\textsuperscript{108} Ibid.


\textsuperscript{110} U.S. Patent No. 5,960,411 (filed Sept. 12, 1997).

\textsuperscript{111} U.S. Patent No. 5,797,127 (filed Dec. 31, 1996).


before one of the many district courts of the US. The rulings of these courts differed widely. Before commencing an action, parties would forum shop to find a court with a history of ruling in the party’s interest in similar cases. In response to concerns regarding US national economic and competitive performance of the 1970s, legislative changes were enacted. The legislative changes included the creation of the CACF and the extension of patent terms.

The Court of Appeals for the Federal Circuit

In 1982, the CAFC was established. The CAFC was established to overcome diverging rulings of US district courts and to strengthen US patentee rights. The CAFC is a specialist patent court, with national jurisdiction to hear appeals from the US district and territorial courts in patent cases and authority just below the Supreme Court of the US. In the first decade of its existence, the CAFC earned praise for achieving a desirable degree of uniformity in place of regional circuit precedents perceived to be disjointed and conflicting.

From its inauguration the CAFC was more inclined to affirm the validity patents.

The CAFC has upheld the US Patent Principle. Between 1982 and 1987, the CAFC upheld 89 percent of district court decisions that patents were valid compared with

---

114 Ibid
115 Ibid
116 Gallini, above n 112, 196.
118 Robert Watt and Francis Johns, Concise legal research (Federation Press, 2009) 98.
the previous rate of less than 40 percent.\textsuperscript{121} Other studies revealed that in the three decades before the CAFC was established, 62 percent of district court cases affirmed findings of patent infringement, while the CAFC in its first eight years affirmed 90 percent of such decisions.\textsuperscript{122} The CAFC was staffed mostly by judges in the federal system with experience as patent attorneys. The statistics are not surprising. Many of the judges would have been sympathetic to the patent system and more likely awarded patent rights. Until recently, the Supreme Court rarely accepted appeals in patent cases from the CAFC.\textsuperscript{123} The increase in finding patents valid and enforceable increased the value of a US patent.\textsuperscript{124} US patents provided their owners with stronger enforceable rights which increased the monopoly rights of patent owners to exclude others from exploiting their inventions.

\textit{TRIPS Reform}

A third area of stronger patent protection involved longer patent lives for some inventions. In 1994, in compliance with TRIPS, the US adopted a 20-year patent term, starting from the date at which a patent application is filed. Previously, the patent term was 17 years from the date at which the patent was issued.\textsuperscript{125} Having increased the scope of patentability and the likelihood that a patent will be found valid, this further extension of US patent rights grants patent holders a longer period in which to exploit their monopoly rights.

\textsuperscript{123} Borràs and Kahin, above n 64, 633.
\textsuperscript{124} Stuart MacDonald, above n 34, 140.
C. Critical Commentary

Awarding exclusive monopoly rights imposes social costs that increase in proportion to the elasticity of demand for that patent information.\textsuperscript{126} Price elasticity of demand is a driver of patent profits and allows a patentee to obtain rents.\textsuperscript{127} Where such elasticity is high, increasing the price above the marginal cost will result in greater decreases in demand and output. This result has serious social welfare consequences. By granting innovators an absolute ability to exclude others, not only will monopoly prices proliferate, but downstream users of the relevant technology for follow-on innovation will also be hindered.\textsuperscript{128}

Alan Devlin, notes that the Supreme Court's famous remark in \textit{Diamond v. Diehr} that "anything under the sun that is made by man" is patentable "aptly summarizes the law's evolving reach."\textsuperscript{129} The judicial and legislative reforms of the 1980s and 1990s tipped the balance between public and private rights significantly in favour of private rights. James Bessen and Michael Meurer, in their seminal book \textit{Patent Failure}, based on empirical data they collected on the private costs and benefits of the US patent system, found that the US Patent Principle is flawed.\textsuperscript{130} Stronger patent rights do not generate more innovation. In fact, adherence to the US Patent Principle inhibits innovation because it "place[s] a drag on innovation".\textsuperscript{131} By

\textsuperscript{129} Chakrabarty, 447 U.S. at 309.
\textsuperscript{131} Ibid 146.
expanding and strengthening patentee rights, the ability to exclude others is increased, monopoly prices proliferate and follow-on innovation is hindered.\textsuperscript{132}

Patents can be seen as a blunt innovation policy. Patent law applies a uniform protection to diverse areas of technology and innovation. It fails to capture the fact that not all innovations works in the same way.\textsuperscript{133} In this regard, the judicial expansion of patentability has met strong criticism. The software industry which has a high degree of direct cumulativeness, where each innovator builds on prior discoveries and technical advances, oppose the US Patent Principle.\textsuperscript{134} Biomedical research is also cumulative and characterised by information-intensive inputs.\textsuperscript{135} By expanding patent protection to these industries the costs of further research and developments are significantly increase.

Software was previously protected by other forms of intellectual property rights. Software and business methods patents have been criticised, in particular, as areas of poor patent disclosure.\textsuperscript{136} Poor quality in patent disclosure undermines the exchange bargain of patents between patentees and society. Poorly disclosed patents can harm completion and hinder innovation by forcing market participants to pay licensing royalties, incur substantial legal expense to defend infringement claims and engage in ‘design-around’ efforts that raise costs and hinder product performance.\textsuperscript{137}

\textsuperscript{132} Devlin, above 128, 1705.
\textsuperscript{133} Burk and Lemley, above n 25, 1696.
\textsuperscript{134} Suzanne Scotchmer, \textit{Innovation and Incentives} (MIT Press, 2004), 1.
\textsuperscript{137} Ibid 1019.
The effect of legislative reforms and CAFC judgements was a three-fold expansion of patentee monopoly rights. The implementation of US patent policy has demonstrated that the US Patent Principle is impractical, imprudent and flawed. This is evidenced by the overwhelming social costs it imposes through widespread overcompensation to patentees.\textsuperscript{138} Excessively broad monopoly rights over information provide windfall profits for patentees but leaves society with disproportionate losses.\textsuperscript{139}

III. COUNTERBALANCING US PATENT PRINCIPLE AND THE BEGGER-THY-NEIGHBOUR POLICY

In response to domestic and international pressure the US has embarked upon reforms which reduce the magnitude of US patentee rights and remove some of the inherent bias of the unique US priority mechanism.

A. Judicial Reforms – Limiting US Patentee Rights

The Supreme Court has largely refrained from reviewing patent cases since the creation of the CACF.\textsuperscript{140} However, since the beginning of the mid 2000s, the Court has shown a renewed interest in patent cases.\textsuperscript{141} This has been the result of several concerns. The Court may have noticed an increase in ‘intra-circuit splits’ in the CACF.\textsuperscript{142} The generalist Supreme Court may have wanted to keep the specialist

\textsuperscript{138} Devlin, above n 128, 1705.
\textsuperscript{142} Gajarsa and Cogswell, above n 140, at 843 n.159
CACF from "stray[ing] too far afield." The Court has also expressed concerns that the increasing prominence of business method patents might have created too much patent protection, especially for "firms [that] use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees."

A series of judicial rulings since 2005 has reduced US patentee rights and contracted patent-eligible subject matter. The Supreme Court has reversed some of the CACF's jurisprudence that had made patents easier to obtain, more powerful, and more difficult to challenge.

1. Patentee Rights

In eBay v. MercExchange, the Supreme Court abolished the CACF's rule of automatic injunctive relief, subjecting successful patent plaintiffs to the same equitable standards that apply in other cases. In Medimmune v. Genentech, the Supreme Court made it possible for licensees to sue for declaratory judgment on invalidity. In KSR v. Teleflex, the Supreme Court significantly raised the standard of non-obviousness from that applied by the CACF. In Quanta v. LG, the Supreme Court strengthened the exhaustion doctrine, precluding patent holders that have licensed rights to component manufacturers from requiring additional licenses from downstream component assemblers.

---

143 Tang, above n 141, 236.
144 Ibid.
146 Borras and Kalin, above n 64, 634.
150 An invention must be non-obvious to be eligible for patent protection.
2. Patentable Subject Matter

In *Bilski v. Kappos*, the Supreme Court addressed a fundamental patent law question of what kinds of inventions were patentable under section 101 of the *Patent Act*. Prior to this case the Supreme Court had shown an interest in patent-eligible subject matter, but had not specifically addressed the issue since *Diamond v. Diehr*. In *Bilski v. Kappos*, without articulating the full series of tests, the majority of the Supreme Court affirmed the CACF’s judgment of *In re Bilski*. In *re Bilski* the CACF had abandoned the permissive standard of its *State Street* decision in favour of earlier Supreme Court language requiring a process to either transform material or be attached to a particular machine.

All these rulings reduced the scope of US patent protection. These judicial decisions effected reforms on issues too controversial for legislative consideration. The Supreme Court’s newfound willingness to reverse the case law of the CACF illustrates the dangers of specialised courts where key judges are drawn from a professional corps interested in expanding the legal and economic scope of the courts activities.

---

154 Borras and Kalin, above n 64, 637.
155 *In re Bilski*, 545 F.3d 943 (Federal Circuit, 2008).
156 Ibid
157 Borras and Kalin, above n 64, 634.
158 Borras and Kalin, above n 64, 634.
B. Reducing Section 104 Discrimination

The discrimination against foreigners in US interference proceedings was reduced in 1994 and 1996. In December 1993, President Clinton's signature on the North American Free Trade Agreement (NAFTA) amended the section 104 interference rules of the Patent Act 1952.\footnote{159} The amendment provided that “any patent applicant may establish a date of invention by reference to knowledge or use of the invention in a NAFTA country”.\footnote{160} This amendment removed the discrimination against Canada and Mexico in interference proceeding with US domestic inventors.\footnote{161} The next year, Clinton signed the GATT.\footnote{162} Signing the GATT extended the section 104 privileges to all countries in the WTO which meant that most foreign applicants were no longer held to the US standard of proving they were the first to invent.\footnote{163}

The bias was not completely eliminated and several areas of disparate treatment remained.\footnote{164} The law was effective only for proof of priority dates beginning in 1996.\footnote{165} It did not apply to non-WTO countries.\footnote{166} Proof of foreign inventive activity could not be used defensively to show that someone else was entitled to a patent. This was because Congress amended section 104 to allow proof of foreign activity in acquiring a patent, but did not amend section 102(g), which disentitled an applicant to a patent if the identical invention was made ‘in this country’ by

\begin{itemize}
\item \footnote{159} Christian J Garascia, Evidence of Conception in U.S. Interference Practice: Proving Who is the First and True Inventor, (1996) 73 \textit{U. DET. MERCY L. REV.} 717, 727.
\item \footnote{160} Ibid.
\item \footnote{161} Sedia, above n 55, 93.
\item \footnote{163} Ibid.
\item \footnote{164} Lemley and Chien, above n 72, 1327.
\item \footnote{165} 35 U.S.C. § 104 (2003); Ibid 1327
\item \footnote{166} 35 U.S.C. § 104 (2003)
\end{itemize}
another.\textsuperscript{167} The latter rule was changed somewhat in 1999 when Congress permitted defensive use of foreign inventive activity in USPTO interference proceedings but not in judicial proceedings challenging the validity of a patent.

C. Conforming to the Trend - America Invents Act 2011

The US recently enacted legislation which represents the first major overhaul of the US patent system in 60 years. On the 16 September 2011, President Obama signed the \textit{Leahy-Smith America Invents Act (AIA)}.\textsuperscript{168} \textit{AIA} introduces a number of significant changes to the domestic patent regime. From the perspective of non-US applicants, the most notable reform introduced by the \textit{AIA} is the transition from the unique US first-to-invent system to a 'first-inventor-to-file' system. This transition will take effect on 16 March 2013, eighteen months after the enactment of \textit{AIA}.\textsuperscript{169}

Supporters of harmonisation have long advocated the first-to-file priority over the present rationale of first-to-invent because of administrative efficiencies.\textsuperscript{170} They have argued that first-to-file priority will reward more directly the attempt to disclose the patented advance, which arguably increases the efficiency with which the patent system increases wealth.\textsuperscript{171} The US patent system now largely conforms to the international harmonisation trend. The reform removes the need for costly

\textsuperscript{167} 35 U.S.C. § 102(g).
\textsuperscript{170} Blake R Wiggs, 'Canada's First-to-File Experience—Should the U.S. Make the Move?' (1991) 73 J. PAT. & TRADEMARK OFF. Soc'y 493, 502-03.
\textsuperscript{171} Ibid, 507-09.
and complex interference proceedings.\textsuperscript{172} For foreign inventors it signifies the next step in removing the inherent anti-foreigner bias of the US patent regime.

The new system retains the current section 102(f) requirement that an applicant actually invented the material sought to be patented, but otherwise changes much of the existing language of section 102.\textsuperscript{173} By moving to a modified first-to-file system, the critical inquiry now becomes ‘when was the application filed’ rather than ‘when was the invention conceived?’ Accordingly, interference proceedings and the ability to antedate references by establishing an earlier invention date are eliminated.\textsuperscript{174} The previous priority mechanism was discriminatory in dealing with foreigners. The significance of the reforms for foreign inventors is that they simplify, and increase access to, the US patent system. There is contention that the new US law is somehow different from the first-to-file law because of the use of the term ‘first-inventor-to-file’\textsuperscript{175}

IV. \textbf{SUMMARY}

Since the 1980s, the US domestic patent regime has increased its strength as a beggar-thy-neighbour policy. This policy is contrary to US Trade Liberalisation Principles. US policymakers, backed by US corporations and business organisations, have used the US Patent Principle as a tool for national economic development at the expense of international development.\textsuperscript{176} The US patent regime strongly favoured large corporations and domestic inventors at the expense of foreign inventors and international global development. The unique priority

\textsuperscript{173} Lehoy-Smith \textit{America Invents Act of 2011 }§ 3
\textsuperscript{174} Ibid.
\textsuperscript{175} T Takenaka ‘Harmony with the rest of the world? The America Invents Act’ (2011) 6 \textit{Journal of Intellectual Property Law & Practice} 1747, 1747.
\textsuperscript{176} May and Sell, above n 18, 1.
mechanism favoured big business and domestic inventors. As a result, the US was slow to conform to international harmonisation trends.

US patent law and competition policy are at odds. The US patent rights increased during the pro-patentee era. Since the 1980s, US judges and legislators dogmatically followed the US Patent Principle and embarked on a three-fold expansion of US patent protection. A biased domestic policy and the US Patent Principle allowed the US to gain a significant lead in the international innovation stakes. This lead did, however, come with disproportionate costs in some areas of domestic patent protection.

During the 2000s, in response to pressure domestically and from other developed nations the US has embarked upon reforms which reduce the magnitude of patent protection under the US Patent Principle and the inherent bias of the US domestic patent regime.

PART 2 - GLOBALISING A BEGGAR-THE-NEIGHBOUR POLICY

Alan Greenspan, former chairman of the Board of Governors of the US Federal Reserve said "[o]ver the past half century the increase in the value of raw materials has accounted for only a fraction of the overall growth of US gross domestic product. The rest of that growth reflects the embodiment of ideas in products and services that consumers value."\(^{177}\) As global trading has increased, the importance of protecting patent rights across national borders has risen exponentially.\(^{178}\)

---


Historically, the US has pushed for international harmonisation of patent law treaties. However TRIPS contradicts the trade liberalisation principles developed post WWII. Part 1 demonstrated that the US domestic patent policy is an example of a beggar-thy-neighbour policy which protects US interest at the expense of other nations. Part 2 will show that the US-led international policy of linked trade and patent protection is also a beggar-thy-neighbour policy. In the international arena the US and other developed nations have restored their economic power and development lead in trade at the expense of developing nations. The US coerced developing nations, some of whom are net importers of technology, into submitting to US Patent Principles under the guise of a trade liberalisation agreement.

I. HARMONISATION AND US PATENT RIGHTS PROTECTIONISM

The US has played a dominant and directive role in international patent law harmonisation since the nineteenth century. The first international patent convention was held in Austria in 1873, at the suggestion of US policymakers, who wanted to be certain that their inventors would be adequately protected at The International Exhibition of Inventions in Vienna (Vienna Exhibition)179 that year.180

This was followed by other convention including the International Union for the Protection of Industrial Property in 1884. Owners and manufacturers of innovations saw considerable advantage in the monopolistic potential of patents.181 Large US exporting corporations that are heavily invested in R&D and patent technology have sought ways to acquire and maintain their exclusive rights more efficiently in an

181 Sell and May, above n 40, 486.
integrated world marketplace. American firms, such as the Edison Company which manufactured Edison’s incandescent carbon filament lamp, pressed for strong patent protection in negotiations over the *Paris Convention of the Protection of Industrial Property 1883 (Paris Convention).* This strategy would be strongly echoed, more than 100 years later, in the activities of the Intellectual Property Committee (IPC), during the negotiations which led to TRIPS.

A. *Paris Convention for the Protection of Industrial Property*

Although preceded by *Vienna Exhibition*, the *Paris Convention* was the first and definitive international treaty involving patents to which the US was a party. The *Paris Convention* is considered “the bedrock of the international patent system”. However, it does not define a ‘patent’. It applies to industrial property generally, including ‘patents, utility models, industrial designs, trademarks, service marks, trade names, indications of source, and appellations of origin’. The *Paris Convention* was established in 1883 with 14 member states. The US became a contracting member of the *Paris Convention* in 1887. Currently there are more than 173 members.

---

184 Sell and May, above n 40, 486.
188 Ibid, art. 1, cl. 2.
The *Paris Convention* commits its members to three key doctrines. First, members must afford foreign inventors, from member states, the same patent protections and access to legal remedies as would be afforded to its own people. Second, domestic patent rights are independent. Each nation must enforce them individually within their domestic patent regimes. Third, a patentee who files an application in a member country must be given 12 months to file in other member countries without prejudice regarding information that enters the public domain. Though the *Paris Convention* was a giant step in aligning national domestic patent systems, the agreement fell short of any real substantive harmonisation. It failed to streamline the patent application procedures or to provide effective enforcement mechanisms which were essential for MNCs who wanted to protect their patent rights internationally.

### B. The Patent Cooperation Treaty

The *Patent Cooperation Treaty (PCT)* was founded after perceived harmonisation failure of the *Paris Convention*. The *PCT* was adopted by member states to simplify and streamline international patent application filing, searching and examination. The *PCT* is administered by the World Intellectual Property Organization (WIPO) International Bureau in Geneva.

---

191 *Paris Convention* article 2.
192 *Paris Convention* article 4.
193 Shinneman, above n 190, 950.
194 *Paris Convention* article 4.
195 Shinneman, above n 190, 950.
The PCT enables patent applicants to file an ‘international’ patent application which simultaneously seeks patent rights in each of the nominated contracting states.\textsuperscript{198} The PCT also provides for a mandatory PCT search\textsuperscript{199} and an optional PCT examination.\textsuperscript{200} The decentralisation of the PCT, through the more than 100 national and regional offices which perform PCT functions, addresses and harmonises the many cultural, linguistic and procedural differences between contracting states.\textsuperscript{201}

While the PCT addressed a key failure of the Paris Convention it has to two major limitations. The first limitation is that the PCT does not retroactively apply.\textsuperscript{202} The second is that the PCT only results in a single international application, not a single granted patent.\textsuperscript{203} Individual contracting states may decide whether to grant the respective national patents.\textsuperscript{204} PCT allows MNCs to save considerable international filing and administration costs, however, it does not ensure protection of their patent rights because the treaty failed to harmonise the substantive laws of contracting states.

C. Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)

In 1994, minimum international patent protections were added to the GATT Uruguay Round. These protections were contained in the provisions of TRIPS. TRIPS significantly altered the global patent paradigm and provided a method for

\begin{flushright}
\textsuperscript{198} WIPO ‘Patent Cooperation Treaty (“PCT”) (1970)’
\texttt{<http://www.wipo.int/pct/en/treaty/about.html>}
\textsuperscript{199} PCT, art. 15(1).
\textsuperscript{200} PCT, art. 31(1).
\textsuperscript{202} Willis, above n 185, 921.
\textsuperscript{203} Ibid.
\textsuperscript{204} Willis, above n 185, 292.
\end{flushright}
the substantive harmonisation of patent laws. Minimum patent protections became a requirement for joining the WTO, and TRIPS was propelled to rapid and widespread accession. Distinct from the earlier patent-related treaties, TRIPS laid the foundation for a globalised patent system.\footnote{Ibid} Unlike the PCT, which only enabled patent applicants to simultaneously file in multiple countries, TRIPS provides enforceable minimum standards patent protection. Many of these standards were modelled on the US Patent Principle discussed in Part 1.\footnote{Ibid} TRIPS took patent law harmonisation to a new level, by supporting the development of an enforceable protectionist global patent system.

II. CONTRADICTING TRADE LIBERALISATION

US TRADE POLICY AND PATENT RIGHTS PROTECTION

A. Bretton Woods – The New International Monetary Arrangement

During WWII there was a general recognition of the futile, arbitrary and antagonistic exchange-rate and monetary policies that had been followed by the major industrial nations in the 1920s and 1930s.\footnote{Ibid} The Roosevelt Administration was convinced that these beggar-thy-neighbour policies had been a cause of both the Depression and the WWII.\footnote{Ibid} As a result the US took initiatives and showed leadership towards creating a stable and internationally acceptable monetary system.\footnote{Ibid} At the United Nations Monetary and Financial Conference at Bretton Woods in 1944, delegates from 44 countries after considerable negotiations, agreed

\footnote{Ibid}{Ibid}{Ibid}{Ibid}
to create a new international monetary arrangement. From this arrangement three new global institutions were borne: the International Monetary Fund (IMF), the World Bank and ultimately GATT. Although the Roosevelt Administration was convinced, the US Congress was not. Congress rejected a multinational trade organisation and the rest of the world saw no point in a global trade organisation without the US. The GATT remained the temporary, and yet most powerful, entrenched non-organisation the world had ever seen until 1994. The GATT secretariat only became a full legal personality when the Uruguayan Round Final Act of 1994 created its successor the WTO.

The founders of the Bretton Woods institutions sought to avoid beggar-thy-neighbour policy problems by creating international institution that would promote the development of an open world economy. The primary goal of this economy was to encourage international growth and economic cooperation by allowing goods and capital to flow around the global as freely as possible. The WTO, and its predecessor the GATT, were focused on negative integration, through reducing tariffs and removing regulatory barriers in international trade. The objective of the Bretton Woods was not successful.

---

211 Braithwaite and Drahos, above n 28, 177.
212 Ibid.
213 Ibid
B. Protectionism and the Trade Act 1974

The global free trade atmosphere which was created post WWII lasted 30 years until the 1970s. The oil shock and high interest rates of the 1970s caused inflation in the international natural resources markets and chaos in the international financial system. A mode of protectionism among US people began in the 1970 in response to the perceived loss of international competition, and by the mid 1980s Congress was awash with protectionism Bills.

A key factor in the ultimate success in securing the GATT was the preparedness of the US to define its negotiating objectives though domestic trade legislation. In 1988 Congress passed the Omnibus Trade Practices Act of 1988 (Omnibus Act) which made two significant amendments to the Trade Act of 1974 (Trade Act).

First, the Omnibus Act linked the receipt by developing countries of import privileges under the Generalised System of Preferences (GSP) to the willingness of those countries to protect intellectual property rights. Secondly, an amendment to section 301 of the Trade Act introduced the Super 301 and Special 301 provisions.

Section 301 of the Trade Act permits the US Trade Representative (USTR) to investigate and impose sanctions on countries whose trade practices are found to be

216 Ibid
217 Braithwaite and Drahos, above n 26, 212.
221 Blakeney, above n 218, 24-25.
222 Puckett, A. Lynne and William L Reynolds, "Current Developments: Rules, Sanctions and Enforcement under Section 301 at Odds with the WTO?" (XXXX) 90 The American Journal of International Law 675, 675
unfair to US interests. It reaches beyond the GATT to give the US unilateral power to penalise countries that threaten American interests. Special 301 concerns intellectual property and Super 301 requires the USTR to identify and investigate ‘priority practices’ of foreign governments that significantly affect American trade. Under these provisions, the USTR is required to identify priority foreign practices, which, if eliminated, will have the greatest benefit for US commerce, and seek a removal of those practices under the threat of retaliation. Section 301 can be used to enforce US rights under multilateral and bilateral trade agreements, as well as to remedy unreasonable, unjustifiable or discriminatory foreign trade practices that restrict or burden US trade. ‘Unreasonable, unjustifiable or discriminatory foreign trade practices’ to include any unfavourable trade condition. The exploitation of US patentee right is explicitly actionable under Section 301.

C. US Coercion

When the US began to push for the inclusion of intellectual property, including patent protection, in the GATT at the beginning of the 1980s, developing countries resisted the proposal. Developing countries at that time held about 1 per cent of the world’s patents. They were desperate for access to the technology of developed nations and knew that higher standards of patent protection would not be in their interests. The countries that were the most active in their opposition to the

---

223 19 U.S.C. §2411
224 Puckett and Reynolds, above n 222, 675.
225 19 U.S.C. §2242(a) (1) (A) contains the "Special 301" provisions. 19 U.S.C. §2420 (a) (1) (A) and (B) (as amended) contains the "Super 301" provisions.
227 Puckett and Reynolds, above n 222, 675.
228 Blakeney above n 221, 24-25.
229 Braithwaite and Drahos, above n 28, 212.
230 Drahos and Braithwaite, above n 78, 212.
TRIPS proposal were Argentina, Brazil, Cuba, Egypt, India, Nicaragua, Nigeria, Peru, Tanzania and Yugoslavia. 231

Before and during the Uruguay Round negotiations, the US, using the Section 301 provisions, exerted bilateral pressure on developing countries. This pressure helped to bring the Uruguay Round closer to the conclusion the US wanted. 232 Brazil was subject to the coercive pressure exerted by the US, 233 and was targeted under Special 301 on patent protection issues related to pharmaceuticals. 234 Geza Feketekuty, a top USTR official, was prepared to admit, in writing, that Brazil and India were strategic targets for the US. 235 Brazil and India were each “too small as a market for US products to wield any counter retaliatory power, but large enough as a country of continental dimensions to be noticed and to be creditable as the target of exemplary deterrence”. 236 The US recognised that breaking the resistance of these nations was essential to achieving their desired outcome. 237 The US has coerced these and other developing nations, most of whom are net importers of patented technology, into submitting to the US Patent Principle under the guise of a trade liberalisation agreement. 238 The US used a ‘carrot and stick’ approach in negotiations. The carrot was increased market access and potential future investment, followed by the stick of economic coercion. 239 As Peter Drahos

232 Braithwaite and Drahos, above n 28 , 180.
233 Ibid 180.
234 Ibid 181.
236 Braithwaite and Drahos, above n 28 , 180.
237 Drahos and Braithwaite, above n 78, 212.
eloquently states “banning the imports of Brazilian software would have done little to stir trade officials in Brazil. Slapping large tariffs on Brazilian coffee would make them jump.”

D. WTO - A Strategic Choice?

The active opposition of developing nations to higher standards of patent protection was another reason behind the US strategy of moving patent lawmaking from one organisation (WIPO) to another (WTO). Each international organisation has different operational rules, which can lead to ‘forum shifting’. Forum shifting can encompass three kinds of strategies: (a) moving an agenda from one organisation to another, (b) abandoning an organisation, and (c) pursuing the same agenda in multiple organisations. They key objective of forum shifting is to move treaty negotiations, lawmaking initiatives, or standard setting to another organisation with more favourable rules. In reviewing instances of forum shifting, Peter Drahos and John Braithwaite conclude that “only the US has used this strategy with any frequency”. Dominant states are often induced to shift lawmaking agendas to another regime when weaker states band together to deadlock negotiations in an existing regime.

In 1970, developing countries became increasingly critical of the international patent system. These countries were concerned about the dominance of foreign

---

241 Braithwaite and Drahos, above n 28, 565.
242 Ibid.
244 Braithwaite and Drahos, above n 28, 565.
245 Braithwaite and Drahos, above n 28, 564-5.
pharmaceutical firms and the high price of medicines. Developing countries voiced their concerns at a WIPO diplomatic conference, held between 1980 and 1984, where they demanded a revision of the patent rules of the *Paris Convention* to grant them preferential treatment. The US strongly opposed any attempts to weaken protections under the *Paris Convention*. The diplomatic conference ended in deadlock in 1985 without adopting any treaty revisions.

The WIPO and the WTO also operate on different decision making rules. The WIPO negotiations operate on a ‘one-state-one-vote’ rule. In comparison, the WTO decides policy by consensus. Decisions reached within the WTO occur when every member consents to the new agreement. Under certain specific circumstances, and when no unanimous consensus is reached, members may vote. In practice this rarely occurs because certain dominant member governments can veto decisions with which they do not agree. The WIPO is a rule-based system, with each country having equal voting rights. The WTO on the other hand is a power-based system. Weaker developing countries “need a rule-based system more than anyone; everyone loses if it collapses, but the US lose least (Indonesian trade negotiator)”.

---

247 Helfer, above n 243, 20.
248 Ibid.
249 Braithwaite and Drahos, above n 28, 566.
251 Ibid.
252 Ibid 89-90.
253 Braithwaite and Drahos, above n 28, 200.
In the WIPO, the US could never expect to get its way on higher standards of patent protection through a voting contest. The US realised this and set its sights on the WTO. The incorporation of patent protection into the WTO was ostensibly carried out by US and European Union (EU) trade officials. Representatives of private US organisation were also able to participate in TRIPS negotiations. In the WTO power is distributed in a highly asymmetrical fashion. The WTO decision-making rules have allowed adherence to both the instrumental reality of asymmetrical power and the logic of appropriateness of sovereign equality. The US, and EU, and to a lesser extent, large, rich states such as Japan, have the power and influence in the WTO. These states stipulated and implemented a TRIPS agreement which benefits their citizens. In the TRIPS negotiations small, poor states had little influence. They were, and are to a great extend today, ‘policy-takers’, rather than ‘policy-shapers’.

The US and its allies shifted patent protection to a new international forum where their voices and ideas had more power. Donald Harris contends that the final TRIPS Agreement ‘closely resembled’ the US drafts, which were heavily influenced by MNCs acting in the IPC. This suggests that developing countries had very little opportunity to negotiate within WTO regime. Shifting the forum of patent protection to the WTO was a strategic choice. By forum shifting the US was able to dictate an

---

254 Ibid 566.  
255 Helfer, above n 243, 20.  
256 Ibid 19.  
257 Moy, above n 43, 778.  
international patent regime that benefits the US, developed nations and MNCs at the expense of the developing world.

E. The Dichotomy in US Trade and Patent Policy

The modern notion of free trade originates from the theories of absolute and comparative advantage developed by the classical political economists, Adam Smith and David Ricardo. Smith and Ricardo both considered the ways in which nations decide their trade policies. They concluded that, with some qualifications or exceptions, a policy of liberalising restrictions on imports would maximise the wealth of a state. A country can gain in wealth from liberalising its import regime, regardless of any legal commitment by its trading partner to liberalise its own import rules reciprocally, or even not to restrict imports further.

One of the dominant concepts of international trade theory focuses on post-WWII domestic politics. This concept balances the perceived need for governments to ensure their ability to intervene in domestic economies to preserve stability, while avoiding the trade feuds of the pre-War era. The pre-War trade feuds involved states reinstating trade barriers as a competitive reaction to the beggar-thy-neighbour policies of other states. These feuds were disastrous for the global economy and global development.

---

263 Howse above n 27, 94-95.
264 Ibid 95.
266 Howse above n 27, 94-95.
US patent law harmonisation efforts contradict the US Trade Liberalisation Principle. Harmonisation imposes global standards in place of national ones. They recognised the fundamentally territorial nature of intellectual property laws. In contrast, TRIPS is a US imposed ‘top-down’ measure, imposing conditions upon national intellectual property protection and procedures that are often different from established procedures. TRIPS opponents have also challenged the WTO’s right to intrude on a policy area as peripheral to global trade as IP.

Using trade policy as a lever to achieve acceptance of non-trade issues has a long, although controversial history. Trade sanctions continue to be a strategy used in international negotiation. TRIPS changed the international trade policy. TRIPS is the only case of positive linkage of non-trade regulatory standards to the WTO. Unlike previous trade policy, TRIPS used of trade linkages to create new international law rather than enforce existing obligations. The new law created was the agreement to harmonise patent rights within the WTO itself. For this reason, including TRIPS in the WTO causes a dichotomy in US trade and patent policy. TRIPS marks the inclusion of an inherently protectionist policy and a barrier to international trade liberalisation in the GATT. Effectively it turns US patent policy into a beggar-thy-neighbour policy. Emery Simon, a former US Trade Negotiator,

---

268 Stack, above n 62, 659.
269 Ibid 659.
271 Pager, above n 30, 217.
272 Ibid 219.
273 Braithwaite and Drahos, above n 28, at 221
274 Ibid 221
described it as the US being able to ‘rebalance the equation’. Realistically it was rebalancing the equation to be significantly in the favour the US, its MNCs and other developing nations. Part 3 will demonstrate that TRIPS is a protectionist policy which protects the interests of developed nations and MNCs at the expense of developing nations and global development.

III. SUMMARY

The US has played a dominant and directive role in international patent law harmonisation since the nineteenth century. TRIPS has provided the US, other developed nations and MNCS, with ways to acquire and maintain their patent rights more efficiently. Lobbied by the IPC, the US and the governments of developed nations have spread enforceable global patent protectionism. Using domestic trade laws, the US has coerced developing nations to accept TRIPS.

The US instigated the shift of intellectual property and patent protection from the WIPO to the WTO. In the WTO, the US and its developed nation allies could dictate the international patent regime they wanted. The strategic forum shift, however, resulted in the US contradicting its own principles of trade liberalisation. The US and other founders WTO system sought to avoid beggar-thy-neighbour policy problems. In harmonising substantive patent law TRIPS created new international law rather than enforcing existing obligations. This creates a dichotomy in US trade and patent policy. It imposes a protectionist regime within the WTO. Imposing the US Patent Principle and a protectionist regime in the WTO

has created an international beggar-thy-neighbour policy. In the international arena the US and their developed nation allies have restored their economic power and development lead in trade, at the expense of developing nations and global development.

PART 3 – TRIPS MAKES BEGGARS OF OUR DEVELOPING NEIGHBOURS
Seminal to any discussion of the purpose and effect of TRIPS is the idea of divergence of interests between developing and developed countries. Most developing nations are net importers of patent technology and have sought to minimise standards of patent protection. Developing nations only agreed to TRIPS patent protection in response to coercion from the US. WTO signatory states must enact the US Patent Principle domestically, which tips the domestic balance between private and public rights in favour of private foreign rights. This imposes social costs through the free market interference which do not provide a net social benefit in developing nations. This removes the justification for the free the interference.

Part 3 will consider the requirements of patent protection under the TRIPS regime and how the protection is enforced. Subsequently the discussion turns to the effects of implementing TRIPS. It will demonstrate that TRIPS protects the interests of developed nations and MNCs while it fails to provide developing nations with promised economic benefits and implementation flexibilities. This part includes the international effects of a ‘one size fits all’ model based on the US Patent Principle, how TRIPS reduced the access of developing nations to public health, and how the

278 Drahos, above n 238, 10.
standards of patent protection have continued to rise after the implementation of TRIPS.

I. PATENT PROTECTION AND TRIPS

Despite ongoing criticism, and now over seventeen years old, TRIPS regulates a marketplace characterised by extraordinary dynamism, influenced by the constant forces of globalisation and technological change.279 In essence, TRIPS was to establish a global, harmonised system of minimum patent rights to which all signatory nations would be bound, modelled on the US Patent Principle.280

A. The Patent Protection Requirements of TRIPS

TRIPS includes several basic principles as well as specific minimum standards of patent protection. All signatory nations were expected to bring their national patent law into conformity with the provisions of the agreement and construct the administrative infrastructure for their enforcement.281

Patents, being a monopoly right, tend to generate deadweight social losses. These social losses can be in the form of high prices for consumers for the life of the patent, or more limited access to products. The latter occurs particularly in developing countries with the access of medicines.282 Patent law should ideally balance incentives to innovate through monopoly rights and the social costs of these rights. When patent terms are extended patentees maintain their profits for

280 Donald Richards, above n 39, 271-2.
281 Ibid 272.
282 Kapczyns, above 246, 1580.
longer and society incurs the costs. TRIPS signatory nations lost their ability to decrease patent terms under TRIPS, although they remained free to increase the length of time those patents remain in force. Many counties, including the US, had to extend their patent terms by enacting TRIPS. TRIPS set the minimum global patent term at 20 years from the patent’s filing date.

TRIPS patent protection must include the right to exclude others from “making, using, offering for sale, selling, or importing” infringing products. The patent grant cannot depend on the place of invention, the field of technology or whether products are imported or locally produced. Patentable subject matter under TRIPS includes “any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application.”

Joseph Straus points out that in 1988, prior to TRIPS, pharmaceutical products were not patentable in 49 countries, animal species in 45, methods for the treatment of the human or animal body in 44, plant varieties in 44, biological processes for the production of plant varieties or animal species in 42, food products in 35, computer programs in 32, chemical products in 22, pharmaceutical processes in 10, processes for the manufacture of food in 9, and microorganisms in 9 of a total 92 states in Paris Convention. TRIPS expanded patentable subject matter in all these nations.

---

283 Yelderman, above n 277, 215.
284 TRIPS Agreement, art 33.
285 TRIPS Agreement, art 28.
286 TRIPS Agreement, art 27(1).
287 TRIPS Agreement, art 27(1)
288 Joseph Straus, ‘Implications of the TRIPS Agreement in the Field of Patent Law’, in Friedrich-Karl Beier (Editor) and Gerhard Schricker (Editor) (eds) From GATT To TRIPS: The Agreement On
TRIPS allows exceptions for patentability of subject matter. The patentability of subject matter exception is under Article 27. The subject matter exception includes for reasons of public order or morality, and in the case of diagnostic, therapeutic and surgical methods, including those for plants or animals.\(^{289}\) Despite this exception, plant varieties can now be protected by either patents or the sui generis system established by the *International Union for the Protection of New Varieties of Plants Convention (UPOV Convention).*\(^{290}\)

TRIPS also allows for exceptions to patentee rights. These exceptions are compulsory licensing and governmental use without the authorisation which have detailed conditions in TRIPS.\(^{291}\) Compulsory licensing includes conditions that the patent holder receives appropriate compensation for the patent before a compulsory license is granted, that this compensation takes into consideration the economic value of the licence and that the patent be subject to judicial review.\(^{292}\) Article 30 provides for other use without authorization of the patent holder. Signatories are permitted limited exceptions to the "exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties".\(^{293}\)

---

\(^{289}\) TRIPS Agreement, art 27(2)-(3).


\(^{291}\) TRIPS Agreement, art 31; Blakeney, above n 218, 36

\(^{292}\) TRIPS Agreement, art 31.

\(^{293}\) TRIPS Agreement, art 30.
Daniel Chow and Thomas Schoenbaum explain that the WTO dispute system works by peer pressure rather than any inherent enforcement authority.\textsuperscript{301} Under the dispute settlement agreement, a WTO member who believes a trading partner is not complying with its obligations may bring a complaint to the WTO by following a set series of procedures.\textsuperscript{302} The complainant member must enter into good faith consultations with the non-complying member in an attempt to reach a mutually satisfactory agreement.\textsuperscript{303} If the consultations fail, the complainant may request the establishment of a Dispute Settlement Panel (Panel),\textsuperscript{304} consisting of persons chosen either by the parties or by the WTO secretariat from a list of experts.\textsuperscript{305} Through a series of written submissions\textsuperscript{306} and oral arguments held in Geneva\textsuperscript{307} the panel forms a decision, which the larger WTO membership\textsuperscript{308} then adopts unless there is an appeal.\textsuperscript{309} If the decision is appealed, it is reviewed by a standing Appellate Body (Appellate Body) on issues of law.\textsuperscript{310} The WTO membership then adopts the Appellate Body decision unless there is a consensus not to adopt it.\textsuperscript{311} Once the decision is adopted, the unsuccessful party has a reasonable period of time in which to implement the decision.\textsuperscript{312} A ‘reasonable time’ is generally within 15 months from adoption of the decision, however, the time may be shorter or longer, depending upon the particular circumstances.\textsuperscript{313}

\textsuperscript{303} Dispute Settlement Understanding art 4 (Consultations).
\textsuperscript{304} Dispute Settlement Understanding art 4 (8) and art 6 (Establishment of Panels).
\textsuperscript{305} Dispute Settlement Understanding art 8(4) (Composition of Panels).
\textsuperscript{306} Dispute Settlement Understanding art 12 (member party submissions) and art 10 (third party submission).
\textsuperscript{307} Dispute Settlement Understanding art 12(10).
\textsuperscript{308} Dispute Settlement Understanding art 16.
\textsuperscript{309} Dispute Settlement Understanding art 17.
\textsuperscript{310} Dispute Settlement Understanding art 17(6).
\textsuperscript{311} Dispute Settlement Understanding art 17(14).
\textsuperscript{312} Dispute Settlement Understanding art 21.
\textsuperscript{313} Dispute Settlement Understanding art 21 3(c).
II. US PATENT PRINCIPLE: ONE SIZE DOES NOT FIT ALL

A. Economic Differences

TRIPS has been pursued by US and other developed nations because it is a policy which protects their economic interests. Building on the US Patent Principle, the international patent principle assumes that stronger patent protection leads to an increase in: (a) technology transfer via Foreign Direct Investment (FDI), and (b) domestic innovation and therefore development of local industry and increasing of access to rich export markets (International Patent Principle).

1. Technology Transfer and FDI

Technology transfer takes place via trade of goods and services, especially of capital goods, FDI, licensing and joint ventures, foreign trade, and movement of people. For most countries 90 percent of national productivity growth is from foreign sources of technology. FDI is the establishment or acquisition of production subsidiaries by foreign MNCs. It is particularly important because it is a source of capital and knowledge about production techniques for the host country. The economic argument, for the stronger patent protection, is that unless innovation and creation is protected by granting a monopoly, the private

---

315 Ibid.
sector will not be motivated to invent and innovate.\textsuperscript{319} Strong patent protection is generally considered to stimulate technology transfer by means of FDI, joint ventures and by stimulating international trade in general.\textsuperscript{320} Previously, MNCs were reticent to export their technology to developing nations because they feared infringement of their intellectual property by counterfeiting and piracy. In certain cases the adoption of TRIPS is purported to have produced an increase in FDI in some developing countries. Other studies suggest that the strength of intellectual property rights alone cannot generate strong incentives for FDI. To support the conflicting evidence on this topic, Jean Homere states that “developing countries in Sub-Saharan Africa and Eastern Europe which have adopted strong intellectual property rights systems have attracted little FDI while China, Brazil, Argentina and Thailand have attracted high levels of FDI despite their weak international intellectual property rights.”\textsuperscript{321}

2. Domestic Innovation

Innovation in developing countries primarily consists of minor adaptations of existing technologies, which in the aggregate stimulate economic activity.\textsuperscript{322} With a strengthened intellectual property regime many of these minor adaptations lead to intellectual property rights infringement. Another problem for developing countries is that the greatest damage, caused by strengthened intellectual property rights, is to industries which are not viewed as ‘legitimate’ by developed nations.\textsuperscript{323}

\textsuperscript{320} Simons, above n 314, 88.
\textsuperscript{322} Ibid.
\textsuperscript{323} Simons, above n 314, 91.
In 1984, the China adopted its first modern patent law that become effective in 1985. In 2000 China amended its patent law to conform to the minimum standards of the WTO. China joined the WTO in December 2001.

In 2003 the patent applications were 308,487. This was an increase of 55,856 more than the previous year. At the beginning of 2004, the total patent applications in China had been 1,931,125 with domestic applications accounting for 82.6 per cent and foreign applications 17.4 per cent. There was a large increase in patent applications in 2004. That year, the Chinese Patent Office, the State Intellectual Property Office (SIPO), handled 353,807 applications. In 2005 the number increased again. 476,264 applications were filed in 2005. This was a 34.6 per cent increase on the previous year 2004. These figures suggest that joining the WTO and enacting TRIPS legislation improved the patenting performance in China.

However, further analysis of China’s patent statistics shows that over 90 per cent of the foreign SIPO patents have claimed foreign priority. This implies that many of the China’s patents are granted to foreign inventors’ exiting inventions. Also two-thirds of the applications filed by Chinese inventors were for low-level technology while 80 per cent of foreign applications were for invention patents, high level technology. This suggests TRIPS has had little impact on China’s

---

324 Drahos, above n 238, 227-8.
326 WTO, Member Information China and the WTO <http://www.wto.org/english/tratop_e/countries_e/china_e.htm>.
328 Ibid.
329 Ibid, 740-1.
331 Liu, above n 331, 733, 741.
domestic innovation because foreigners have dominated the key high-technology sectors.332

Although developing countries are implementing TRIPS, they are awarding most invention patents to the foreign inventors from countries like the US. Stronger patent rights have done little for domestic innovation in these countries because their domestic level of innovation is not advanced enough to benefit from stronger patent protection. In fact, in most cases increased patent protection inhibits the domestic innovation of developing nations because they are unable develop technology around existing patents.

B. Costs of Implementation and Enforcement

In many cases TRIPS established substantially higher standards of patent protection than the existing domestic patent laws.333 For instance, one of the reasons why a country like the US has such an advanced patent system is because the US, as a developed nation, has the resources, time, and funds to enforce patent.334

The emphasis in TRIPS is that patent rights are private rights. MNCs and developed countries’ are demanding greater criminal enforcement, ex officio authority, and data exclusivity from national patent regulators. These demands have gradually shifted the costs and responsibilities of patent protection from private rights holders

332 Drahos, above n 238, 231.
334 Willis, above n 185, 304.
to national governments.\textsuperscript{335} For developing countries, this emphasis is undesirable. Stronger enforcement often comes with a hefty price tag and difficult trade-offs.\textsuperscript{336} Developing nations do not have the resources for such enforcement.\textsuperscript{337} The obligations of implementation and enforcement provisions under TRIPS is concerning for developing nations. Many of these nations are already struggle to meet international standards while simultaneously furthering their goals for economic and social progress.\textsuperscript{338}

The \textit{UN Conference on Trade and Development} (UNCTAD) found that in Chile, the additional fixed costs of complying with TRIPS were US$ 718,000, with annual recurring costs of US$ 837,000.\textsuperscript{339} Commentators suggest that the fixed cost in Egypt would be US$ 800,000 with annual training costs close to US$ 1 million, while in Bangladesh the one-time costs amount to US $250,000 with annual costs of over US $1.1 million which covers judicial work, equipment and enforcement efforts.\textsuperscript{340} In regard to cost estimates for implementing and enforcing TRIPS Maskus notes that the estimates overlook training costs, and suggests that “these estimates may be low”.\textsuperscript{341}

Patent enforcement is expensive.\textsuperscript{342} One study published in 2000 by the \textit{Wall Street Journal} estimated that average cost of patent enforcement was $1.2 million.\textsuperscript{343}

\textsuperscript{336} Peter K. Yu, ‘Enforcement, Economics and Estimates’ (2010) \textit{WIPO Journal} 1,1
\textsuperscript{337} Andrew J. McCall, ‘Copyright and Trademark Enforcement in China’ (1996) \textit{9 Transnat’l Law} 587, 591.
\textsuperscript{338} Simons, above n 314, 61.
\textsuperscript{340} Ibid.
\textsuperscript{341} Ibid.
\textsuperscript{342} Willis, above n 185, 304.
These expenses appear to be increasing, with a more recent commentator describing an “industry rule of thumb” whereby “any patent infringement lawsuit will easily cost $1.5 million in legal fees alone to defend.”\textsuperscript{344} Higher stakes litigation is even more costly according to a 2008 American Intellectual Property Law Association study. For patent suits involving damages claims of more than $25 million, expenses reportedly increased in 2007 to $5 million.\textsuperscript{345}

Given the limited resources in many developing countries, an increased use of resources in the enforcement area inevitably will lead to the re-allocation of resources from other competing, and at times more important, public needs.\textsuperscript{346} Such needs include purification of water, generation of power, improvement on public health, reduction of child mortality, provision of education, promotion of public security, building of basic infrastructure, reduction of violent crimes, relief of poverty, elimination of hunger, promotion of gender equality and protection of the environment, as well as responses to terrorism, illegal arms sales, human and drug trafficking, illegal immigration and corruption.\textsuperscript{347}

III. FAILED FLEXIBILITIES COST DEVELOPING NATIONS

Despite the problems with the one-size-fits-all model under TRIPS, it did include a number of provisions drafted to provide the flexibility to facilitate development and

\textsuperscript{346} Peter K Yu, ‘Trips Enforcement And Developing Countries’(2011) 26 (3) \textit{American University International Law Review} 727, 776
\textsuperscript{347} Ibid.
to protect the public interest. The effectiveness of these flexibilities has been jeopardised by developed nations.

The UN Human Rights Council states that the "[f]lexibilities were included in TRIPS to allow States to take into consideration their economic and development needs. States need to take steps to facilitate the use of TRIPS flexibilities." These provisions take differing forms but serve the common purpose of enabling WTO members to take their economic, social and environmental needs into account, when tailoring their implementation of TRIPS obligations. Examples of the flexibilities in TRIPS include (a) provisions that specifically mention other objectives with which members may balance patent rights enforcement, (b) provisions that provide overt discretion to national governments regarding methods of implementation of commitments, (c) limitations and exceptions to protections afforded by TRIPS and (d) purposefully vague language, especially in the enforcement section, that leaves significant room for interpretation as to the specific nature of the obligation entailed. These flexibilities were included to balance the desire of developed nations for higher standards of patent protection, with the desire of developing nations to achieve their national development and welfare strategies. This section will focus on the effectiveness of the flexibility
provisions in articles 1.1, 7, 8 and 41.5 with regard to the recent *China-IPR Case*.\(^{357}\)

A. Article 1.1

The third sentence of Article 1.1 provides that "members shall be free to determine the appropriate method of implementing the provisions of this Agreement within their own legal system and practice."\(^{358}\) It echoes the preamble of TRIPS, which highlights recognising "the special needs of the least-developed country Members in respect of maximum flexibility in the domestic implementation of laws and regulations in order to enable them to create a sound and viable technological base."\(^{359}\) In the *China-IPR Case*,\(^{360}\) the government of China claimed that "Articles 1.1 and 41.5 were key concessions to the developing world, which the United States and other developed third parties seek now to dismiss and disregard."\(^{361}\) China argued that "Article 1.1 is ‘a specific caveat’ that establishes boundaries on obligations, specifically in the realm of enforcement."\(^{362}\) The position taken by China was that the provision not only provided the much-needed context for interpreting TRIPS, but it also indicated that "the balance of rights and obligations in TRIPS is . . . very much at stake in this dispute."\(^{363}\)
The US-China dispute WTO panel (Panel) rejected China’s position. It declared that Article 1.1 “does not permit differences in domestic legal systems and practices to justify any derogation from the basic obligation to give effect to the provisions on enforcement.”\textsuperscript{364} Instead of allowing a member state to lower the specified TRIPS standards, the provision merely grants to a WTO member “freedom to determine the appropriate method of implementation of the provisions to which they are required to give effect.”\textsuperscript{365}

Although the Panel’s interpretation of Article 1.1 was a disappointment to many developing countries, it is consistent with other reports of the Appellate Body or other WTO panels.\textsuperscript{366} Given the history in using the third sentence of Article 1.1, it is fair to assume that its future use is unlikely to provide any effective defence against TRIPS non-compliance, even though WTO members may still be tempted to include such a sentence in their oral statements or written submissions.\textsuperscript{367} The lobbying for Articles 1.1 and 41.5 may have been fruitless because Article 1.1 is ineffective as a defence to non-compliance.

B. Article 7 and 8

Peter Yu contends that “Articles 7 and 8 provide explicit and important objectives and principles that play important roles in the interpretation and implementation of the Agreement.”\textsuperscript{368} Article 7 describes the objectives of TRIPS which are that “intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner

\textsuperscript{364}China-IPR Panel Report Report Annex B–2, ¶¶ 7.513
\textsuperscript{365}China-IPR Panel Report Report Annex B–2, ¶¶ 7.513
\textsuperscript{366}Yu, above 346, 776.
\textsuperscript{367}Ibid.
\textsuperscript{368}Yu, above 348, 798.
conducive to social and economic welfare, and to a balance of rights and obligations." While the first three objectives technological innovation, transfer and dissemination of technology, and the production and use of technological knowledge, focus mainly on technological development and may not affect all forms of intellectual property rights, the latter two have a much broader focus and cover virtually all forms of intellectual property rights. Article 8, provides that members may "in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socioeconomic and technological development, provided that such measures are consistent with the provisions of this Agreement." Commentators have had differing interpretations of Article 7 and 8. Some have considered Article 7 as "mere hortatory" while some have highlighted the limitations of Article 8 because it contains the TRIPS consistency test. Others have argued using Article 31.1 of the Vienna Convention on the Law of Treaties (Vienna Convention) which requires treaties to be "interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty...in the light of its object and purpose." Although WTO Panel's Reports have applied Articles 7 and 8 on occasion, their application has remained limited.

369 TRIPS Agreement, art 7.
370 Yu, above n 348, 1000.
371 TRIPS Agreement, art 8(1).
375 ibid, art 31.1.
376 Yu, above n 346, 768.
Notwithstanding the importance of Articles 7 and 8 and the Vienna Convention’s specification, the Panel in this case did not mention Article 7 or 8.\textsuperscript{377}

The Panel’s approach contrasts to the decision in Canada—Patent Protection of Pharmaceutical Products (Canada Case).\textsuperscript{378} The Panel struck a compromise between the two positions by allowing for “certain adjustments” that stopped short of renegotiating the basic balance of TRIPS.\textsuperscript{379} The lack of discussion of Articles 7 and 8 in the Panel’s report provides an important lesson for all developing nations.\textsuperscript{380} If these two provisions are to provide the key basis for a pro-development interpretation of TRIPS, they need to be utilised to the fullest extent in the WTO submissions to help develop or clarify their normative content. By further developing Articles 7 and 8, countries can also “pave the way for the development of future exceptions and limitations, which can be used to restore the balance of the international intellectual property system.”\textsuperscript{381} The greater use of the two provisions may even help “persuade the [Dispute Settlement Body (DSB)] to recognize and give effect to developmental priorities.”\textsuperscript{382}

C. Article 41.5

Article 41.5 provides that “nothing in [Part III of the Agreement] creates any obligation with respect to the distribution of resources as between enforcement of intellectual property rights and the enforcement of law in general.”\textsuperscript{383} This provision states explicitly that a WTO member is not required to devote more

\textsuperscript{377} Yu, above 346, 768.
\textsuperscript{379} Correa, above n 379, 102.
\textsuperscript{380} Yu, above n 346, 772, 768.
\textsuperscript{381} Ibid.
\textsuperscript{382} UNCTAD-ICTSD, Resource Book On Trips And Development (UNCTAD-ICTSD, 2005) 130.
\textsuperscript{383} TRIPS Agreement, art 41.5.
resources to intellectual property enforcement than to other areas of law enforcement. It further invites the DSB to evaluate whether the resource demands for intellectual property enforcement are disproportionate to demands in other areas.\textsuperscript{384}

The provision is again particularly important to less developed countries. During the TRIPS negotiations, these countries were deeply concerned about the need to reallocate a considerable amount of resources to set up specialised intellectual property courts or strengthen intellectual property enforcement. These concerns were so significant that less developed countries specifically demanded the inclusion of Article 41.5 in the TRIPS Agreement.\textsuperscript{385} As Professor Correa recounted “the last paragraph of Article 41 was not suggested in the original U.S. and EC proposals. It was included in order to address the concerns of developing countries, based on a proposal by the Indian delegation. This was in fact one of the few provisions in Part III where developing countries’ views made a difference.”\textsuperscript{386}

In \textit{China-IPR Case}, the Panel’s Report suggested that a future WTO panel could consider the shift of burdens, responsibilities, and risks of enforcement from private rights holders to national governments, especially those in the less developed world.\textsuperscript{387} The Panel’s Report noted clearly that its task was not “to review the desirability of strict IPR [Intellectual Property Rights] enforcement.”\textsuperscript{388} After all, the second sentence of Article 1.1 of TRIPS gives member states the power to “implement in their law more extensive protection than is required by this

\textsuperscript{385} Gervais, above n 373, at 440.
\textsuperscript{386} UNCTAD-ICTSD, 382, at 585.
\textsuperscript{387} Yu, above 346, 781.
\textsuperscript{388} TRIPS Enforcement Panel Report ¶ 8.5.
Agreement, provided that such protection does not contravene the provisions of this Agreement." It could be argued that, through this carefully worded report, the Panel has sent some subtle warning signals to developed countries, which, despite the compromise made at the TRIPS negotiations, continue to aggressively push for TRIPS-plus enforcement norms to the detriment of developing countries.  

IV. REDUCING ACCESS TO PUBLIC HEALTH

Access to medicines in developing nations is limited by patents on pharmaceutical products. Developed countries and drug companies hail TRIPS as a positive step in combating patent infringement worldwide and protecting the rights of patent holders. TRIPS critics are quick to note that there was high degree of variation of the scope of patent protection for pharmaceuticals prior to the adoption of TRIPS. The variation was attributed to differing theoretical perspectives regarding rights to intellectual creation, and the health and economic circumstances within developing countries.

A. TRIPS Provision Affecting Access to Medicines

The limitation of medicines is a critical issue for the developing nations, which have to meet the health needs of millions of people suffering from diseases like HIV/AIDS, malaria, and tuberculosis. Most of the patents for remedial drugs are owned by US pharmaceutical and biotechnology companies. Pharmaceutical and

---

389 TRIPS Agreement art. 1.1 (emphasis added).
390 Yu, above 346, 781.
391 Kapczynski, above n 346, 1850.
biotechnology patents create the social losses which restrict the access to medicines and public health.\textsuperscript{394} Developing nations have the most severely affected populations and also lack the economic means to tackle their national public health issues.

Prior to TRIPS, more than 50 developing countries allowed patent protection for pharmaceutical processes only, and did not permit pharmaceutical product patents.\textsuperscript{395} Article 27 of TRIPS stipulates that "patents shall be available for any invention, whether products or processes, in all fields of technology."\textsuperscript{396} This provision prevents the discrimination between pharmaceutical process and product that previously occurred in developing nations. The motivation for the discrimination related to access to medicines and national development strategies. The difference in opinions regarding the patentability of pharmaceutical products between developed and developing nations reflects the social importance of medicines and the deep asymmetry in the innovative and productive capabilities existing in their field.\textsuperscript{397} TRIPS allowed for exclusion of patentability for public order or morality which included protecting human health.\textsuperscript{398} Despite this exclusion provision there are many different hypotheses in which member countries may not grant patents.\textsuperscript{399}

\textsuperscript{394} F. M. Scherer, \textit{A Note on Global Welfare in Pharmaceutical Patenting}, 27 World Econ. 1127, 1128 (2004).
\textsuperscript{396} TRIPS Agreement, art 27.
\textsuperscript{397} Correa, above n 395, 229.
\textsuperscript{398} TRIPS Agreement, art 27(2)
\textsuperscript{399} Correa, above 395, 229.
Before TRIPS, 96 countries allowed for compulsory licences in one form or another. 400 US pharmaceutical and biotechnology companies had limiting the extent to which governments can force compulsory licensing in mind when they lobbied for the inclusion of TRIPS to the WTO. 401 They succeeded in this regard because TRIPS contains many complicated and restrictive provisions for situations where compulsory licences could be authorised for supply in member countries. 402 Public health issues, regarding the TRIPS restrictions on pharmaceutical and biotechnology, caused the sharpest controversies over the WTO's intellectual property rules.

B. The WTO Ministerial Meeting in Doha

The HIV/AIDS pandemic sparked demands for clarification of TRIPS flexibilities for the protection of public health. However, it was the American anthrax episode which occurred immediately before the WTO Ministerial meeting in Doha, Qatar which facilitated agreement on a Doha Declaration on the TRIPS Agreement and Public Health (Public Health Declaration). 403 In the wake of the 11 September 2001 terrorist attacks, some media and postal workers in the US died after being exposed to anthrax spores sent through the mail. 404 In the shaken and uncertain climate of 2001, US policymakers, fearing a major bio-terror attack, threatened to issue compulsory licences on Bayer’s Cirop patents to ensure adequate stockpiles of the most effective drug for treating anthrax. 405 Following the anthrax scare and the threatened shortage of the Cipro drug, all WTO members were prompted to ask

400 Ibid 245.
401 Groombridge, above n 393, 993.
402 TRIPS Agreement Article 30(f)
403 Susan Sell, in Donna Lee, Rorden Wilkinson (eds) The WTO after Hong Kong: progress in, and prospects for, the Doha, 53.
404 Ibid 58.
how prepared they were to be prisoners of their own patent systems.\textsuperscript{406} The US lost significant international legitimacy following the anthrax scare. The US efforts to secure compulsory licences were juxtaposed against the efforts of developing countries to secure cheap access to AIDS drugs.\textsuperscript{407} As a Brazilian representative, José Marcos Nogueira Viana asserted the "U.S. and Canadian approaches to the anthrax scare is precisely what the Brazilian government has been doing over the past two years in response to HIV/AIDS."\textsuperscript{408} In light of the anthrax scare which caught the attention of the access campaign and developing country negotiators, compulsory licences were on "everybody's minds at Doha".\textsuperscript{409} The hypocrisy of the US effectively gave developing nations leverage to further their access to health and development campaigns at Doha.

1. Public Health Declaration

Perhaps the most well-known manifestation of the public health challenge appears in the Public Health Declaration adopted in November 2001, as part of the launch of a new round of WTO trade talks in Doha.\textsuperscript{410} The Public Health Declaration applies narrowly to the issue of access to patented medicines. It grants least developed countries an additional 10 years before they must protect pharmaceuticals.\textsuperscript{411} The Public Health Declaration which allows countries with no

\textsuperscript{406} Ellen 't Hoen, TRIPS, Pharmaceutical Patents, and Access to Essential Medicines: A Long Way from Seattle to Doha, 3 CHI. J. INT'L L. 27, 43 (2002)
\textsuperscript{407} Debora Halbert, Moralized Discourses: South Africa’s Intellectual Property Fight for Access to AIDS Drugs, (2002) 1 SEATTLE J. SOC. JUST. 257, 280
\textsuperscript{410} Ministerial Declaration, WTO Doha Ministerial Conference, 4th Sess., WTO Doc. WT/MIN(01)/DEC/W/1 (Nov. 14, 2001) (Doha Ministerial Declaration).
\textsuperscript{411} Public Health Declaration, para 7 (extending until 2016 the transitional period for least developed WTO members to implement provisions of TRIPS governing patents and undisclosed information relating to pharmaceutical products).
domestic generic drug manufacturing capacity to import drugs produced under compulsory licenses.

The Public Health Declaration appears to have become a catalyst for broader efforts to revise, reinterpret, or supplement patent protection standards adopted in the WTO and in WIPO. After the Public Health Declaration, developing countries became more fully engaged in intellectual property norm-setting activities, and, at their insistence, the WIPO adopted the Development Agenda in 2007. In May that same year, the US Congress decided to remove tough public health provisions in bilateral Free Trade Agreements in order to better support the public health needs of developing nations and more fully comply with the Public Health Declaration.\(^{413}\)

V. TRIPS WAS ONLY THE MINIMUM STANDARDS

TRIPS established only the minimum standards of patent protection. When negotiating TRIPS, the parties agreed to an exchange in which developing countries would gain higher standards of intellectual property protection in exchange for access to the agricultural sectors of developed countries.\(^{414}\) Developed countries have failed to make good their promised cuts to domestic supports for agriculture and they have aggressively pursue developing countries for

\(^{412}\) Sell, above n 409, 519.


bilateral agreements which include intellectual property protection standards that are more stringent than those found in TRIPS.⁴¹⁵

The move towards bilateralism in international patent lawmaking is controversial but not new.⁴¹⁶ The historical development of the international patent regime was based on bilateral agreements which served as building blocks for subsequent bilateral, regional and multilateral negotiations.⁴¹⁷ In the nineteenth century, countries negotiated bilateral agreements containing intellectual property protection. These agreements then acted as models for drafting provisions of the Paris Convention in 1883.⁴¹⁸ A century later, the US, using the Super 301 mechanism engaged in bilateral negotiations to coerce developing nations to soften their resistance to TRIPS.⁴¹⁹

While many countries believed that they were negotiating the maximum standards of intellectual property protection, they quickly discovered that they had actually negotiated only the minimum during the Uruguay Round.⁴²⁰ Despite a TRIPS advocate triumphantly exclaiming, “we got 95% of what we wanted,” that extra 5 per cent always mattered to the US and MNCs.⁴²¹ Led by the US, advocates for higher standards of patent protection aggressively forced their agendas through Bilateral Trade Agreements (BTA), Bilateral Investment Agreements (BIA), and European Partnership Agreements (EPA), regional FTAs and multilateral

---

⁴¹⁵ Ibid 53.
⁴¹⁶ Morin above n 413, 177.
⁴¹⁷ Ibid.
⁴¹⁹ Morin above n 413, 177.
⁴²⁰ Sell, above 409, 448.
⁴²¹ Ibid
negotiations such as the Anti-Counterfeiting Trade Agreement (ACTA) and Trans-Pacific Partnership (TPP).  \(^{422}\)

The US has been the most active campaigner for bilateral, regional and multilateral negotiations. Following the signing of TRIPS, the Clinton Administration signed bilateral agreements specifically devoted to the protection of intellectual property with Jamaica, Lithuania, Latvia, Trinidad and Tobago, Cambodia, Laos, Nicaragua and Vietnam.  \(^{423}\) In 2002, the Bush Administration obtained Trade Promotion Authority from the Republican Congress.  \(^{424}\) The US signed fully fledged FTAs, which contained intellectual property provisions, with Singapore, Chile, Central American countries, Dominican Republic, Australia, Morocco, Bahrain, Oman, Peru, Colombia, Panama and Korea, and is presently negotiating FTAs with Malaysia and the United Arab Emirates.  \(^{425}\) These bilateral, regional and multilateral negotiations constitute the TRIPS-Plus Agreements.

A. **TRIPS-Plus Agreements**

TRIPS-Plus Agreements are pushing the frontier of the international patent system.  \(^{426}\) The use of TRIPS-Plus Agreements has expanded and accelerated over time, which further supported the fact that TRIPS was a beginning and not an end point for intellectual property protection.  \(^{427}\) The TRIPS-Plus Agreements effectively work in three ways. They can contain patent protection standards more stringent than those found in TRIPS, obligate developing countries to implement

\(^{422}\) Ibid

\(^{423}\) Morin above n 413, 175

\(^{424}\) Ibid

\(^{425}\) Ibid 175-6.

\(^{426}\) Ibid.

\(^{427}\) Sell, above n 239, 477.

78
TRIPS before the end of its specified transition periods and require such to accede to or conform to the requirements of other multilateral intellectual property agreements.

1. More Stringent Standards

TRIPS-Plus Agreements often contain standards of patent protection which are more severe and exceed the standards contained in TRIPS. TRIPS-Plus Agreements often have the effect of reducing the flexibilities, safeguards and policy space of developing countries. These bilateral and regional agreements tighten patent protection by restrict compulsory licensing to a very limited set of circumstances. Drug registration, patent linkage and data exclusivity provisions mean that "prospective licensees are unlikely to replicate test data, and governments cannot normally wait until a new set of test data has been developed." The net effect of these features is reduced competition and access. Finally, these bilateral and regional agreements incorporate automatic patent term extensions beyond the 20 year TRIPS term. These extensions are not limited in time, despite the fact that the US limits extensions to compensate for delays in marketing approval to five years.

2. Transitional Periods

Many TRIPS signatory nations were given a grace period for compliance. Although the obligations under TRIPS were uniform for all Member countries, developing countries had a longer period to phase them in. This was a concession to developing nations, many of whom had argued that they did not have the necessary

---

428 Chon, above n 372, 78.
430 Susan Sell, above n 409, 454.
431 Anderson and Razavi, above n 178, 272.
resources to monitor and enforce intellectual property rights to the extent required by TRIPS.\(^{432}\) This was the only true measures developing nations obtained in TRIPS, in addition to Articles 7 and 8.\(^{433}\) Developed countries were given until 1996 to comply with TRIPS, developing countries until January 2000. For those countries on the United Nations list of least-developed countries, the transitional period was 11 years. The transitional period for pharmaceutical patents was extended by the *Public Health Declaration*.\(^{434}\)

Developing nations had believed that TRIPS would establish permanent and comprehensive standards for patent protection rights.\(^{435}\) This was not the case, following the implementation of TRIPS developed countries began to further leverage their bargaining power over developing nations through BIAs. The US effectively legislated around TRIPS grace periods through the use of BIAs. Nicaragua the signed TRIPS in 1994. The grace period granted to developing nations applied to Nicaragua, so it was not obligated to implement the Agreement until 2000. In 1995 the United States and Nicaragua began trade negotiations. The negotiations concluded with Nicaragua gaining some US trade advantages, through a new BIA. However, the trade off was that Nicaragua implemented TRIPS intellectual property rights protections years in advance.\(^{436}\) This is one example of the US-initiated bilateral treaties perpetuating the asymmetries and imbalances between the developed and developing world and the preferred patent rules of dominant MNCs.


\(^{433}\) Gervais, above n 373, 509

\(^{434}\) Ibid 509

\(^{435}\) Anderson and Razavi, above n 178, 270.

\(^{436}\) Ibid, 272.
3. *Most Favour Nation Principle*

The most favoured nation principle (MFN Principle) contributed to a global elevation of intellectual property protection standards. The MFN Principle has been the key principle governing trade relations amongst states, especially in the context of the WTO.437

TRIPS contains a version of the MFN Principle in Article 4. A member of TRIPS who grants a benefit, any advantage, favour, privilege or immunity, to any other country, not necessarily a TRIPS member country, must then accord the same benefit to TRIPS member countries, subject to the exceptions.438 The operation of the MFN Principle is qualified. It does not apply retrospectively to bilateral, regional and multilateral agreements, unless an agreement amounted to an arbitrary or unjustifiable and discrimination against nationals of other WTO members.439 Whenever a WTO member enters into an international agreement, which grants TRIPS-Plus benefits, the MFN Principle applies and requires those benefits to be extended to all WTO members.440

TRIPS-Plus provisions in trade agreements include data exclusivity provisions, prohibitions of parallel importation, linkage between drug registration and patent protection, highly restrictive conditions for issuing compulsory licenses, and patent term extensions.441 The MFN Principle in TRIPS, when combined with other trade agreements containing TRIPS-Plus provisions, has the effect of rapidly spreading

---

438 TRIPS Agreement, art 4.
439 Ibid.
440 Ibid.
441 Sell, above n 239, 453.
and setting higher standards of intellectual property. \textsuperscript{442} As Peter Drahos explains “[e]ach new bilateral agreement that sets higher standards of intellectual property is picked up by the MFN Principle of TRIPS. The savings of MFN become significant as more states enter into agreements with the US. If, for example, 29 states each enter into a bilateral agreement with the US that contains the same provisions on intellectual property, the MFN Principle spreads those standards amongst all the states. Without MFN, 435 [separate] agreements would be needed.”\textsuperscript{443} Nations are forced to accede, or conform, to the requirements of other multilateral intellectual property agreements.

The adverse effects of the MFN Principle and TRIPS-Plus Agreement on poorer countries that are overwhelming. These nations are net importers of the technologies from a few developed countries. Any advantage a developing nation gains from new trade agreements are lost instantly because the benefits they are awarding one nation is available for all other WTO members. This deprives developing nations access to public health. Through TRIPS-Plus Agreements pharmaceutical companies of developed countries, who hold patents on medicines, are provided with stronger patent rights at the expense of the public health needs in developing counties.\textsuperscript{444}

\textsuperscript{442} Drahos, above n 437, 802
VI. SUMMARY

TRIPS is a beggar-thy-neighbour policy which contradicts the principle of trade liberalisation which is the basis of modern international trade law.

The power of sovereigns depends upon their ability to use resources within their borders. Information sources, scientific knowledge, technological information and data have become importance resources for national development. TRIPS, by requiring all signatory members to conform to agreement’s provisions and ensure enforcement, removed the ability of nations to tailor their patent regimes for domestic development and welfare. The cost of implementation and administration of TRIP is detrimental to developing nations. These costs divert resources from other social welfare programs. The assumptions of the International Patent Principle are flawed. TRIPS has failed to deliver the promised increases in technology transfer, FDI and domestic innovation to developing nations.

The TRIPS flexibilities were designed to enable members to take their economic, social and environmental needs into account, when implementing TRIPS obligations. The TRIPS flexibilities aimed to deliver a balance between the developed nation’s desire for higher standards of patent protection and the desire of developing nations to achieve their national development and welfare strategies. The WTO Panel has failed to interpret the TRIPS flexibilities as legal requirements. This has left the developing nations bearing the costs of TRIPS implementation while developed nations enjoy the benefits of stronger patent protection internationally.

445 Drabos, above n 97, 204
TRIPS has protected the interest of large pharmaceutical companies at the expense of developing nations access to health. The *Public Health Declaration* did slightly improve the access of nations to compulsory licences.

Implementation of TRIPS has allowed developed nations to pursue TRIP-Plus Agreements. These agreements increased the strength and scope of patent protection while reducing the concessions awarded to developing nations in the Uruguay Round.

**PART 4 – IMPROVING A BEGGAR-THY-NEIGHBOUR PATENT POLICY**

Repealing patent law domestically and internationally is unlikely. Patent law will remain a driver for innovation policy and be based on notions of incentives to innovate, inventor rewards, and public disclosure. Considering the effects the US Patent Principle has had on foreign nations, and developing nations in particular, it is time to recalibrate the system so it better encourages innovation and dissemination of information. Patent law must be realigned to deliver the development goals of international trade liberalisation.

The international patent market lacks the information and standards for valuation which make the coordination of market exchange difficult.\(^{446}\) The patent system has become a closed system which is too complicated for the public to access. Many modern inventors use patents as a defensive tool rather than an opportunity to innovate. Changes this can be sought through improved disclosure and

\(^{446}\) Shinneman, above n 190, 960.
transparency. An effective patent system should provide protection to innovators but also define and regulate an emergent innovation market.⁴⁴⁷

The effect of patents and other forms intellectual property on national innovation is not readily quantifiable. Policymakers use Gross Domestic Product (GDP), R&D expenditure and patent application and approval statistics, as surrogate measures of national innovation.⁴⁴⁸ US and other developed nations have placed excessive reliance on these rough proxies and on net trade balances or deficits figures when setting patent policy.⁴⁴⁹ Commercial short term goals of profit maximisation align with this approach.

The policy balance between public and private rights is tipped in the favour of private corporations profiting instead of meeting long term goals of maximising innovation and development. Although commentators and policymakers have explained at length why adopting the US and International Patent Principles will help to stimulate innovation in developing countries, empirical evidence does not support these claims.⁴⁵⁰

The costs of getting the national patent system “wrong” in a developing country are higher than in developed countries. Most developed countries have sophisticated systems of competition regulation to ensure that patent monopoly rights cannot

---

⁴⁴⁷ Ibid
⁴⁴⁹ Chon, above n 2 2813.
unduly affect the public interest.\footnote{Commission on Intellectual Property Rights, \textit{Integrating Intellectual Property Rights and Development Policy} (Commission on Intellectual Property Rights, 3rd ed, 2003) 4 <http://www.iprcommission.org/papers/pdfs/final_report/CIPRfinalfinal.pdf> } Many developing countries do not have the resources to simultaneously enact a sophisticated patent system and a competition system to keep the patent system in check.\footnote{Peter K Yu, above n 450, 890}

I. \textbf{Improve Patent Disclosure and Transparency}

The patent exchange bargain gives an inventor the monopoly right to exclude others from exploiting his invention for a limited time, in exchange for the inventor’s public disclosure of that invention.\footnote{Hollbrook, above n 11, 125.} The ultimate beneficiary of the patent exchange bargain should be the public, to whom the invention is disclosed instead of being kept a secret.\footnote{Ibid.} In practice the reverse happens.\footnote{Drahos, above n 455, 7.} Today, the patent exchange bargain has been tipped in favour of MNCs and developed countries.

Drahos contends that modern technology patenting is often complex and this leads to uncertainty in patent disclosure.\footnote{Ibid} He states that “companies are often not sure that they have found all the patents relevant to a product on which they are working. They often have doubts about the scope of the patents they have found.”\footnote{Ibid} The patent specifications of these patents reflect this uncertainty, which in turn leads to uncertainty of patent boundaries.
Unlike real property, patents do not come with fenced boundaries.\textsuperscript{458} Patents boundaries are hidden, unclear and too costly to determine.\textsuperscript{459} Patents are not always easily defined, and the lack of notice within the system makes unintentional infringement almost inevitable.\textsuperscript{460} This is one of the reasons for patents being used defensively. The public is unable to benefit from patent disclosure because as the Swedish Patent and Registration Office recognised the problems with the system have grown to a point “where even experts have trouble making accurate searches.”\textsuperscript{461}

A. \textit{Improving National Transparency}

A system needs to be developed to rebalance the patent bargain theory. Drahos suggests some reduction of the complexity and uncertainty could be achieved by creating a patent transparency register with national patent offices.\textsuperscript{462} The scope of the transparency register could be a matter for the national patent office regulator to decide. It may focus on areas of technology where disclosure is particularly poor or necessary for the public interest. Drahos provides the examples of research tools in biotechnology, particular classes of drugs, specific plants or genes.\textsuperscript{463} The register would require patentees to make a full disclosure of the patents surrounding the targeted technology. Other parties would be able to rely on the register which would reduce patent enforcement and litigation costs.

\textsuperscript{458} Bessen and Meurer, above n 130, 145
\textsuperscript{459} Ibid
\textsuperscript{460} Ibid 46,147.
\textsuperscript{461} Drahos, above n 455, 8
\textsuperscript{462} Ibid
\textsuperscript{463} Ibid
B. Creating Global Standards of Patent Transparency

The patent exchange bargain by implication requires that the public be able to find the inventor’s patent. National patent offices are required to provide the public with search systems and databases that enable interested members of the public to find patents.\textsuperscript{464} Current searching tools available to the public from patent offices are of varying quality.\textsuperscript{465}

Essentially, in many developed countries, one is required to have access to commercial databases in order to do comprehensive searching.\textsuperscript{466} The resources of patent offices in developing countries are limited. Electronic searching is either not possible, or it exists in a limited form.\textsuperscript{467} Many patent offices rely on technocratic trust to the trilateral patent offices of Europe, Japan and the US.\textsuperscript{468} Developing nations, who are unable to process patent applications, rely on the approval of the trilateral patent offices and effectively become safeguards for developed nation patentee rights.\textsuperscript{469}

The recent developments of software algorithms, such as Google and Wikipedia, suggest that it will one day be possible to have a web-based technology platform which can simultaneously search all patents databases worldwide.\textsuperscript{470} This would allow the public to access patent applications and information. As Richard

\textsuperscript{464} Drahoš, above \textsuperscript{n} 238-299.
\textsuperscript{465} Drahoš, above \textsuperscript{n} 455
\textsuperscript{466} Ibid
\textsuperscript{467} Ibid.
\textsuperscript{468} Peter Drahoš 'Cooperation, trust and risk in the world's major patent offices' (2009) 36(8) \textit{Science and Public Policy} 641, 644.
\textsuperscript{469} Christopher May and Susan Sell, \textit{Intellectual Property Rights: A Critical History} (Lynne Rienner, 2006) 177.
\textsuperscript{470} Drahoš, above \textsuperscript{n} 455

Jefferson, Chief Executive Officer of Cambria,\textsuperscript{471} observed that the current levels of patent opacity only serve the interests of patent law firms that “accumulate billable hours by providing the same information over and over for different customers, and charging full fees to update them periodically.”\textsuperscript{472} Cambria is the company behind the Patent Lens. The Patent Lens is a worldwide, open-access, free full-text patent resource.\textsuperscript{473} The Patent Lens system allows for simultaneous searching of USPTO, PCT, European and Australian patent information.\textsuperscript{474} It is a free public resource which is available to anybody with an internet connection.\textsuperscript{475} Increasing global transparency will make technology markets more efficient,\textsuperscript{476} and will reduce both transaction and litigation costs.\textsuperscript{477}

Drahos further suggests that if one organisation can advance the cause of global patent transparency as a public good, then patent offices are clearly not trying very hard.\textsuperscript{478} Increasing disclosure and transparency of patent information to the public will rebalance the patent exchange bargain and reduce the influence of MNCs and developed nations. Global patent transparency is a foundation which will enable other reforms of the patent system.\textsuperscript{479}

\textsuperscript{471} An independent non-profit institute dedicated to creating new technologies, tools and paradigms to promote change and enable innovation <http://www.cambia.org/daisy/cambia/home.html>.
\textsuperscript{474} Drahos, above n 455 9.
\textsuperscript{475} Jefferson, above n 472, 28-29.
\textsuperscript{476} Bessen and Meurer, above n 130, 21.
\textsuperscript{477} Shinneman, above n 295, 960.
\textsuperscript{478} Drahos, above n 455, 9-10
\textsuperscript{479} Drahos, above n 455 9-10
II. INCORPORATING THE DEVELOPMENT AS FREEDOM MODEL WITHIN THE GLOBAL SYSTEM

‘Development’ is increasingly one of the pressing purposes of the international legal regimes within which intellectual property operates. The developed nations have prospered under the ‘development-as-growth’ model which is focuses principally on economic growth. The Organisation for Economic Co-operation and Development (OECD) and the World Bank Group both consider that “innovation is the cornerstone of sustained economic growth and prosperity”. The International Patent Principle is also founded on the development-as-growth model. Denis Borges Barbosa, Margaret Chon and Andrés Moncayo von Hase, offer an alternative, the development-as-freedom model.

The development-as-freedom model is based on Amartya Sens and Martha C Nussbaum’s views of development. Sen believes that it “is simply not adequate to take as our basic objective just the maximization of income or wealth, which is, as Aristotle noted, ‘merely useful and for the sake of something else.’ For the same reason, economic growth cannot sensibly be treated as an end in itself. Development has to be more concerned with enhancing the lives we lead and the freedoms we enjoy.” Nussbaum furthers this by putting forward that there are certain basic functional capabilities which societies should aim to provide for their citizens and which should be included in quality of life measurements. Her list

---

482 Denis, Chon and Moncayo von Hase, above 480, 75.
includes what many developed countries would consider basic human rights, such as the right to live to an acceptable lifespan, and to have adequate nutrition, access to health and sanitation.\footnote{Martha C Nussbaum ‘Capabilities and Human Rights’ (1997) 66 Fordham Law Review 273, 287. This list is slightly different from the version published earlier in Human Capabilities, in note XX above, and was apparently revised as a result of recent visits to development projects in India.} It also includes a way of life informed and cultivated by an adequate education, including, but not limited to, basic literacy, mathematical and scientific training.\footnote{Ibid.} 

The WTO and the WIPO have relied on the development-as-growth model. Professors Dreyfuss and Lowenfeld note that "there are two sides to every innovation."\footnote{Dreyfuss and Lowenfeld, above n 182, 304-05.} By adopting the developing-as-growth model, these organisations have diminished the rights of the end-users of innovation.\footnote{Ibid.} A former general counsel for the Office of the USTR stated, “in fact, the TRIPS Agreement establishes and protects the rights of [current] innovators; it does not include a bill of rights for users of innovation.”\footnote{Ken Shao, ‘From Lockeian Theory To Intelectual Property: Marriage By Mistake And Its Incompatibility With Knowledge, Creativity And Dissemination’ (2009) 39 Hong Kong Law Journal 401, 402; Judith H. Bello, "Some Practical Observations about WTO Settlement of Intellectual Property Disputes"(1997) 37 Virginia Journal of International Law 357, 365.} 

International debate has led to modifications of TRIPS as reflected in the Doha Declarations and the Development Agenda of WIPO (Development Agenda)\footnote{WIPO, Development Agenda for WIPO http://www.wipo.int/ip-development/en/agenda/}.\footnote{Katherine J. Strandburg, Accommodating User Innovation in the International Intellectual Property Regime: A Global Administrative Law Approach, 2009 ACTA JURIDICA 283, 285.} In 2007, the member states of WIPO adopted the Development Agenda which included 45 recommended proposals which are grouped into 6 different groups (a) technical assistance and capacity building, (b) norm setting, flexibilities, public policy, and public domain, (c) technology transfer, information and communication
technologies, and access to knowledge, (d) assessment, evaluation, and impact studies, (e) institutional matters, including mandate and governance and (e) other issues.\textsuperscript{492} According to Christopher May, the Development Agenda intended to re-establish the public policy aspects of patent rights, emphasising that the protection and enforcement of patent rights cannot be an end in itself.\textsuperscript{493}

The Development Agenda rejects the ‘one-size-fits-all’ approach of the International Patent Principle and patent law, however, it fails to adequately deal with the development-as-freedom model. WIPO’s development efforts prior to the Development Agenda were development as growth-friendly, emphasising economic growth. This model does not tell the whole story of development in terms of patent protection and intellectual property.\textsuperscript{494} The model de-emphasises the important variable of an appropriate educational and scientific infrastructure, as well as local knowledge, in generating the kind of innovation and growth led by intellectual property.\textsuperscript{495}

Despite this modification there are still concerns about the ability of TRIPS to make continuous adjustments to a global innovation policy in light of development-as-freedom model.\textsuperscript{496} One proposed solution for the international patent regime is to set up an administrative process which would allow for continuous adjustments.\textsuperscript{497} This process would rely on a re-focused WIPO which would be tasked with the interpretation of TRIPS’ flexibilities and exceptions, and to deliver

\textsuperscript{493} May, Christopher. The World Intellectual Property Organization: Resurgence and the Development Agenda (Routledge, 2007), 78–79.
\textsuperscript{494} Chon, 2011 above n 372, 375.
\textsuperscript{496} Erin, above n 295, 961.
\textsuperscript{497} Strandburg, above n 491, 286.
the needs of the global innovation community.\textsuperscript{498} WIPO's administrative role would be to find and assess possible amendments to TRIPS which would enhance global innovation from the development-as-freedom model.\textsuperscript{499} This would allow for subsequent agreements and declarations, such as Public Health Declaration, which would reintroduce the failed TRIPS flexibilities to ensure that the development-as-freedom model is adopted within the TRIPS regime.

Erin Shinneman believes this is an interesting suggestion and that it may potentially be a viable option for continuous improvements to the global patent regime. However, she warns that although a re-focused WIPO would be tasked to global innovation and development, the regime is “still situated within the proprietary, trade-based paradigm of TRIPS. And, while enhancing the flexibilities of this international instrument on an ad hoc basis may provide innovators some protection, it is unlikely to encourage and support the continued development of innovation strategies.”\textsuperscript{500}

The future of the international patent regime must avoid further entrenchment of the US and International Patent Principles which are outdated and stifle the evolution of innovation.\textsuperscript{501} Any successful solution must have flexibilities for inventors, especially those from developing nations. Even delegates of the WIPO have articulated this need stating that “in view of the rapid technological innovation and the social and economic challenges, the function, value and impact of the

\textsuperscript{498} Erin, above n 295, 961.
\textsuperscript{499} Strandburg, above n 491, 286.
\textsuperscript{500} Erin, above n 295, 961.
patent system need[s] to be constantly adjusted". The private rights notion of patent law must shift to re-define patent rights to focus on to distribution and development, rather than the right to exclude and profit.

III. SUMMARY

The current patent regime favours private interests at the expense of the public and developing nations. The concentration of benefits in patent regimes would be more equitable with increased transparency and disclosure.

Domestic patent offices could increase the dissemination of knowledge by implementing patent transparency registers. These registers would target areas of technology where patent technology disclosure is poor and detrimental to national innovation and welfare. It would place the emphasis on patentees who would be regulated to provide frank disclosure.

Global patent transparency and the dissemination of information could be improved by the development of web-based patent databases. These would serve as new platforms for further patent regime reforms.

Development has been the focus of the international patent regime. Recently there has been a shift towards the development-as-freedom model. Global innovation and development would benefit from continuous improvements to the international

patent regime. A proposal for this is to re-tasked the WIPO. Its role would be to provide flexibility to the global patent regime. This would enable the development-as-freedom model to permeate TRIPS regime.
CONCLUSION

This thesis discusses the concept that US Patent Policy is a beggar-thy-neighbour policy. It challenges the assumption that stronger patent protection drives innovation. It demonstrates that the US Patent Policy, domestically and internationally, consistently favours the US, other developed nations and MNCs at the expense of developing nations.

Trade liberalisation has been seen as essential to promote global stability and global economic and social development. US Patent Policy is a form of trade protectionism. US Patent Policy has been used by the US and MNCs to maximise private and developed countries interests at the expense of poor developing nations. It has not obviously resulted in increased innovation or social welfare.

US policymakers have used the US Patent Principle to promote US national innovation and economic development at the expense of foreign inventors and development. The unique priority system of the US patent regime strongly favoured large corporations and domestic inventors.

The strength of US patent rights changes inversely to US competition polices. US patent rights dramatically increased during 1900s the pro-patentee era. The combination of a biased domestic policy and the US Patent Principle allowed the US to gain a significant lead in national innovation capacity. This lead did, however, come with noticeable costs in some areas of domestic patent protection.
Responding to pressure domestically and from other developed nations the US has embarked upon reforms. These reforms have contracted the scale of US patent rights and removed the unique priority mechanism and reduced the inherent bias to domestic inventors.

Internationally the US has engineered a patent regime which delivers strong patent protection to their MNC inventors. It promoted the International Patent Principle and linked TRIPS to GATT creating a mechanism for increasing patent protection in the guise of trade. Nations resisting the US policy were coerced into acceptance by threatened trade sanctions under the section 301 provisions. TRIPS imposed new law into the WTO. It is the only example of a protectionist policy being included in the WTO. The WTO’s mandate is trade liberaliation through the removal of trade barriers. TRIPS contradicts this mandate.

TRIPS shifted patent policy from a national affair where states could tailor regimes to suit their domestic needs, to a US dictated global patent regime. The regime imposed higher standards of patent protection to many nations. TRIPS has been detrimental to developing nations’ economic, innovation and welfare goals. TRIPS was designed as the minimum set of patent standards which attempted to balance individual rights with social welfare and global innovation. It had flexibilities to assist developing nations meet the TRIPS standards and still improve the well being of their citizens. Many of the TRIPS flexibilities in practice have failed to their goals. The access of developing nations to public health has been compromised by TRIPS. The Declaration of Public Health has slightly improved the access to pharmaceutical patents. It hopefully marks the start of broader reforms to the TRIPS regime which will allow developing nations flexibilities
when implementing TRIPS. Subsequent agreements have increased the standards of protection and further reduced the TRIPS flexibilities. The effectiveness of TRIP-Plus Agreements increasing patent protection is attributable to the MFN Principle. This exacerbates the inequalities in global development and welfare and also entrenches the beggar thy neighbour policy.

Entrenched inequalities, development measured only by GDP and trade balances and MNCs claiming expanding patent monopoly rights will only increase global tension and the further the beggar-thy-neighbour nature of US Patent Policy. Some progress has been made through the Declaration of Public Health and the Development Agenda of the WIPO. These reforms narrowly re-introduced flexibilities and brought development to the agenda of the WIPO.

Further improvements to the international patent regimes may include, improving patent disclosure and transparency and adopting the ‘development-as-freedom’ model. Increases to patent disclosure and transparency could commence with implementing national transparency registers and web-based systems to search patent databases worldwide. The technology exists but the will to deliver this level of functionality to the public is lacking.

Promoting ‘development-as-freedom’ model within the international patent regimes requires a paradigm shift. Shifting from the ‘development-as growth’ model, which protects private rights will improve global knowledge dissemination, innovation and development. The current situation produces beggars of neighbours. Currently, TRIPS is a protectionist policy which excludes those who are among the world’s most needy.
IV. BIBLIOGRAPHY

A. Articles/Book

Adams, Stephen R, Information Sources in Patents (Walter de Gruyter, 2nd ed, 2006)


Arnold, Roger A Microeconomics (Cengage Learning, 2010)

Arnold, Roger A, Microeconomics (Cengage Learning, 2010)


Bailey, David, Dan Coffey, and Phil Tomlinson, Crisis or Recovery in Japan: State and Industrial Economy (Edward Elgar Publishing, 2007)


Braithwaite, John and Peter Drahos, Global Business Regulation (Cambridge University Press, 2000)


Burgunder, Lee B Legal Aspects of Managing Technology (Cengage Learning, 2010)


Burstein, Michael J 'Rules For Patents' (2011) 52 William and Mary Law Review 1747


Chang-hui Yu, Real success, financial fall: a reassessment of the Korean dynamism (Ewha Womans University Press, 1999)

Chaudhry, Peggy, and Alan S Zimmerman The Economics of Counterfeit Trade: Governments, Consumers, Pirates, and Intellectual Property Rights (Springer, 2009)


Chon, Margaret, 'Global Intellectual Property Governance (Under Construction)' (2011) 12 Theoretical Inquiries in Law 349


Crow, Jonathan, Legal Theory (Thompson Reuters, 2009)


Drahos, Peter and John Braithwaite, Information Feudalism: Who Owns the Knowledge Economy? (Oxford University Press, 2003)

Drahos, Peter, ‘Patent Reform for Innovation and Risk Management’ (2007) 1 KE Studies 1
Drahos, Peter, A Philosophy of Intellectual Property (Dartmouth, 1996)
Drahos, Peter, and John Braithwaite ‘Hegemony Based on Knowledge: The Role of Intellectual Property’ (2003) 21 Law in Context 204
Dreyfuss, Rochelle Cooper and Andreas F Lowenfeld, ‘Two Achievements of the Uruguay Round: Putting TRIPS and Dispute Settlement Together’ (1997) 37 Virginia J. Int’l L. 275
Dunoff, Jeffrey ‘The Death of the Trade Regime’ (1999) 10(4) European Journal of International Law 733
Farrand, James Seth Weisberg, Rickard Killworth and Victoria Shapiro “‘Reform” Arrives In Patent Enforcement: The Big Picture’ (2011) 51 IDEA 357
Feketekuty, Geza ‘US Trade Policy and the Public Discourse: a Postscript’ in Dwight Perkins, Andrew MacIntyre and Geza Feketekuty, Trade, Security, and
National Strategy in the Asia Pacific (1996) 7 National Bureau of Asian Research Analysis 35


Gervais, Daniel, The TRIPS Agreement: Drafting History and Analysis (Sweet and Maxwell, 2nd ed., 2003)

Gervais, Daniel The Trips Agreement: Drafting History And Analysis (Sweet and Maxwell 3d ed, 2008)


Howsse Robert ‘From Politics to Technocracy – And Back Again: The Fate of the Multilateral Trading Regime’ (2002) 96 American Journal Of International Law 94


Kariyawasam, Rohan Chinese Intellectual Property and Technology Laws (Edward Elgar, 2011)


Kelly, John M, A Short History of Western Legal Theory (Oxford University Press, 1st ed, 1992)


Kirshner Orin and Edward Morris Bernstein, The Bretton Woods-GATT System: Retrospect and Prospect After Fifty Years (M E Sharpe, 1996) x

Klooster, John W Icons Of Invention: The Makers Of The Modern World From Gutenberg To Gates (Greenwood, 2009)
Koellinger, Philipp ‘Why are some entrepreneurs more innovative than others?’ (2008) 31(1) Small business economics 21


Li, Xuan and Carlos Maria Correa Intellectual Property Enforcement: International Perspectives (Edward Elgar Publishing, 2009)


Lloyd, Dennis and Michael D A Freeman (eds), Lloyd's Introduction To Jurisprudence (Stevens and Sons, 5th ed, 1985)


Lundvall, Bengt-Ake, (ed), National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning (Anthem Press, 2010)


Watt, Robert and Francis Johns, *Concise legal research* (Federation Press, 2009)


Puckett, A. Lynne and William L Reynolds, ‘Current Developments: Rules, Sanctions And Enforcement under Section 301 at Odds with the WTO?’ 90 *The American Journal of International Law* 675


Shao, Ken, ‘From Lockean Theory to Intellectual Property: Marriage by Mistake and Its Incompatibility with Knowledge, Creativity and Dissemination’ (2009) 39 Hong Kong Law Journal 401

Shapiro, Carl ‘Antitrust limits to patent settlements’ (2003) 34(2) RAND Journal of Economics 391


Spinello, Richard A, and Maria Bottis, A Defence to Intellectual Property Rights (Edward Edgar, 2009)


Steinberg, Richard H. In the Shadow of Law or Power? Consensus-Based Bargaining and Outcomes in the GATT/WTO, 56 International Organization 339


Suthersanen, Uma, Duffield, Graham, and Chow, Kit Boey, Innovation Without Patents: Harnessing the Creative Spirit in a Diverse World (Edward Edgar Publishing, 2007)


Takenaka, Toshiko ‘Harmony with the rest of the world? The America Invents Act’ (2011) 6 Journal of Intellectual Property Law & Practice 1747


Tellis, Gerard J., Jaideep C. Prabhu and Rajesh K. Chandy, ‘Radical Innovation in Firms Across Nations: The pre-eminence of Corporate Culture” 2009 73 *Journal of Marketing* 3


Yu, Peter K ‘The Objectives and Principles of the TRIPS Agreement’ (2009) 46 Houston Law Review 797

Yu, Peter K ‘Trips Enforcement And Developing Countries’(2011) 26 (3) American University International Law Review 727


B. Case Law


Diamond v Diehr, 450 U.S. 175 (1981)


re Bilski 545 F.3d 943 (Federal Circuit, 2008)


C. Legislation

Leahy-Smith America Invents Act of 2011

Patent Act of 1790

112
Patent Act of 1952  
Sherman Antitrust Act of 1890  
Trade Act of 1974  
US Constitution  
Omnibus Trade and Competitiveness Act of 1988

D. Treaties


General Agreement on Tariffs and Trade, opened for signature 30 Oct 1947, 55 UNTS 187 (1 January 1948)


E. Other


OCED 2004 Patents, Innovation and Economic Performance


Syed, Murtaza and Lee, Jinsook, Japan’s Quest for Growth: Exploring the Role of Capital and Innovation (Working Paper 294, International Monetary Fund, 2010)


U.S. Patent No. 5,960,411 (filed Sept. 12, 1997)


WTO, Member Information China and the WTO <http://www.wto.org/english/thewto_e/countries_e/china_e.htm>