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Emerging Conflicts over Intellectual Property in Recent GATT Negotiations

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EMERGING CONFLICTS OVER INTELLECTUAL PROPERTY IN RECENT GATT NEGOTIATIONS

by

SONIA BALDIA
LL.B., University of Delhi, 1991.

A Thesis Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment of the Requirements for the Degree

MASTER OF LAWS

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1992
EMERGING CONFLICTS OVER INTELLECTUAL PROPERTY IN RECENT GATT NEGOTIATIONS

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1. INTRODUCTION

The most recent decade was marked by an increasing global interaction and interdependence arising from a rapid acceleration of trade and investment, the creation and proliferation of new technologies, and more efficient means of communication and transportation. This globalization has resulted in the blurring of the boundaries between domestic and foreign trade policies and has triggered a series of new trade disputes. These new economic realities have stimulated multilateral trade negotiations which aim at eliminating barriers and distortions to international trade, strengthening trade rules and discipline, and liberalizing trade.

The Uruguay Round of negotiations, launched at Punta del Este, Uruguay, in September 1986, is the most recent in a series of eight trade liberalization negotiations that have been held since the GATT's inception in 1947. This Round is by far the most ambitious and complex to date, the agenda incorporating a broad spectrum of economic activity which has never been previously negotiated on a multilateral scale. This Round was scheduled to conclude by the end of 1990 at the ministerial meeting of the trade negotiations committee, held in Brussels from 3 to 7 December, 1990. Owing to the persistence of widely differing views among the participating


countries in some key areas of the negotiations, it was not possible to end the Round as planned. These negotiations were suspended December 7, leaving the international trading system in a period of uncertainty as to the prospects for further trade liberalization and expansion of world trade. The session collapsed due to a number of political deadlocks in some of the major substantive areas of negotiations. In particular, agriculture and trade-related investment measures (TRIMs), reflected fundamental divergences in the positions of the participants. The talks, restarted in September 1991, have not yet been concluded.

One of the issues on the ‘Uruguay agenda’ concerns intellectual property rights worldwide. The Punta del Este Ministerial Declaration provides for the consideration of the trade-related aspects of intellectual property rights (TRIPs). The mandate of the relevant negotiating group is as follows:

In order to reduce the distortions and impediments to international trade, and taking into account the need to promote effective and adequate protection of intellectual property rights, and to ensure that the measures and procedures to enforce intellectual property rights do not themselves become barriers to legitimate trade, the negotiations shall aim to clarify GATT provisions and elaborate as appropriate new rules and disciplines. The inclusion of this issue in the Uruguay Round appears to have been motivated by the concern of several developed countries to ensure a minimum worldwide standard of ‘adequate and effective’ protection, so as to protect the technology produced by
them, thereby maintaining their competitive position in the
world markets.  

TRIPs negotiations constitute a comprehensive and far-reaching
multilateral effort to establish international standards for IP protection, as
well as a first attempt to bring property rights into the multilateral system
of trading rights and obligations. It was included after hard bargaining
and strong opposition from some developing countries, particularly Brazil
and India who insisted that the GATT should not and does not contemplate
the negotiation of substantive IP standards. Not until April 1989 did the
developing countries agree to let negotiations on substantive standards
proceed, refuting the GATT's competence to promulgate new rules.

This issue has evolved into an area of major disagreement. The
industrialized countries are engaged in an effort to persuade the developing
countries to incorporate rules on the protection of intellectual property into
the framework of GATT. Because the proposed norms regarding the
recognition of IP rights might significantly effect wealth allocation between
the developing and the developed world, to the short-term detriment of the
developing world, developing countries have consistently and intensely
resisted the program with respect to the nature, scope and institutional
implementation of the legal regime to be established. The main focus of the
Uruguay Round is on reconciling differences between the developed and the

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developing countries on the proper uniform standards for the protection of IP rights abroad. The challenge of reconciling these divergent views is not an easy one.

The condition of the world economy calls for an expeditious conclusion of the Uruguay Round to regain momentum for trade liberalization and trade expansion in order to restore general economic growth. The maintenance of an open multilateral trading system is of great importance to all countries. The Round has to achieve a balanced and substantial package of results in all areas, and it has to address and satisfy the vital interests of all participants. Failure in the Uruguay Round to recognize and enforce IP rights will only intensify pressures to achieve alternative solutions through increased reliance on unilateral sanctions. For example, the U.S. resolve to protect IP rights, whether on a unilateral or multilateral basis, has created widespread dissatisfaction with its trade policy. The U.S. has been labeled a protectionist and a trade bully for imposing coercive economic measures on countries it regards as not providing adequate protection of IP. A retreat to this kind of protectionism or an exclusive focus on regional or bilateral arrangements would put the international trading system at great risk and could lead to a profound crisis.

This thesis describes the "intellectual property problem" and how it came to be the focus of GATT attention. It addresses the concerns of the developed and the developing world regarding a reform in their IP protection regimes. One of the results of this thesis is that reforms that do not stem from developing countries' perceptions of their own interests and needs, and that are not articulated in keeping with broader economic and
technological policies, are unlikely to result in stable and predictable rules or to be properly enforced.
2. THE GROWING IMPORTANCE OF IP PROTECTION IN THE INTERNATIONAL TRADING SYSTEM

IP protection has acquired a high national and international profile because inadequate and ineffective protection of IP against infringement has substantially distorted international trade and led to a variety of trade-related problems.

2.1 DEFINING THE IP PROBLEM

Inadequate and ineffective national protection for IP results in a number of activities that distort international trade. These activities include the copying of another's product for commercial purposes and the unauthorized manufacture, sale or use of works, products and services protected by copyrights, trademarks and patents. The intangible nature of IP makes it particularly susceptible to piracy, a problem which is exacerbated by evolving technology.

Industrialized countries claim billions of dollars in losses due to the infringement of their patents, copyrights, trademarks and trade secrets, mainly by certain developing countries. The U.S. industry has estimated its aggregate worldwide losses due to inadequate protection of IP in 1986 at $43-61 billion. According to the European Parliament, several billion dollars of

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5 THE INTELLECTUAL PROPERTY COMMITTEE, KEIDANREN AND UNICE, BASIC FRAMEWORK OF GATT PROVISIONS ON INTELLECTUAL PROPERTY: A STATEMENT
counterfeit goods are sold annually within the European Community which has resulted in the loss of 100,000 jobs in France and Germany. In United Kingdom, it is estimated that 100,000 jobs are lost due to copyright and patent infringement. British publishers lost £130 million as a result of copyright infringement in 1986.

Today, the U.S. and other policy makers in industrial countries are engaging in significant efforts to seek stronger IP protection worldwide and diminish international infringement of their products. The protection of IP is increasingly perceived, mostly by these developed market economies, as crucial to international competitiveness.

Due to the increase in international competitiveness and international technological rivalry, the significance of technology to the industrialized countries has greatly increased. These countries believe that they have significant comparative advantages in technology. Constant innovation has become the symbol of the economies of industrialized countries, making technology and innovation major factors in international economic competition. The industrialized countries contend that the prospects for the industrialized countries to retain a major share of the global market in the 21st century depend not only on their ability to stimulate technological innovation, but also on efforts to ensure an orderly diffusion of that technology through appropriate international legal machinery. The growing share of knowledge-intensive products (like


6 Id.
7 Id.
8 Id.
computer software, computer hardware, semiconductor chips, space satellite technology, and electronic machinery) in worldwide trade, together with the increase in international competition and integrated communication abilities, have magnified the economic significance of IP. Therefore, IP's growing impact on trade has become the focus of many studies and has sparked debates among the countries all over the world.

The industrialized countries claim their IP system to be superior and more efficient and want the developing countries to introduce the same system with comparable standards and procedures. They argue that IP is required to encourage the emergence of important new technologies, to continue productive investment in increasingly expensive research and development, and to enhance global distribution of the products of intellectual efforts. This gives rise to a number of questions and concerns: Why do the industrialized countries demand the adoption of their system? How do they extend their traditional IP laws to other nations? Would it be beneficial to other countries to adopt this system? What are the ways industrialized countries may be able to persuade other nations to introduce similar IP systems even though it may not be in their best interests to do so? All these questions will be addressed in the subsequent sections of this discussion.

Although most countries recognize the importance of IP protection, there are significant differences in their approaches to this issue. The
developed countries argue that "to speak of IP rights, as opposed to IP privileges, tends to imply that IP rights are a universal obligation, rather than an elective option." They regard the protection of IP as a fundamental right comparable to rights to physical property. In most developing countries and many developed countries, by contrast, IP is seen less as a body of fundamental rights than as a subset of their general economic policies, to be managed for their contribution to economic growth and industrial development.

The ability of both the sides to muster refined counter arguments based on social and economic tenets that stubbornly defy empirical verification renders the conflict more acute. The developing countries' continuous efforts to erode the existing levels of protection for IP and the strong perseverance of the industrialized countries to strengthen IP laws under GATT further exacerbates the resulting tensions. Inadequacies in the current international agreements fan the fire.

2.2 EXISTING MECHANISMS FOR INTERNATIONAL PROTECTION OF IP

Intellectual property, like other forms of property, is territorial in nature and scope. Therefore, to make, use or sell an item in one nation, which is protected in another nation, does not violate IP laws in the second

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nation. For this reason, innovators, artists and authors are obliged to file for protection in each nation in which a significant market is sought or anticipated. Such filings are supported or facilitated by a network of international conventions. Most of the international conventions on IP are administered by the World Intellectual Property Organization (WIPO). WIPO was established by a convention signed on July 14, 1967, brought into force in 1970 and made a specialized agency of the United Nations in 1974.13

The objectives of WIPO are:

a. to promote the protection of IP through cooperation among states;

b. to encourage the development of new treaties and the modernization of those treaties it presently administers; and

c. to promote national property protection around the world through educational support and the provision of technical assistance.14

WIPO provides assistance to the developing countries in gaining access to patented foreign technology, and locating technological information.

The current regime consists of a series of international agreements at the world and regional levels which have existed for over a century. The principal worldwide agreements are the Paris Convention of 1883,15 covering patents, trademarks and other forms of industrial property, the

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Berne Convention of 1886,\textsuperscript{16} for the protection of literary and artistic works, and the Universal Copyright Convention (UCC) of 1952,\textsuperscript{17} on copyrights.

i. Paris Convention

No international laws specify explicit rules for the protection of industrial property. Each country has specific industrial property laws which cover only acts accomplished in that country. International agreements generally do not establish rights but are designed to harmonize these divergent national laws.

The Paris Convention of 1883, officially titled the International Union for the Protection of Industrial Property, with approximately 100 signatory nations, addresses patents, trademarks, service marks, industrial designs, utility models, trade names, indications of source, appellations of origin and unfair competition.

This Convention has two major provisions: (a) "national treatment"\textsuperscript{18} i.e., equal treatment of nationals and non-nationals; and (b) "right of priority"\textsuperscript{19} when filing for the same patent or trademark in any signatory nation within one year. National treatment is tantamount to no protection


\textsuperscript{18} Arts. 2 and 3 of the Paris Convention. 'National treatment' requirements bar signatory nations from discriminating against foreigners by offering them weaker patent protection than the protection accorded to nationals.

\textsuperscript{19} Art. 4 of the Paris Convention. 'Rights of priority' stipulates that once an application for protection is filed in one signatory nation, the applicant has one year to file in any other signatory nation, which then shall consider such an application as if it were filed on the same day as the original application.
at all for companies which operate in countries that do not have their own
domestic law. The agreement does not require member nations to upgrade
or enforce domestic laws.

This Convention, with only one exception (article 5 quarter), leaves
signatories a large measure of discretion in determining the scope of
national laws on patents and trademarks. Member nations retain
considerable latitude in excluding products from protection and issuing
compulsory licenses in cases of non-work.\textsuperscript{20} Also, they are free to grant
nationals certain forms of preferential treatment like subsidies and tax
abatements.\textsuperscript{21}

The U.S. is not a member to all industrial property agreements.\textsuperscript{22} For
example, it does not belong to the Lisbon Agreement as the U.S. wine
exporters use of the terms “burgundy” and “champagne” would violate its
appellations of origin provision.

\textbf{ii. Berne Convention}

The Berne Convention covers the protection of literary and artistic
works. It is an international copyright convention negotiated in 1886 and
revised in 1971. Its membership has increased from ten nations to more
than eighty, including the entire European Community, many communist-
bloc states, numerous developing countries, and, as of March 1, 1989, the
United States.

\textsuperscript{20} Strengthening Protection of Intellectual Property in Developing Countries: A Survey of
the Literature 11 (Wolfgang Siebeck With Evenson, Lesser, and Primo Braga 1990).
\textsuperscript{21} Id. at 12.
\textsuperscript{22} ROBERT P. BENKO, supra note 14, at 5.
The Berne Convention establishes a system of rights and obligations that protects and furthers the dissemination of intellectual works in the international arena. Like the Paris Convention, the Berne Convention is based on the principle of providing "national treatment" to the works created by nationals of other member states. But unlike the Paris Convention, it stipulates a so-called minimum protection which can be claimed in any member state, even though the domestic law does not provide this protection. Copyright protection under the Convention is extended without the formalities of applications or examinations. The minimum period of protection is the lifetime of the artist or the author plus 50 years.

iii. Universal Copyright Convention (UCC)

The UCC, established in 1952, is a multilateral copyright treaty sponsored and administered by the United Nations Education, Scientific and Cultural Organization (UNESCO). This Convention deals with the rights granted to the authors, artists, composers and film-makers. It is less stringent than the Berne Convention and provides for a minimum of protection equal to the life of the author plus 25 years for most works. It provides for "national treatment" for copyright holders of member countries. To receive protection under the UCC, authors must comply with the procedural requirements of their own nation's copyright statutes. It does not actually establish international standards of protection. The

23 Art. 5 of the Berne Convention.
United States has withdrawn from UNESCO but it still adheres to the UCC.25

Figure 1 provides an overview of the WIPO Membership and the patent protection all over the world as of 1988. [See Figure 1 on page 16-17.]

This international regime for the protection of IP rights is one focus of concern in the current policy debates. The negative impact of inadequate international protection of IP on the U.S. stems from several aspects of WIPO:26 Most of the conventions simply mandate “national treatment” and do not require a nation to enact any legislation. None of these have a legitimate, well-structured dispute-settlement mechanism. If a signatory member violates the treaty, there is no punitive remedy that can be awarded to the injured party. Also, there is no international enforcement under these conventions.27 Enforcement is left to the national courts of these signatories, leaving an aggrieved party to fend for itself in the local courts.28 The conventions do not provide adequate substantive norms covering the important subject-matter areas, for example, trade secret protection receives no recognition in the treaty system. Semi-conductor chip protection is not subject to an international agreement.29 In sum, the multinational

26 ROBERT P. BENKO, supra note 14, at 4.
28 See Gadbaw & Richards, supra note 12, at 52.
29 See Note, Third World Questions the Need For Integrated Circuit Treaty, 34 PAT. TRADEMARK & COPYRIGHT J. (BNA) 59-60 (May 21, 1987). Such agreements have been stymied by the developing countries.
conventions have not been ideal mechanisms for challenging non-compliant countries.

The U.S. and a few other industrialized countries like Japan and EC have had the most difficulty contending with the direction and the momentum of WIPO policies. From the U.S. perspective, apparent impotence of WIPO to deal with the trade-related problems of IP is due to the fact that it was never intended to address trade-related distortions, leading the U.S. and other industrialized countries to consider using GATT as a vehicle for improving the level of international multilateral standards.
FIGURE 1
OVERVIEW OF WIPO MEMBERSHIP AND PATENT PROTECTION
WORLDWIDE AS OF 1988

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>DURATION OF PROTECTION</th>
<th>MEMBERSHIP</th>
<th>AVAILABLE PATENT PROTECTION</th>
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<td></td>
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<td>20a</td>
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<tr>
<td>Argentina</td>
<td>5, 10, 15c</td>
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<tr>
<td>Austria</td>
<td>15b, d</td>
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<tr>
<td>Belgium</td>
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<tr>
<td>Bolivia</td>
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<td>Brazil</td>
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<td>China</td>
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<td>India</td>
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<tr>
<td>Zambia</td>
<td>16b</td>
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</tbody>
</table>


**Notes**: a from filing date; b from publication date; c from grant date; d extension possible; * denotes membership; @ processes patented under some circumstances.
3. **THE U.S. CONCERNS WITH INADEQUATE PROTECTION OF IP**

In recent years, the United States' dominant position as a leader in the world trade has eroded significantly.\(^3^0\) Last decade, the U.S. experienced an enormous trade deficit as its appetite for imported goods consistently outpaced its exports.\(^3^1\) The U.S. trade deficit for 1988 amounted to $170 billion.\(^3^2\) As the deficit proved detrimental to the health of the U.S. economy, a primary focus of the U.S. trade strategy has been the reduction of this enormous trade deficit, predominantly by boosting its exports.\(^3^3\) Trade analysts have concluded that the major impediments to growth in exports are foreign barriers to trade. Foreign "piracy" of IP has been cited as a major barrier to the U.S. exports.\(^3^4\) Revenues lost by the U.S. companies due to the worldwide sales of the products made without authorization utilizing the IP of the U.S. IP owners, have been estimated to as much as $35 billion per year. This represents approximately 15 percent of the U.S. trade deficit.\(^3^5\) Former United States Trade Representative, Clayton Yeutter, stated that "We could shrink the U.S. $170 billion trade

\(^3^2\) See INTERNATIONAL MONETARY FUND, DIRECTION OF TRADE STATISTICS YEARBOOK 402 (1989).
\(^3^5\) See generally Edward A. Finn, Jr., "That's the $60 Billion Question", FORBES, Nov. 7, 1988, at 40.
deficit appreciably simply by adding proper protection for our IP rights around the world."\(^{36}\)

Safeguarding IP rights from foreign infringers has emerged as one of the most important trade policy goals of the U.S.\(^{37}\) Americans who engage in international trade are very concerned about the lack of adequate and effective protection of IP rights in many foreign markets. The share of the U.S. exports that rely heavily on the protection of patents, copyrights, trademarks and trade secrets has more than doubled in the post-war period, and now amounts to over one-fourth of the total U.S. exports.\(^{38}\) These goods include pharmaceuticals, chemicals, computers, software, movies, books, sound recordings and electrical machinery. [See Figure 2 on page 20.]

The U.S. argues that it is not only losing money, but more importantly, its economy is losing the competitive edge it gains from research and development, innovation and creativity. As a nation it simply cannot afford it.


FIGURE 2

INTELLECTUAL PROPERTY AS A COMPONENT OF U.S. EXPORTS: SELECTED GOODS HIGH IN INTELLECTUAL PROPERTY VALUE 1947 AND 1986

1947

90.1%
5.5% 3.9% 0.5%

1986

72.6%
11% 7%
8.7%
0.7%

3.1 PIRACY

Piracy is a vague term that has no settled legal definition.\(^{39}\) In the broadest terms, it can be defined as the unauthorized and uncompensated duplication of another person's intellectual efforts for commercial purposes.\(^{40}\) The U.S. protects IP rights because the government recognizes the public interest in granting the innovator, author, producer, researcher or artist some form of exclusive control over the production, sale or distribution of their creative intellectual achievements. This control works as an incentive for these creative people to risk investing the time and money necessary to innovate. However, this arrangement may break down when pirates misappropriate the IP by making, using or selling it for commercial gain without the owner's authorization and without paying royalties to compensate the owner.

In its progressive shift to an information based economy, the U.S. has become increasingly vulnerable to piracy.\(^{41}\) Piracy not only directly hits the U.S. IP owner, it also has a number of indirect effects on the U.S. economy. Piracy in certain industries like software makes research and development and artistic creativity less profitable and less attractive. This may result in the delay of important inventions and creations and slow the pace of world development. This reduction in the research and development and loss or delay of productivity curtails employment in the U.S. industries


\(^{41}\) Id at 770-80.
foreign products much lower than the originator's own marginal costs.\textsuperscript{46} Second, the home market of the IP owner, i.e., the U.S., where the pirated goods are illegally imported. The U.S. is reportedly the largest market for foreign counterfeit versions of domestic products. Lower priced unauthorized versions of the original products, unless specifically excluded by border measures or enjoined by domestic IP laws, can drive the U.S. IP owners out of their home markets altogether.\textsuperscript{47} Third, the markets of all the other countries to which the products are exported; Once the pirated goods become good enough to satisfy the local demands, pirates introduce them into international trade and compete on advantageous terms with the U.S. exporters selling the genuine goods at higher prices. Consequently, the U.S. exporters are not only driven out of the pirating nations' markets, but also suffer a marketing barrier in these other countries. In sum, piracy displaces sales of legitimate goods in the domestic market; it decreases exports to, foreign sales in, and royalties from the countries that abuse IP; and it shrinks the markets for legitimate goods in third countries.

The U.S. argues that if the pirate nations were encouraged to adopt stricter IP protection, which is similar to that existing in the U.S. and other developed nations, the U.S. products could potentially be more competitive internationally and the U.S. exports would increase.

\textsuperscript{46} See Dam, \textit{supra} note 25, at 627-28.
3.2 ESTIMATES OF FINANCIAL LOSSES SUFFERED BY THE U.S. INDUSTRY AND TRADE

A number of the U.S. and international bodies have tried to quantify the financial losses suffered by the U.S. IP owners, due to piracy in the three above mentioned markets (home market of the pirate, home market of the U.S. IP owner, and other countries' markets). Estimates of the economic cost of pirated IP are staggering. Commercial piracy of the IP costs the U.S. economy billions of dollars and thousands of jobs each year.

A report produced by the U.S. International Trade Commission (ITC) in 1988, at the request of the U.S. Trade Representative (USTR), is the most recent and influential study on this issue. USTR asked the ITC to prepare a comprehensive study of the "distortions in the U.S. worldwide trade associated with the deficiencies in the protection provided by foreign countries to the U.S. intellectual property rights." The ITC calculated the distortions caused by trademark counterfeiting, and infringement and misappropriation of copyrights, patents, semiconductor chip design, trade secrets and other types of IP based on the data from a questionnaire it sent to approximately 500 U.S. firms involved in the foreign trade.

48 See Gadbaw & Richards, supra note 12, at 92-97 (approaching the problem by identifying significant 'pirate' countries and then attempting to quantify estimated losses in the form of 'pirate sales' in these countries).
52 ITC REPORT, id. at vii. 431 firms responded to the questionnaire.
The ITC estimated more than $23.8 billion of losses in 1986 which were due to inadequate protection of IP. Extrapolating these losses, to cover the entire national economy, USTR Clayton Yeutter placed all U.S. companies' losses between $43 billion to $61 billion. Many kinds of losses were included in these figures: lost export sales, displacement of U.S. domestic sales by infringing imports, lost fee and royalty payments, reduced profit margins, damage to reputation caused by pirated goods and foregone research opportunities. The Report estimated that 150,000 to 750,000 U.S. domestic jobs were lost as a result of illegal use of patents, trademarks and copyrights. The ITC Report attributed a significant concentration of estimated losses to certain developing countries and newly industrialized countries: Brazil, India, Republic of Korea, Taiwan, Hong Kong, Singapore and Mexico.

The industries that appear most affected are chemical, cosmetics and pharmaceutical companies, movie and music owners, publishers, computer companies involved in hardware and software, and fashion designers. It is common to see copies of Ralph Lauren polo shirts or Reebok tennis shoes selling for a few dollars in the developing countries rather than the high price for originals.

Profits for patent and copyright pirates in high-tech industries like computer hardware, semi-conductors or pharmaceuticals are very high because the infringers can sell products far below the original price since

54 ITC REPORT, *supra* note 50, at 4-4, Table 4-2 (listing factors that contributed to U.S. companies' losses of revenues because of inadequate intellectual property protection).
55 *Id.* at 4-16, 4-18.
no research and development costs have been incurred. For these industries, the key expense is no longer the cost of production but the cost of innovation, which must be recouped from the sales in volumes both at home and abroad. For example, it costs a pharmaceutical company a new drug $125-180 million for research and development over a ten year period to develop, but it takes virtually no time or money to copy one already developed. Similarly, a new family of semi-conductor integrated circuits typically costs over $100 million to develop but no time or capital investment to copy it. A copy of a popular $500 U.S. software package can be bought in the Far-East for $7.50. Twenty-five percent of the two-billion records and tapes sold in the world are counterfeit with prices in some countries as low as twenty-five percent of the legitimate price.

In a 1989 Foreign Trade Barriers Report (FTB Report), the USTR's Office identified the most serious existing defects from the U.S. government point of view in foreign IP legal regimes. The findings of this report matched with those in the ITC Report. The FTB Report, however, did not quantify the losses, it talked in terms of substantive law and enforcement deficiencies. Taken together, the ITC and FTB Reports highlight a lack of patent coverage for chemicals and pharmaceuticals, overly permissive compulsory licensing of patents, inadequate copyright legislation and

56 See GATT FRAMEWORK, supra note 5.
59 See GATT FRAMEWORK, supra note 5.
enforcement with respect to the audio, video and software sectors in a significant number of developing countries.

The above mentioned reports in the ITC survey are often disputed due to a number of reasons. It is argued that quantifying piracy in terms of financial losses to the U.S. business enterprises is difficult because it involves several highly uncertain and hypothetical factors and involves speculation.61 The approach of compiling data through questionnaires to the industries involved is surely not ideal as it relies on several debatable assumptions. The statistics should be viewed with skepticism as they are based on the industries' own unverified estimates.62 Some authors have questioned the ITC Report's methodology and expressed concern about unsubstantiated estimates by companies that have an incentive to claim serious damage by piracy.63 The ITC figure of $43-61 billion in annual losses by industries due to inadequate IP protection seems rather inflated. The studies carried out by Gadbaw and Richards64 show a figure of $3.4 billion for 1986, which is significantly lower than the figures provided in the 1987 ITC Report. Gadbaw and Richards tried to quantify the aggregate losses due to piracy by identifying the seven most problematic countries (Argentina, Brazil, India, Mexico, Republic of Korea, Singapore and Taiwan) which had some of the largest pirate industries in the world. [See Figure 3 on page 28.]

64 See Gadbaw & Richards, supra note 12, at 379-83.
FIGURE 3

ESTIMATED ANNUAL REVENUES FROM SALES OF PIRATED PRODUCTS IN 1986

(in Millions of U.S. Dollars)

<table>
<thead>
<tr>
<th>Country</th>
<th>Agricultural Chemical</th>
<th>Pharmaceutical</th>
<th>Book Publishing</th>
<th>Audio</th>
<th>Video</th>
<th>Software</th>
<th>Computer</th>
<th>Semi-Conductor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>4.5</td>
<td>231</td>
<td>N/A</td>
<td>N/A</td>
<td>5.1</td>
<td>10</td>
<td>N/A</td>
<td>0</td>
<td>251</td>
</tr>
<tr>
<td>Brazil</td>
<td>67</td>
<td>93.8</td>
<td>N/A</td>
<td>19</td>
<td>40.8</td>
<td>62</td>
<td>466</td>
<td>0</td>
<td>749</td>
</tr>
<tr>
<td>India</td>
<td>17</td>
<td>920</td>
<td>6</td>
<td>N/A</td>
<td>N/A</td>
<td>3.75</td>
<td>N/A</td>
<td>0</td>
<td>947</td>
</tr>
<tr>
<td>Mexico</td>
<td>6</td>
<td>136.5</td>
<td>N/A</td>
<td>65</td>
<td>12.45</td>
<td>20</td>
<td>N/A</td>
<td>0</td>
<td>240</td>
</tr>
<tr>
<td>R.O. Korea</td>
<td>20</td>
<td>188</td>
<td>70</td>
<td>18</td>
<td>65.2</td>
<td>20</td>
<td>N/A</td>
<td>95</td>
<td>476</td>
</tr>
<tr>
<td>Singapore</td>
<td>N/A</td>
<td>1.5</td>
<td>2.7</td>
<td>63.5</td>
<td>11</td>
<td>26</td>
<td>N/A</td>
<td>0</td>
<td>105</td>
</tr>
<tr>
<td>Taiwan</td>
<td>15.9</td>
<td>27.4</td>
<td>.9</td>
<td>17</td>
<td>25</td>
<td>16</td>
<td>514</td>
<td>0</td>
<td>616</td>
</tr>
<tr>
<td>Total</td>
<td>130</td>
<td>1,598</td>
<td>80</td>
<td>183</td>
<td>160</td>
<td>158</td>
<td>980</td>
<td>95</td>
<td>3384</td>
</tr>
</tbody>
</table>

Numbers Rounded for Totaling

N/A = Information Not Available

Of the nations studied, the level of pirate sales was the greatest in India followed by Brazil, Taiwan, the Republic of Korea, Argentina, Mexico and Singapore. Of the industries studied, pirate sales were the greatest in pharmaceutical industry, the audio recording industry, the video recording industry, the software industry, the agricultural chemical industry, the semi-conductor industry and the book publishing industry [See Figure 4 on page 30.]

They made worksheets for each country and industry, to estimate pirate revenues, by collecting data on the domestic market size, exports, the level of domestic production, and current revenues of the IP owners. These figures were then utilized to estimate the possible increase in the revenues of the U.S. IP owners obtained through the elimination of piracy.65

These studies by no means represent a complete list of industries affected that have suffered losses from piracy. The list includes those industries that have suffered losses from piracy in a number of developing countries, and which the U.S. government officials, industry groups and industry associations have repeatedly mentioned as the most injured by inadequate IP protection. Many other industries, such as fashion apparel, athletic footwear and watch industries, have also suffered losses particularly due to trademark infringement in the developing countries. These losses have not been quantified by Gadbaw and Richards in their study.

65 Id. at 92.
FIGURE 4

ESTIMATED LEVELS OF 'PIRATE' SALES IN 1986

BY COUNTRY

BY INDUSTRY

The U.S. IP owners claim that the loss is large even if one takes into account the probability that the available economic data may magnify the injury to the U.S. industry and trade.

3.3 INADEQUATE PROTECTION OF NEW TECHNOLOGIES

Another area of U.S. concern involves newly emerging technologies. Piracy has soared in recent years by the advent of new technologies as they make it easier and more inexpensive for the pirates to get access to, copy and transmit the data.66 For example, Fiber-optic technology can transfer 100 average length novels over a distance of 100 miles in one second.67 The proliferation of video and audio-taping equipment like compact disc (CDs) and digital audio tapes (DAT) has enabled the pirates to produce cassette tapes virtually indistinguishable from legitimate recordings. Approximately 80 percent of the audio tape market in Portugal, Nigeria, Saudi Arabia, India and Thailand is controlled by pirates.68 Similarly, personal computers enable pirates to make exact replicas of computer software conveniently in their homes or offices. The development of new semi-conductor chips or a software may cost enormous time and millions of dollars, but setting up a plant to reproduce them can be done for a fraction

66 See ROBERT P. BENKO, supra note 14, at 39.
of this sum. Italy has five pirated copies of software for every one purchased legitimately.\textsuperscript{69}

The traditional IP system is breaking down in the wake of these new information and communication technologies. Recent advancements in computer software, biotechnology and space satellite technology fit imperfectly under either the patent or the copyright paradigms.\textsuperscript{70} For example, satellite signal piracy has emerged as an increasing problem in Taiwan as it affords no protection to it at all.\textsuperscript{71} Pirates with satellite dishes extract broadcast signals from the air-waves and re-transmit them for commercial purposes.

The vulnerability of new technologies could potentially cause the greatest harm to the U.S. economy as the U.S.'s competitive advantage has historically been in the development of new technologies, such as computers, semi-conductor chips and biotechnology.\textsuperscript{72} The U.S. argues that the emergence of these technologies forces a re-evaluation and re-definition of existing IP right classifications and forms of protection. Japan and European Community share this concern.

\textsuperscript{69} *Software Pirates Find Italy's Land Has No Byte*, FIN. TIMES, Apr. 28, 1988.


3.4 EFFECT ON THE EXISTING GLOBAL SYSTEM OF IP PROTECTION

Rampant piracy of IP has a number of adverse effects on the existing system of IP protection worldwide. It threatens the very existence of the IP system as the inventors and innovators, in order to recoup the research and development costs and to appropriate all benefits of their inventions, become reluctant to disclose/patent their inventions. They try to protect their inventions/knowledge from piracy by secrecy in trade as long as possible and try to exploit it before the imitators catch up. This confounds the underlying principle of the patent system which is designed to inform the public about important inventions that have been made and already are protected, so that the duplication of efforts and expenses can be avoided. The non-disclosure of inventions also burdens further research on the same or related products or processes as it cuts off valuable information. This large scale piracy can weaken and destabilize the existing patent system by reducing the incentive for the inventor to disclose.

Similarly, counterfeiting defeats the main functions of the trademark system when consumers are unable to recognize the products of specific manufacturers. Customers stop relying on known trademarks for standard of quality and safety, losing confidence in the trademark system as an indicator of quality. This reduces manufacturers' incentives to produce high quality products.

On the other side, manufacturers in the developing countries that tolerate piracy gain an artificial competitive advantage in the world trade as they do not pay royalties for the use of foreign IP. They incur minimal research and development costs for marketing their knock-offs, and also suffer little risk as they free-ride on the successful products. Coupled with their own typically cheap labor, pirates can provide low cost products to the consumers. This profitability entices other small scale manufacturers into pirating, thus making piracy endemic, spreading it to other countries with weak IP protection system. The problem of piracy becomes deep-rooted and difficult to cure, posing a threat to the existing global systems of IP protection.

3.5 ECONOMIC ARGUMENTS FOR STRONGER PROTECTION OF IP IN THE DEVELOPING COUNTRIES

The U.S. and most developed countries believe that IP rights protection system modelled on current OECD (Organization for Economic Cooperation and Development) practice would sufficiently stimulate economic growth and effectively promote valuable economic activity, such as research and development, foreign investment and the diffusion of technology, in the developing world. This view, however, is not universally held, particularly among the developing nations. Serious disagreements remain, revolving around questions like - whether the protection of IP is of

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74 See Reichman, supra note 40, at 763-764.
net benefit to a developing nation or whether the potential benefits of such protection are outweighed by the costs of introducing such a system?

An influential segment of the U.S. IP community is promoting developing country protection of IP based on claimed benefits to those countries. Whether the benefits are higher than the costs remains a much debated thesis without any empirical verification.\(^7^5\) There is no strong evidence that the developing countries will necessarily benefit or lose from a reform of their IP systems.

The proponents of enhanced IP protection frequently refer to a paper by M.L. Burnstein\(^7^6\) in arguing that IP protection plays a positive role in the economic development of the developing countries.\(^7^7\) This paper, however, does not base its claim on empirical evidence and arrives at this conclusion on the basis of assumptions and predictions concerning economic behavior.

Economists in industrialized countries argue that stronger protection of IP will produce a variety of long-term benefits for the developing countries.\(^7^8\) They suggest the following impacts of increased levels of IP protection:

a. Increase in technology transfers and foreign investment - In order to attract foreign expertise in high-tech industries which rely heavily on IP, it is indispensable for a developing country to strengthen its IP protection. This is so because the technology owners do not have an incentive to

\(^7^5\) See ROBERT P. BENKO, supra note 14, at 27-29, 47-50; Primo Braga, supra note 9, at 258-64.
\(^7^7\) See Gadbaew & Richards, supra note 12, at 21 & n.21; SHERWOOD, INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT 158 (1990).
\(^7^8\) See Deborah Mall, supra note 27.
transfer their proprietary knowledge to countries with weak IP protection system, in view of the potential for piracy.79

b. Stimulation of local innovation and technology infrastructure - IP protection promotes domestic innovation by providing additional incentives to the local innovators to invest more resources in the technological advancements by guaranteeing a greater economic return for innovations that are successful.

c. Increase in the global technological innovations resulting from better protection in all countries.

d. Decrease in the 'export-revenue losses due to trade sanctions.' Primo Braga suggests that the export-revenues which are lost when trade sanctions are imposed against developing countries having significant trade links to the industrialized world should also be included among the variables considered in the benefit function.80 For example, Brazil could have saved $39 million in 1989 had it provided strong patent protection to the pharmaceutical products.

The economists conclude that IP protection is not only beneficial to the society as a whole, but is also beneficial to consumers due to the availability of quality products which result from the provision of IP protection. It enables the developing countries to grow at a faster rate and improves the standards of living in the developing world.

The economists argue that the apparent advantages of piracy are more illusory than real. Most of the advantages accrue in the short run, while most of the losses are deferred to the future generations. By failing to

79 See SHERWOOD, supra note 77.
80 See Primo Braga, supra note 9, at 262.
develop their own technology-producing capabilities, these countries burden their future generations with lower quality and lesser variety of goods, inflated prices and lower labor productivity and competence.\textsuperscript{81} Also, piracy diminishes the incentives for indigenous innovation and fosters the 'brain-drain' of the most able innovators of the developing countries.\textsuperscript{82} For example, India's lax IP protection constitutes a disincentive for computer programers to stay and work in their home country. Transfer of technology through piracy occurs in a vacuum and is not accompanied by the transfer of training, experience, know-how and trained man-power, that comes with the legitimate transfers of technology. Therefore, full use of available knowledge and development of new technologies cannot occur.\textsuperscript{83}

Economists in industrialized countries recognize that there are short-term loses in the form of lost pirate revenues and the reallocation of resources, which accrue to the developing countries while strengthening their IP laws, but contend that these loses are outweighed by the long-term benefits enumerated above.\textsuperscript{84}

3.6 DISENCHANTMENT WITH WIPO

The U.S. is genuinely disenchanted with the existing IP regimes as they are not sufficient to mitigate the extensive trade distortions and

\begin{flushleft}
\textsuperscript{81} See Hoffman & Marcou, \textit{supra} note 68.
\textsuperscript{82} See Emmert, \textit{supra} note 73.
\textsuperscript{83} See ROBERT P. BENKO, \textit{supra} note 14, at 29.
\textsuperscript{84} See, e.g., MacLaughlin, Richards & Kenny, \textit{The Economic Significance of Piracy}, in Gadbaw & Richards, \textit{supra} note 12, at 89-91, 97-108.
\end{flushleft}
economic damage caused by the piracy of IP rights. Its primary objection involves the extreme laxity of the conventions' rules. The attitude of the U.S. towards these treaties has been summarized as follows:

The protection offered by these rules, however, cannot cure many of the intellectual property problems faced today by America's creative industries. First, 'national treatment' becomes meaningless when the national law of developing countries are inadequate, or not enforced. Second, the limited number of signatories and the conventions' lack of application to non-member countries also diminish their effectiveness. Finally, the lack of mechanisms for consultations, for dispute-settlement or for remedying violations limits their usefulness.

In addition to its failure to provide substantive norms and effective dispute settlement procedures, this system is criticized for its lack of attention to some important new technologies. The agreements have failed to keep pace with the technological advances.

Also, member countries are not required to enact any national laws protecting IP as long as the national laws are non-discriminatory against

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85 UNITED STATES PROPOSAL FOR NEGOTIATIONS ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS 1 (Nov. 5, 1987); see also Dam, supra note 25.
foreigners. Consequently, almost every pirate nation is in full compliance
with the terms of the conventions, since it provides no IP protection to its
own domestic industry. The U.S. retaliatory action against such nations
could conceivably punish nations for practices which are in accordance
with the international law. For example, if Brazil, a member of a WIPO
convention, provides “national treatment” to U.S. IP owners (its domestic
IP law being not very strict for the nationals as well) it is in perfect
harmony with the existing international law on IP. If the U.S. imposes
trade sanctions against Brazil for lax IP protection, it shall be a retaliation
against the existing international norms and standards on IP.

Another area of dispute is over the granting of compulsory licenses
by the member nations to insure that the registered patents are put into
commercial use. The U.S. finds this practice particularly troublesome,
since it takes the use of the patent out of the control of the inventor.

The U.S. has complained about the United Nations' voting style in
WIPO, i.e., each country has one vote and decisions are made by a simple
majority. In WIPO, the developing countries, the industrialized countries
and the socialist countries have almost always voted as a bloc or a group.
This is particularly annoying for the U.S. as the majority bloc of the
developing countries in WIPO can prescribe their views on the
industrialized countries' minority bloc.

89 Paris Convention for the Protection of Industrial Property, opened for signature Mar. 20,
90 Unfair Foreign Trade Practices: Hearings Before the Energy and Commerce
91 Heritage Foundation, New Threats to Intellectual Property Rights, 761 BACKGROUNDER
A more fundamental problem is that not all countries subscribe to WIPO or all the conventions. Some of the most problematic countries are not members and therefore not subject to the convention rules. For example, India, Singapore, Taiwan and Thailand are not signatories to the Paris Convention. Taiwan, Korea and China are not signatories to the Berne Convention.92

Industrialized countries have unsuccessfully tried to enhance WIPO's role as an effective forum against international piracy. In fact, the previous levels of minimum standards are also eroding and deteriorating as the developing countries are trying to make IP conventions more flexible.

Due to all these problems with the existing international convention system, the U.S. and other affected industrialized countries are looking for a new multilateral solution to the piracy dilemma in order to protect their self-interests.93

93 See ROBERT P. BENKO, supra note 14, at 9.
4. U.S. ATTEMPTS TO SOLVE THE PROBLEM

Mechanisms to protect expanding research and development costs have evolved in the recent years in response to the growing levels of IP piracy facilitated by emerging new technologies. The statutory mechanisms in the U.S. IP law range from purely domestic laws intended to enforce its own IP regime, to confrontational bilateral measures that can be used to pressure developing countries into meeting U.S. demands.

The U.S. has employed a three-pronged attack to combat piracy. First, in order to provide a stable home base for the U.S. companies, the U.S. has strengthened domestic IP laws to curtail the export of certain strategic technologies and to slow importation of counterfeit goods into the U.S.. Second, the U.S. has tried to pursue bilateral negotiations that enforce compliance through trade sanctions with individual problem countries. Third, the U.S. has tried to seek relief through multilateral negotiations in the GATT.94

These instruments collectively compose a menu of options for the U.S. interest groups and policymakers who often face the question of precisely which instrument would be best suited to achieve their goals and objectives. The purpose of this section is to assess the instruments that the U.S. has at its disposal to fight the problem of piracy.

94 See Leaffer, supra note 62. See also INTELLECTUAL PROPERTY RIGHTS IN SCIENCE, TECHNOLOGY, AND ECONOMIC PERFORMANCE 214 (Francis W. Rushing & Carole Ganz Brown eds. 1990) (hereinafter called Rushing & Brown).
4.1 UNILATERAL MEASURES

Congress has recently undertaken comprehensive initiatives to strengthen the protection afforded to the U.S. IP owners. It has responded to piracy with a series of major amendments to the patent, copyright and trademark acts. These legislative developments have plugged loopholes and have enhanced coverage and protection under the U.S. law. For example, until 1984 the U.S. patent law did not protect the products made abroad that infringed upon patented processes. The enactment of the Patent Law Amendments Act plugged this loophole. In addition, the Trademark Counterfeiting Act of 1984 amended the Lanham Act to greatly strengthen the remedies in civil suits against international counterfeiting.

Another prospective major change in the U.S. patent law would be the adoption of a first-to-file system for the patent protection in place of the first-to-invent rule practiced at present in the U.S. This change would harmonize the U.S. patent law with the rest of the developed countries.

98 The first-to-invent system, codified at 35 U.S.C. § 102 (1982), protects the first inventor and is perceived in the United States as being a more fair system. Most countries use a first-to-file system, which often results in a race to the patent office.
99 See Lachica, U.S. is offering to Revise its Patent Code if Other Countries Agree to Reciprocate, WALL ST. J., June 15, 1988, at 21, col. 3; Dunner, First-to-File: Should Our
Important changes have also taken place in the U.S. copyright laws conferring enhanced protection for the copyright owners and increasing penalties for copyright infringement. Computer software and databases were given protection by a 1980 amendment. Traditional IP laws proved to be inadequate for the protection of certain new technologies, especially biotechnology and information technology. Congress extended protection to these areas by enacting the Semiconductor Chip Protection Act (SCPA) of 1984. This Act provides protection to semiconductor chips; it gives the creator of a semiconductor "mask-work" control of reproduction, importation, distribution and sale for ten years.

Moreover, the Trade and Tariff Act of 1984 authorized the President to impose import restrictions on goods from countries that do not adequately protect IP rights. The Caribbean Basin Economic Recovery Act (CBERA) of 1984 requires the President to evaluate Caribbean countries' protection of IP rights before awarding them tariff preferences. A more recent law with antipiracy provisions, the 1988 Trade Act, simplifies patent infringement proceedings under Section 337 of the Tariff Act of 1930 before the International Trade Commission. It provides the U.S. patent owners a new cause of action for infringement of a U.S. process patent by foreign manufacturers exporting to the U.S.. The private citizens can now petition the ITC for relief. If the ITC determines that an imported product does in


103 See ROBERT P. BENKO, supra note 14, at 12.
fact violate a valid patent of an industry that either exists in the U.S., or is in the process of being established, then it may issue a "cease and desist order" (an order to the foreign firm to discontinue the practice), or an "exclusion order" (an order to the U.S. customs service to bar entry of the imports). The "exclusion order" remains functional as long as the patent, trademark or copyright is valid.

Finally, the amendment of Section 337 under the 1988 Trade Act has reduced the injury standards significantly. Prior to this amendment, the law required the petitioner to prove to the ITC not only that the imports in question violated his IP rights, but also that he suffered substantial injuries and that the domestic industry was economically and efficiently operated.105 As amended in 1988, this section requires the petitioner merely to demonstrate that the U.S. domestic industry exists. The requirements to prove injury or that it is "efficiently or economically operated" have been eliminated. These changes facilitate rulings in favor of petitioners by reducing their burden of proof.

In brief, these amendments increase the likelihood that a petitioner will win his case and raise the possible penalties for non-compliance.


Guarding against piracy is exceedingly difficult since the U.S. IP laws have a limited extra-territorial effect.106 Foreign piracy of IP is not an infringement unless it occurs within the U.S.;107 therefore, the U.S. relies on multilateral and bilateral trade agreements with its trade partners to establish IP standards.108

The U.S. government has undertaken an intense program of direct bilateral negotiations, coupled with the threat and use of unilateral economic sanctions, to attempt to improve foreign protection for the U.S. IP owners.109 These negotiations effectively promote the U.S. interests. They target practices of a particular country offensive to the U.S. interests and coerce the non-complying countries to adopt adequate standards of protection.110 If bilateral persuasion is ineffective, the U.S. threatens to impose unilateral economic sanctions.

106 35 U.S.C. § 271 (1983); 17 U.S.C. § 501 (1977). Section 271(a) provides that "whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefore, infringes the patent." Section 501(a) provides that one "who imports copies or phonorecords into the United States... is an infringer of the copyright."
110 For details of the cases initiated by the USTR against the target countries, see OFFICE OF THE U.S. TRADE REPRESENTATIVE, SECTION 301 TABLE OF CASES (Dec. 14, 1989). According to this Table, 68 cases were initiated between 1974 and 1988. Half of these cases were terminated pursuant to successful bilateral or multilateral negotiations which improved the allegedly unfair trade practice while five cases were terminated because the claim under s. 301 was not justified or the petition was withdrawn. Id.
Congress strengthened the U.S. hand by the 1984 trade law amendments that identified inadequate IP laws of the U.S. trading partners as constituting a basis for retaliatory action under Section 301. But the current main weapon for exerting pressure on foreign countries is the so-called Special 301 IP provision of the Omnibus Trade and Competitive Act of 1988. This Special 301 specifies the "carrots" and "sticks" available to the U.S. trade negotiators in order to attain their objectives. The 1988 Trade Act expressly finds that the "international protection of IP rights is vital to the international competitiveness of the United States persons that rely on the protection of IP rights." President Reagan, in signing the 1988 Trade Act, stated that Special 301 will "strengthen the ability of U.S. firms to protect their patented, copyrighted, or trademarked goods and ideas from international thievery."

The Special 301 authority is designed to enhance U.S. ability to negotiate improvements in foreign IP regimes through bilateral initiatives that carry in the background the threat of retaliation in the form of restrictions on access to the U.S. market. This section places the entire burden of adjustment upon the U.S. trading partners. The statute requires the Office of the U.S. Trade Representative (USTR), within thirty days after the submission of the National Trade Estimate Report to the Congress, to

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115 19 U.S.C. § 2241 (1988). Section 2241(b) requires the publishing of the National Trade Estimate Report, which is due on March 31st of each succeeding year.
analyze foreign countries' laws and initiate accelerated six-month investigations of countries that deny "adequate and effective protection of intellectual property rights," or "fair and equitable market access to United States persons who rely on intellectual property protection." Under the Special 301 mechanism, the USTR first must identify "Priority Foreign Countries," who are the most egregious IP transgressors and have the greatest adverse impact on U.S. products and who are not making significant progress in negotiations with the USTR. All countries that deny adequate protection, whether *de jure* or *de facto*, are considered in this designation process. This finding is based upon the USTR's annual trade barriers report, the petitions received from firms and industry groups, and consultations with other officials in the United States Government (e.g., the Commissioner of Patents and Trademarks; Registrar of Copyrights). A list of these priority countries must be published in the Federal Register.

The USTR does have some discretion, however, as the statute specifies that the agency need not initiate such a case if it "determines that the initiation of the investigation would be detrimental to the United States economic interests." The USTR is authorized, but is not required, to retaliate by increasing duties or imposing other restrictions on imports.

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117 Id. § 2242(a)(1)(B).
118 Id. § 2242(a).
119 Id. § 2242(b)(1)(A).
120 Id. § 2242(a)(2), (b), (c).
121 Id. § 2242(b)(2).
122 Id. § 2242(e).
123 Id. § 2411(a)(2)(B)(iv).
124 Id. § 2416(b). The goods selected for duties or restrictions need not be related to the disputed practice of the priority country. § 2411(c)(3).
The USTR can revoke such identification at any time. In the event of revocation, the USTR must provide a detailed explanation of the reasons for such revocation in its semi-annual report to the Congress. The USTR has explicit authority to enter into binding agreements with foreign countries.

Since the enactment of Special 301, the U.S. has taken responsive action against two nations. In reaction to a USTR investigation of Brazil, initiated at the request of the Pharmaceuticals Manufacturers Association (PMA), President Reagan imposed $39 million in ad valorem tariffs on a variety of Brazilian imports as a consequence of Brazil's continuing refusal to extend product and process patent coverage to pharmaceuticals. This sanction was equal to the USTR's estimate of lost sales by the U.S. pharmaceutical manufacturers due to patent piracy in Brazil.

Similarly, the U.S. retaliated against Thailand by dropping it from the Generalized System of Preferences (GSP) program, for its failures to adequately protect IP. The GSP treatment allows several developing nations to export goods to the U.S. without many of the duties normally imposed on developed nations.

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125 Id. § 2242(c)(1)(A).
126 Id. § 2242(c)(2).
127 Id. § 2411(a), (b)(2), (c)(2)(C), (d)(3)(B)(i)(II), (d)(4)(B).
In 1989, rather than identifying countries as “Priority Foreign Countries” under Special 301, the USTR created an intermediate step, not required by Special 301, by establishing a “Watch List” of twenty-five trading partners,\textsuperscript{133} whose practices deserved special attention. This watch list identifies two categories of countries with unfair IP trade practices.\textsuperscript{134} The first category, or “Priority Watch List” countries, are those that could meet the statutory criteria for priority country identification but are making some concessions in recent bilateral or multilateral negotiations.\textsuperscript{135} The USTR gave these countries six months to make improvements before naming them as priority countries under Special 301. The second category of “Watch List” countries are those that have a lesser degree of inadequate IP protection. Seventeen countries were placed on this list and were given one year to prove progress.\textsuperscript{136} This intermediate approach was intended to prod these countries into action, without actually retaliating against them, giving the USTR more time to use pressure without resorting to the actual initiation of formal procedures. This tactic met with a mixed reaction from Congress; some legislators applauded the USTR’s restraint, while others criticized the action as being weak.\textsuperscript{137}


\textsuperscript{134} Id.

\textsuperscript{135} Id. at 719. The eight countries placed on the priority watch list are Brazil, India, Mexico, People’s Republic of China, Republic of Korea, Saudi Arabia, Taiwan, and Thailand.

\textsuperscript{136} Id. Countries on the watch list include Argentina, Canada, Chile, Colombia, Egypt, Greece, Indonesia, Italy, Japan, Malaysia, Pakistan, Portugal, Philippines, Spain, Turkey, Venezuela, and Yugoslavia.

\textsuperscript{137} USTR Defends Administration’s Naming of of Japan, India, Brazil Under Super 301, Int’l Trade Rep. (BNA) 684 (May 31, 1989); Rep. Gephardt criticized the Bush Administration for not taking stronger action and for not making “these intellectual property pirates walk the plank.” 135 CONG. REC. E 1552-53 (daily ed. May 4, 1989).
Threatening trade sanctions is a strong tool in dealing with some countries, but is ineffective with others. Special 301 has achieved significant improvements in IP protection in Korea, Singapore, Malaysia, Taiwan, Saudi Arabia, Japan and Indonesia,\(^\text{138}\) while Argentina, Brazil, India and Mexico have shown no improvement at all.\(^\text{139}\) As a result, on April 26, 1991, the USTR identified China, India and Thailand as “Priority Foreign Countries”. These had been on Special 301 “Priority Watch List” since the first annual review in 1989. However, there appears to be a direct relation between a developing country’s reliance upon exports to the U.S. and the country’s willingness to improve its IP protection.\(^\text{140}\) Specifically, the Republic of Korea, Taiwan and Singapore (three of the top few GSP beneficiary nations under the U.S. GSP program) have made genuine efforts to provide greater level of IP protection under the U.S. pressure.\(^\text{141}\) They fear huge losses of export revenues if the U.S. imposes trade sanctions against them. India, on the other hand, has not responded favorably to the U.S. coercion as its major exports are to the EC and Japan and not to the U.S..\(^\text{142}\) It gains more from the Japanese and the EC trade-benefits.\(^\text{143}\)


\(^{139}\) For details refer to Wilson, A Trade Policy Goal for the 1990’s: Improving the Adequacy and Effectiveness of Intellectual Property Protection in Foreign Countries, 1 TRANSNAT’L LAW. 421, 437-443 (1988).


\(^{141}\) Korea and Taiwan, whose IP policy was until recently based on the traditional Chinese culture, in which the highest form of compliment an artist or author could receive was to have his work copied, have made significant legislative changes. See Gadbaw and Richards, supra note 12, at 19.

\(^{142}\) See id at 23.

\(^{143}\) See J. JACKSON & W. DAVEY, INTERNATIONAL ECONOMIC RELATIONS 1158 (2d ed. 1986).
Similarly, Argentina and Brazil have made no changes in their IP laws. This shows that the U.S. trade pressure to combat piracy may prove ineffective with those countries whose legitimate exports to the U.S. are not a significant portion of their GNP.

The United States Tariff and Trade Act of 1984 ties the application of the GSP or the Caribbean Basin Initiative (CBI) program\(^{144}\) to the willingness of participating countries to adopt higher standards of IP protection. These programs were initially intended to provide a sort of free-market form of foreign assistance by offering non-reciprocal, duty-free treatment of certain qualifying products that the beneficiary countries export. In recent years, however, these programs have been used as indirect tools by American trade negotiators. The privileges under these programs are increasingly conditional upon meeting the U.S. trade demands on IP and other issues.

Another form of coercive negotiation employed by the U.S. in IP issues is that the U.S. applies a strict definition of reciprocity in the protection of IP related to computers. Under the Semiconductor Chip Protection Act of 1984, the U.S. provides protection for the mask-works of another country's semiconductor chips only if the other country offers similar protection on foreign software. These provisions are of greater interest to the industrialized countries rather than to the developing countries. To date, the U.S. has granted software protection to 18 trading partners, all of which are advanced industrialized countries.\(^{145}\) However, if

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\(^{144}\) CBI is a one-way free trade area, by which the U.S. extends duty-free import privileges to most products exported by selected Central American and Caribbean trading partners. Caribbean Basin Economic Recovery Act (CBERA) 19 U.S.C. §§ 2701-2706 (1986).

the U.S. attempts to apply the same strategy in areas of IP other than semiconductor chips, it should take into account that the reciprocity principle conflicts with the WIPO conventions' obligation to apply national treatment if the technology is covered by them.\textsuperscript{146} As semiconductors were not covered by any WIPO conventions, the SCPA reciprocity clause does not violate the U.S. obligations of granting national treatment under WIPO.

In each of these coercive measures, the U.S. attempts to establish linkage between a country's IP rights policies and its access to the U.S. markets and trade preference. These coercive measures meet with a high degree of foreign resistance and risk significant damage to the U.S. foreign policy interests. Japan reacted angrily to the announcement of it being named a Section 301 candidate for barriers to supercomputers, satellites and forest products, and rejected formal bilateral negotiations.\textsuperscript{147} Similarly, Brazil and India termed the Administration's decision as "totally unjustified, irrational, and unfair."\textsuperscript{148} The EC Commission has designated this Section 301 as "a provision of the U.S. trade laws which could be used in a harmful way against the Community's trading interests" and labelled this provision as "potentially dangerous to the whole relationship."\textsuperscript{149}

On U.S. imposition of $39 million tariffs on Brazilian imports to the U.S., Brazil lodged a complaint with the GATT, charging that the

\textsuperscript{146} See Emmert, \textit{supra} note 73, at 1350-55.
\textsuperscript{147} See Japan Rejects Bilateral Negotiations With the U.S. Under Super 301 Provision, 6 Intl' Trade Rep. (BNA) 686 (May 31, 1989).
\textsuperscript{149} EC Report Cites 42 U.S. Trade Barriers, Super 301 Provision Called Major Threat, 6 Intl' Trade Rep. (BNA) 575 (May 10, 1989).
retaliatory and discriminatory U.S. tariffs violated the latter’s obligations under the GATT. The GATT panel, formed to examine the legality of the U.S. action, massively supported Brazil’s position.\textsuperscript{150} This is because Special 301 puts a retaliatory tariff on GATT-protected goods in response to a non-GATT violation.

Also, GATT acknowledges that developing countries are confronted by special problems and recognizes that developed countries should “take account of the special development, financial and trade needs of developing countries.”\textsuperscript{151} Accordingly, developed countries should “provide differential and more favorable treatment to developing countries.”\textsuperscript{152} In violation of this objective, Special 301 does not differentiate between developing and developed countries in its identification of the priority countries. It is clear, therefore, that this retaliation is perceived by the GATT members as a unilateral act in violation of the GATT principles. The end result of the increased tension is a decrease in U.S. credibility in international trade negotiations as well as a hampering of any further IP negotiations between the U.S. and the particular nation.\textsuperscript{153}

Bilateral negotiations can be totally ineffective if a foreign government simply refuses to give in to the U.S. pressure of enhancing IP protection. In such a situation, the world trading system would suffer sanctions that have no beneficial effect at all. Once sanctions are implemented, domestic support for stronger IP protection may be


\textsuperscript{151} General Agreement on Tariffs and Trade Multilateral Negotiations: Agreement on Technical Barriers to Trade, Mar. 29, 1979, art. XXXVI, 18 I.L.M. 1079, 1095.

\textsuperscript{152} Id.

\textsuperscript{153} See generally Antoinette M. von dem Hagen, supra note 105, at 105-09.
negatively affected. The burden of trade sanctions would tend to fall upon the export-oriented sectors that are typically more receptive to arguments in favor of IP rights protection, while the pirating industries would not be affected at all and would continue their covert production and sale in the world markets. In addition, bilateral negotiations may be ineffective where the U.S. bargaining position is weakened by lack of lawful trade or U.S. government aid.

Imposing trade sanctions is an imperfect solution because military and geopolitical considerations may prohibit sanctions against certain major pirating countries. For example, India may find it politically difficult to apply sanctions against the People’s Republic of China for violations of IP laws.

Discretionary character of the bilateral measures actually adopted does not always contribute to the establishment of common standards. Country by country negotiations can easily lead to inconsistent approaches. This can be illustrated from the fact that the Brazilian law on software grants a 25-year term of protection, while the term adopted in the Republic of Korea was 50 years, and in both cases the duration is shorter than that generally accepted under international copyright law.

Last but not the least, these bilateral negotiation settlements may set the limits for future negotiated outcome with another country. For example, the U.S. may find it difficult to negotiate with India a term of

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154 See Primo Braga, supra note 9.
155 See supra note 139 and accompanying text.
156 See Gadbaw and Richards, supra note 12, at 29.
software protection longer than that negotiated with Brazil (that is 25 years).

4.3 **THE MULTILATERAL APPROACH: GATT AND TRADE-RELATED ASPECTS OF IP RIGHTS**

Given the inadequacy in both the current scope of IP protection worldwide and in the outlook for reform either through bilateral negotiations or through international IP conventions, the GATT round provides a most logical and promising vehicle for change. The first effort by the U.S. to heighten GATT sensitivity to IP protection was a proposal for an anti-counterfeiting code made during the GATT Tokyo Round negotiations in the late 1970's. While the draft was never officially submitted for consideration, work continued on the code. During 1985, a group of experts from the developed countries discussed the code and considered the possibility of broadening GATT discussions to include infringement of other IP rights. After an extensive debate, and despite considerable opposition, the U.S., joined by several other industrial countries, succeeded in placing intellectual property on the agenda for the Uruguay Round and thus the Trade Related Intellectual Property (TRIPs) negotiations were born in September 1986.

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160 See Abbott, *supra* note 61, at 713.
i. U.S. Objectives in the Uruguay Round

The U.S. approach has been to seek a binding, comprehensive, and enforceable agreement on trade-related IP matters which will substantially reduce trade distortions resulting from deficiencies in the U.S. trading partners' protection and enforcement of IP. The four major U.S. objectives in the TRIPs agreement are to obtain:161

1. Adequate standards of protection that each signatory country must embody in its laws on patents, copyrights, trademarks, trade secrets, and semiconductor lay-out designs;
2. Effective enforcement provisions that specify how intellectual property rights holders should be able to enforce their rights internally and at the border through legal action;
3. A mechanism for settling nation-to-nation disputes along the lines of traditional GATT dispute settlement procedures; and
4. The right under international trade law to apply trade sanctions when another country fails to live up to its obligations under the agreement.

ii. The Proposed GATT Code on IP

On October 28, 1987, the U.S. extended a framework proposal to the GATT group working on IP.162 This proposal included specific recommendations on substantive standards in the areas of patent,

trademark, copyright, trade secrets, and semiconductor lay-out. These recommendations largely reflected U.S. substantive IP standards. The proposal suggested that a mechanism to encourage accommodation of changing technologies should be included in the agreement. Also, it contemplated the mandatory adoption of minimum national enforcement standards, including provisions for border measures (e.g., import blocking and seizure), provisional remedies, and the expeditious resolution of disputes. Under this proposal, an independent GATT dispute settlement mechanism would be established to resolve IP disputes.163

The U.S. proposal specifically contemplates the use of a separate GATT code as the institutional mechanism for implementing the new IP regime. The code would provide a ‘discipline’ as:

an incentive for all governments to join such an agreement in order to resolve disputes (arising from IP infringement) under a multilateral dispute with a strong basis for coordinating their efforts to encourage non-signatories to adopt intellectual property regimes in accord with the standards embodied in the agreement.164

The U.S. has shown unwillingness to negotiate a GATT agreement that establishes standards less protective than those generally existing in

163 Independent dispute settlement mechanisms are used in a number of existing GATT codes, including the codes on anti-dumping and subsidies. See Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade (Anti-dumping), GATT, BISD: TWENTY SIXTH SUPP. art. 15, 171 (1980); Agreement on Interpretation and Application of Articles VI, XVI and XXIII (Subsidies), id. arts. 13, 18, at 56.
164 U.S. Framework Proposal, supra note 162, at 1372.
the U.S. and some other developed countries. The EC and Japan also submitted a detailed proposals to the GATT signatories which are similar to the U.S. proposal in the elaboration of substantive standards.

In June 1988, a collective effort by the U.S., EC, and Japanese industry groups, Basic Framework of GATT Provisions on Intellectual Property, Statement of Views of the European, Japanese and United States Business Communities, recognized the difficulties inherent in achieving a GATT IP consensus in view of the divergence in national interests between industrialized and developing countries and suggested that incentives might be required to induce developing country participation in a solution to the IP problem.

165 EC Presents Detailed Proposal for GATT Coverage of Intellectual Property Rights, 5 Int'l Trade Rep. (BNA) No. 28, 1012 (July 13, 1988). The suggested norms are—(1) patent availability for all new inventions with exclusive rights for twenty years from the date that patent protection is sought; (2) registrability of trademarks and enforced protection of registered trademarks; (3) copyright protection for all forms of creative expression, including newer forms such as computer programs, and data bases for the life of the author plus 50 years; (4) trade secrets provisions broadly defined to include undisclosed valuable business, commercial, technical or other proprietary nature, with GATT signatories agreeing not to disclose technical secrets submitted to government officials as a requirement to do business; and (5) protection for the original layout design of semiconductor chips.

166 See Guidelines and Objectives Proposed by the European Community for the Negotiations on Trade Related Aspects of Substantive Standards of Intellectual Property Rights, GATT Doc. MTN.GNG/NGII/W/26 (July 1988).
5. POSSIBLE IMPLICATIONS FOR THE DEVELOPING COUNTRIES

IP problems result from differing attitudes about the ownership of ideas. Economists in developing countries and politicians assert that IP protection laws simply perpetuate a system of economic imperialism which allows developed countries such as the U.S. to maintain a position of world dominance.\textsuperscript{167}

The developing countries oppose the establishment of substantive and uniform standards involving greater protection of IP rights, because of the implications for their own technological development. They think it would create oligopoly in high technology. They need access to new technology in order to foster the development process and participate more fully in world trade. In countries that have already attained a certain degree of industrial and technological development, IP protection may well be an important tool in fostering innovation. Developing countries, however, do not view the relationship between protection and innovation through the same lens. Their arguments are grounded on the conception that IP law is to be viewed as an instrument for economic and technological progress that must strike a proper balance between the granting of exclusive rights to stimulate the creation of new technology and the dissemination of both new and old

technological skills and knowledge. With this approach, the nature and scope of protection will necessarily vary from country to country and from one period to another, depending upon the degree of development reached and the policies chosen to implement differing national views of the public interest. Many of the today's most developed countries, at earlier stages of their own industrial growth, often limited the scope of IP protection while denying protection altogether for certain technologies or product categories.\textsuperscript{168} Many industrialized countries, like Canada, have only recently introduced patent protection of pharmaceutical products, while others like Finland, Greece, Monaco, Norway, and Germany still exclude them from protection.\textsuperscript{169} Also, until recently, the U.S. provided no copyright protection to the British publishers.\textsuperscript{170} Americans were once notorious pirates of books published in Britain.\textsuperscript{171} The international system of IP thus evolves gradually and consensually as the participating countries grow, establish innovation capabilities, and gain competitiveness in international markets.

While foreign firms are reluctant to transfer their knowledge to countries where technology can be easily copied, greater legal protection

\textsuperscript{168} Office of Technology Assessment, Intellectual Property Rights in an Age of Electronics and Information, Washington D.C., 1986. United States during its first 100 years has behaved as many developing countries do today: "When the United States was still a relatively young and developing country...it refused to respect international intellectual property rights on the grounds that it was freely entitled to foreign works to further its social and economic development." See also Oddi, The International Patent System and Third World Development: Reality or Myth? 1987 DUKE L.J. 831, 856-57 (1987).
\textsuperscript{170} See Oddi, supra note 168.
\textsuperscript{171} Id.
may not automatically lead to an enhanced process of technology transfer. IP protection by itself cannot make up for the lack of trained personnel and of equipment and general infrastructure.\textsuperscript{172} These are all key factors in decisions concerning technology transfer. Equally, technology transfer may not occur, even with legal protection, if other conditions are not met, such as adequate market size and expected growth or ability of potential licensees to compete successfully. Licensing decisions are generally based on a multiplicity of factors, among which IP is not necessarily decisive.\textsuperscript{173} Stronger IP protection will only strengthen the bargaining position of property rights holders, which will be reflected in demands for higher royalties and in the imposition of restrictive clauses of various kinds.\textsuperscript{174} The level of royalty rates charged in some fields may altogether deter developing countries' firms from gaining access to the most competitive technologies, thereby retarding the technological progress of the developing countries and strengthening the split between them and the developed countries.

The impact of stronger IP protection on consumers is not sure to be positive. As a rule, the stronger and broader the exclusive rights, the higher is the risk of exorbitant monopoly prices\textsuperscript{175} and of other abusive practices that may harm consumer interests.\textsuperscript{176} The high prices charged for patented pharmaceuticals are a classic example of such a phenomenon.

\textsuperscript{172} See ROBERT P. BENKO, supra note 14, at 28.
\textsuperscript{173} It may be argued, for instance, that the decision to license depends much more on the solidity of a particular licensing agreement than on the degree of legal protection itself.
\textsuperscript{176} See ROBERT P. BENKO, supra note 14, at 28. See also Rushing & Brown, supra note 94, at 27.
Brazil does not give drugs any patent protection within its borders because the government does not believe its people should have to pay what is to them a very high price, for a basic health care commodity. Similarly, India and Argentina justify the exemption by stressing the critical need of food and pharmaceutical products to prevent starvation and disease. Developing countries' effort to make products affordable for their citizens whose per capita income is significantly lower than that of the developed countries may explain some of their resistance to IP protection.

The impact of IP protection on foreign direct investment is quite uncertain. There is no empirical evidence showing a positive correlation between a strong system of protection and managerial decisions to undertake such investments. The availability of legal protection is one factor taken into account when considering such a decision, but economic conditions, such as cheap skilled labor, cheap raw material or large consumer markets, may play a far more significant role.

It is argued by the developed countries that without certain price levels the innovative firms would not obtain sufficient resources to justify continued research and development activities. But this argument is not

177 Timothy J. Richards, Brazil, in Gadbaw & Richards, supra note 12, at 149. See also COUNTRY REPORTS ON ECONOMIC POLICY AND TRADE PRACTICES, U.S. STATE DEPARTMENT (1989).
178 Gadbaw & Kenny, India, in Gadbaw & Richards, supra note 12, at 186. Indira Gandhi, the late Prime Minister of India, summed up her nation’s opposition to pharmaceutical patents by stating that “the idea of a better ordered world is one in which medical discoveries will be free of patents and there will be no profiteering from life and death.” Id.
180 See Rushing & Brown, supra note 94, at 28, 29.
compelling when applied to developing countries because it fails to consider that research and development expenditures are largely recovered in the markets of the developed countries. The developing countries' markets are in most cases marginal and would not normally constitute a primary factor in determining the rate of investment in research and development.

The developing countries argue that "since the ultimate objective of IP protection and trade liberalization is economic growth and development, development considerations must therefore override all others in determining levels of IP protection." Developing countries should not be made to adopt any new rules that may be inharmonious with their national development interests. It is argued that it would be inappropriate to come out with a uniform standard of IP protection taking into account the diverse technological and economic conditions amongst countries. "To legislate global uniformity in the face of global diversity and plurality" would further complicate the problem.

The goal of IP law is to maximize public wealth by providing incentives to create. On a micro-economic level, it can be shown to provide proper incentives. But no one has ever proved this goal of wealth maximization at a macro-economic level. Therefore, it can be very difficult for a developing country to subject itself to the relatively certain current revenue losses in exchange for less certain and unquantifiable long-term benefit of over-all wealth maximization.

181 See Peter Gakunu, supra note 167, at 361.
182 Id. at 362.
183 Id.
184 See Paul J. Heald, supra note 175, at 965.
185 See id. n. 47.
Some of the other specific implications for the developing countries may be summarized as follows:

5.1 THE SOVEREIGN RIGHT OF A STATE TO DETERMINE ITS ECONOMIC POLICY

The freedom of countries to legislate in accordance with their own economic and development needs is well recognized under international law. India in its submission to the TRIPs working group in July 1989, which focuses primarily on patents, argues that:

Every country should... be free to determine both the general categories as well as the specific products sectors that it wishes to exclude from patentability under its national law taking into consideration its own socio-economic, developmental, technological and public interest needs. It would not be rational to stipulate any uniform criteria for non-patentable inventions applicable alike both to industrialized and developing countries or to restrict the freedom of developing

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By virtue of the principle of equal rights and self-determination of peoples enshrined in the Charter of the United Nations, all peoples have the right freely to determine, without external interference, their political status and to pursue their economic social and cultural development, and every state has the duty to respect this right in accordance with the provisions of the Charter.

Every State has the sovereign and inalienable right to choose its economic system as well as its political, social and cultural systems in accordance with the will of its people, without outside interference, coercion or threat in any form whatsoever.
countries to exclude any specific sector or product from patentability.\(^\text{187}\)

It has been argued that the current efforts of the U.S. to strengthen IP protection are attempts to maintain its economic dominance by translating its domestic provisions on IP protection into international standards. This curtails the freedom of the developing countries to select their own political and economic systems,\(^\text{188}\) thereby violating international "principle of equal rights and self-determination of peoples." Ladas, in 1975, called the imposition of foreign legal standards on unwilling states in the name of 'harmonization', a polite form of economic imperialism.\(^\text{189}\) He was of the view that harmonization refers to the establishment of a uniform law or laws for certain areas of territories or countries. It generally involves a forced imposition on a country of the law of another.\(^\text{190}\)

5.2 ECONOMIC DISADVANTAGES

A change toward enhanced IP protection will impose identifiable significant economic costs on the developing countries as they are typically

\(^{187}\) Standards and Principles Concerning the Availability, Scope and Use of Trade Related Aspects of Intellectual Property Rights (1989); See also GATT: Indian Proposal Says Developing Countries Should Get Patent, Trademark Concessions, 6 Int'l Trade Rep. (BNA) 953 (July 19, 1989).

\(^{188}\) See Primo Braga, supra note 9.

\(^{189}\) See 1 S LADAS, PATENTS, TRADEMARKS, AND RELATED RIGHTS: NATIONAL AND INTERNATIONAL PROTECTION 14-15 (1975).

\(^{190}\) Id. See also Oddi, supra note 168, at 877.
net importers of technology. The economic costs will come primarily in the form of:

i. **Administration and Enforcement**

The administrative costs of implementing an effective IP system are not trivial. The U.S. spends over $300 million a year to operate the Patent and Trademark Office. Such costs are correlated to the size of the domestic market and research and development intensity of the economy. The WIPO's Industrial Property Statistical Report shows that many developing countries' systems already provide significant patent protection, which is the most expensive form of protection from an administrative point of view. Some developing countries with sizable patent offices include Mexico, Brazil, India, and South Korea. However, many other developing countries do not have efficient IP registration and enforcement offices and required expertise. Yamaguchi describes the typical situation in many developing countries as:

Some of these patent offices receive several hundred or several thousand patent applications, filed mostly from foreign countries such as Japan and the U.S.. These have about ten examiners in each of these patent offices to examine this large number of patent applications....

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192 ROBERT P. BENKO, supra note 14, at 181.

193 See Gadbaw & Richards, supra note 12.

For such countries, administrative costs of strengthening IP system would be significantly high. It would necessitate the introduction of new judicial and administrative structures and the consequent expenditure on resources necessary for their functioning. Unfortunately, there is no empirical test to estimate the costs that developing countries would face in bringing enforcement up to the levels prevailing in industrialized countries. It would be, however, irrational to expect developing countries to implement highly effective enforcement systems in the short run.

ii. **Increased Royalty Payments**

Because the developing countries are net importers of knowledge and technology, strengthening their IP system would tend to increase the level of payments abroad for proprietary knowledge. For example, patent statistics show that only one percent of existing patents are held by nationals of developing countries. Patenting activity in developing countries is dominated by non-resident patentees from the developed countries. Therefore, expansion of the degree of coverage of patents would result in higher payments for foreign technology.

iii **Displacement of Pirates**

Displacement of firms based on piracy, through termination of sales or payment of royalties, is another related cost. Of course, this would only be a social cost if piratical activities are displaced by foreigners. This is based on the assumption that these firms would be wiped out entirely.

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Some economists believe that from a social perspective, the displacement of pirates may not entail a welfare loss.\textsuperscript{196} If the piratical activities are stopped and licenses are issued to the nationals of the same country, there would be a transfer of income from the pirates to other nationals and thus not affect the net sales or revenues of the country as a whole. The "transfer of sales or royalty payments to other nationals would represent merely a transfer of income from one member of society to another and therefore, from the nation's perspective, would represent no net loss at all."\textsuperscript{197}

iv. Costs of Additional Domestic R&D

This aspect has received little attention in the debate since most analysts tend to believe that additional R&D is always good. Without disputing the importance of R&D for economic development, one should take into account its related costs. New R&D activities spurred by stronger IP protection may draw resources away from other economic activity, and this could present a cost.\textsuperscript{198} Nogues suggests that an IP reform could lead to wasteful R&D ("reinventing the wheel") in economies characterized by high levels of trade protection.\textsuperscript{199}

\textsuperscript{196} See Primo Braga, \textit{supra} note 9, at 256.
\textsuperscript{197} See MacLaughlin, Richards & Kenny, \textit{supra} note 84, at 107.
\textsuperscript{198} See POSNER, \textit{ECONOMIC ANALYSIS OF LAW} 54 (2d ed. 1977); Paul J. Heald, \textit{supra} note 175, at 965; Oddi, \textit{supra} note 168, at 847.
\textsuperscript{199} Nogues, \textit{Patents, Distortions, and Development}, PRE Working Paper Series No. 315, Washington, D.C.: The World Bank (1990); Paul J. Heald, \textit{supra} note 175, at 970. "How much would computers cost if every manufacturer had to redesign all components from scratch?" \textit{Id.}
v. **Anticompetitive Effects**

A major concern in developing countries over strengthening IP is that it would not only bring significant increases in prices, but would also impair the process of technological diffusion. Increased market power enables the seller to reduce output and raise prices, resulting in a greater producer surplus increasing static welfare losses. For example, MacLaughlin, Richards, and Kenny estimate that price increases would be substantial, in excess of 100 percent in some countries, in case of audio and video products as well as software. They assume that the impact of the reform on the prices of pharmaceutical products would not exceed 5 percent because governments would apply price controls to avoid any steeper increases.

The economic impact of a reform tends to vary significantly across countries, depending on the responsiveness of domestic innovators to higher protection, the responsiveness of foreign direct investment, demand elasticities for protected products, the volume of existing local infringing activity, and other factors.

Greater IP protection entails both short-term costs and long-term benefits for developing countries. But most of the time the short-term costs are so substantial that it can be very difficult for a developing country to subject itself to the loss of current revenues in exchange for less readily quantifiable long-term benefits. Therefore, the developing countries

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201 MacLaughlin, Richards & Kenny, supra note 84.
202 Id.
203 See Gadbaw & Richards, supra note 12, at 90.
advocate 'gradualism', saying that we should wait for countries to reach the threshold stage, at which they will find that the benefits of IP protection are no longer remote and so begin to outweigh the costs.204

5.4 GATT OR WIPO

The developing countries have made several arguments to support the claim that GATT does not have the competence to take up matters concerning IP protection. They are of the view that WIPO would be a forum better qualified to handle questions of IP protection.205 WIPO has been specifically dealing with IP for at least 25 years now. They invoke the principle of speciality recognized in international law which governs the respective competences of international organizations and according to which the competence to deal with specific issues of international law lies with the organization that has been especially created for this purpose.206

Some authors have claimed that it would be inefficient to repeat in GATT what has already been done in WIPO.207 Duplication of WIPO efforts would involve waste of time and efforts as WIPO already has a permanent working staff of people from over 52 different countries, dealing exclusively with matters of IP.

204 See Primo Braga, supra note 9, at 264.
207 Id.
Also, developing countries have traditionally mistrusted the GATT and called it a "rich man's club where the interests of the developed countries carry the day."\textsuperscript{208} Much of this attitude comes from the Kennedy Round in the 1960s and the emergence of the United Nations Conference on Trade and Development (UNCTAD) as an institution that is more receptive than the GATT to the special interests of the developing countries. The results of the Kennedy Round did not satisfy the developing countries as little was done to non-tariff barriers of which they had complained, and tariff cuts were mainly on goods of little interest to them.\textsuperscript{209} This demonstrates that they lacked the bargaining power to negotiate concessions of interest to them and that their interests were not adequately reflected in the results.\textsuperscript{210} Therefore, the GATT has been accused of being a tool of the industrialized countries in their effort to maintain and entrench their domination over world trade and the developing countries. They have historically gravitated to WIPO where they hold a greater degree of control.\textsuperscript{211}

\textsuperscript{208} See Gadbaw & Richards, supra note 12, at 47.  
\textsuperscript{210} See UNCTAD, id.  
\textsuperscript{211} See Gadbaw & Gwynn, supra note 86, at 49.
6. BALANCING OF INTERESTS: A PROPOSAL

If, in principle, international law permits both the developed and the developing countries to adapt IP rights to their respective economic strategies, the problem becomes how to achieve satisfactory relations between the two groups of states without sacrificing the rights of the IP owners and without derogating from the basic principles of economic sovereignty discussed before.212

The GATT offers the possibility of creating a package deal of give-and-take that is satisfactory to both the sides.213 This problem can be addressed successfully in GATT by taking into proper consideration the concerns of the developed countries, in terms of diminishing the frustrations of the economic return, and developing countries, in terms of their national interest and economic development needs. Absolute acceptance of each group's perspective yields a significantly different result both with respect to the norms to be observed and the obligation to compensate for changes. In such circumstances, where there is no global consensus over the issue of IP protection, the task of the trade negotiator in GATT should be to establish a compromise perspective. The GATT should be seeking a mutually advantageous balance of legal rights and obligations.214

213 See Joos & Moufang, supra note 206, at 898, 902.
The developing countries face the need to devise IP systems in response to international requirements, on the one hand, and to their own development goals, on the other. The task is difficult, because most of these countries have not yet reached levels of technological development that would permit them to extract the full benefits obtainable from these systems in the immediate future. However, greater benefits may be expected as their economies grow and the technological infrastructure develops.

6.1 MINIMUM STANDARDS FOR THE IP CODE IN GATT

Whether a new GATT code on IP will be effective in reducing piracy and losses to the developed countries' IP owners depends on two factors: membership and content. A code with high standards and procedural requirements will be of little use if it is signed only by a few developed countries like the U.S., the EC and Japan, which already have high standards of IP protection. It will be very hard to get the major pirating countries to sign it. Therefore, such a code would miss the aim of the GATT negotiations. For this reason, a code adopting minimum standards for protection of IP should be codified under the GATT. These minimum standards should be derived from synthesis of existing effective national laws and international treaties and conventions for the protection of IP rights. The GATT members should come to a consensus on what areas of national laws, treaties and conventions function effectively in the various areas of IP and bring them together into one code. For example, the U.S.,

215 See Deborah Mall, supra note 27.
216 See GATT FRAMEWORK, supra note 5, at 36.
the EC and Japan, in their proposals to the GATT working group, agree that Berne Convention should be adopted as a minimum standard for the international protection of copyrights.217 This is acceptable to the developing countries as well because the protection standards in the Berne Convention are in accordance with their developmental needs. Most of the developing countries are members of this Convention.218

The code should be “open”, that is, it should be a living document that automatically covers new forms of technology or creativity.219 The EC Commission suggested a “review clause” for instant coverage of new forms of innovation, providing for frequent review and renegotiation.220 The drawback is that it would create a continuous problem of convincing unwilling countries whenever protection is sought for a new technological innovation.

6.2 CONCESSIONS BY THE DEVELOPED COUNTRIES

The developing countries are not prepared to take action with regard to IP which would further destabilize their already unstable economies, or to impose short-term economic hardship on their citizens in exchange for what the developed countries regard as the long-term economic benefits of IP protection. In order to persuade the developing countries to take action, the GATT members must work out a combination of concessions and compromise acceptable to all signatories, if they intend to achieve a true

217 Id.
218 See Figure 1 on page 16-17 of the text.
220 See Europe Documents No. 1522, at 3 (July 29, 1988).
solution to the trade-related problems of IP, keeping in view that the unilateral trade sanctions are not most effective and can create a significant risk of similar unilateral action against the developed countries. See supra notes 150-55 and accompanying text.

Immediate and strict compliance with new IP standards would result in painful economic dislocations that could be remedied through a transitional approach. This approach of gradual upgrading of IP protection would permit them to bring their national laws into conformity with the new norms and would ease economic dislocation effects.

The developing countries that make concessions by improving their protection of IP can be offered concessions in areas of interest to them. There are a variety of concessions that can be made by the developed countries in exchange for a GATT agreement on the protection of IP. These range from concessions with respect to compensation due for IP itself, to concessions in other trade areas. A package of concessions may be most appropriate.

As discussed earlier, the developing countries should be allowed a transition period to bring their national laws into step with the GATT standards. In this way, the developing countries can sign on to the framework requiring adherence to minimum standards within a reasonable amount of time.

The industrialized countries can offer technical and financial assistance for the creation or improvement of an IP enforcement infrastructure. Such assistance could be targeted on the governmental

221 See supra notes 150-55 and accompanying text.
222 See GATT FRAMEWORK, supra note 5, at 27.
223 Id. at 39.
infrastructure or be industry-specific and could be provided through WIPO.\textsuperscript{224} The developed countries could also work closely with the World Bank and the regional development banks to promote lending programs for developing countries that demonstrate improved protection of IP.

The other forms of concession would be the granting of certain short-term privileges to the developing countries. This might involve granting of reductions by developed countries on standard royalty rates for some period. Along the same lines, the developed countries, especially the U.S., could consider softening its stand on compulsory licensing.\textsuperscript{225} An arrangement in which the IP industries are compensated for wealth transfers by national tax incentives would help to channel the energies of the market into the creation of a viable concessionary structure.

Other concessions would involve granting more favorable terms in GATT negotiating areas other than IP. GATT's primary function is to facilitate the trading of concessions among various areas under negotiation.\textsuperscript{226} As all the fifteen areas under negotiation in the current round "can be seen to form a single, multifaceted but interrelated pattern of general business ..... regulation,"\textsuperscript{227} compromises with regard to some should facilitate agreement with regard to others. This "package deal effect" of the Uruguay Round is a good hope for all proponents to solve the IP problem in GATT.

\textsuperscript{224} Id.
\textsuperscript{226} See O. LONG, LAW AND ITS LIMITATIONS IN THE GATT MULTILATERAL TRADE SYSTEM 98 (1985).
The developed countries should let the developing countries determine the level and scope of protection of IP rights “in particular sectors which are of special public concern such as health, nutrition, agriculture and national security.” The governments of developing countries believe that knowledge that can cure illness and feed populations should be in the public domain and not be traded as private property. The most politically volatile issue included in the negotiations appears to be the extension of patent protection for pharmaceutical products.

The developed countries should develop plans for direct investment earmarked for technological development in the developing countries. This would be of particular interest to the developing countries as increased foreign direct investment not only provides the developing countries with foreign exchange, but it also creates jobs and an industrial infrastructure for future growth, and technology. The developed countries could, in essence, invest a portion of the benefits they would gain from the elimination of piracy. They could support the R&D programs in the developing countries if the innovations which result from the R&D would receive adequate IP protection. Such commitments might have a very significant impact on the attitude of the policymakers in the developing countries.

Gadbaw and Richards suggest that the IP owners in the developed countries could provide licenses to the former pirates at a free market rate agreed to by both governments. This would enable the pirates to continue to produce in the same line of business and ultimately piracy would be

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229 See Gadbaw & Richards, supra note 12, at 28.
eradicated. This approach could cover up the problem of increasing unemployment subsequent to the introduction of IP protection.

An area not specifically “trade-related” but offering considerable promise is that of developing country debt reduction. One of the conditions of debt relief could be commitment to enhance protection for IP. Some developing countries could possibly be enticed by offers of some kind of a “Brady Plan”, on accession to the GATT code. Another substitute would be increased loan or other financial guarantees within the World Bank or the International Monetary Fund for those countries that demonstrate enhanced IP protection. A large number of countries could be included in a program that involved the trading of debt for enhanced IP protection. The USTR, Carla Hills, has now apparently signalled a willingness to condition debt relief for Brazil on improved IP protection.

The industrialized countries may continue to condition the grant of tariff concessions to the developing countries under the GSP program on adherence to an IP agreement. The U.S. grants benefits to a number of its trading partners on a case-by-case basis. However, this remedy could prove effective only against those countries who rely heavily on the U.S. for their exports.

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230 Under the so-called “Brady Plan”, the industrialized countries had made over $30 billion in pledges to the developing country debt-reduction programs as of June 1989. Japan alone had pledged a contribution of $4.5 billion to the World Bank as of that date. See Japan Pledges $2 Billion for Debt Crisis: Country has Already Committed to $4.5 Billion to Brady Plan Initiative, WASH. POST, June 14, 1989, at 2, col.4.


233 See supra notes 132 and 144 and accompanying text.
To encourage adherence, the GATT code on IP protection would be in effect only among the signatories to the GATT code, who would enjoy the benefits and rights thereunder on a most-favoured-nation basis. These benefits, rights and obligations under the GATT code would automatically be extended fully and equally only to the signatories to the GATT code. A signatory would be afforded "national treatment" of exports in the country of any other signatory nation.\textsuperscript{234} Also, improved market access can be offered as an incentive to sign on to the GATT code on TRIPs.

A code of conduct could be laid for the multinational enterprises in different countries, in order to prevent the abuse of concentration of economic power. Multinational enterprises could be obliged to respect the antitrust laws of their home state if the antitrust laws of the host state are not fully developed. This would put an effective check on the misuse of their market power due to enhanced IP protection in the developing countries.

A survey of 50 developed-country firms (U.S. and European) that were involved in the industrial fields of chemicals, electrical products and pharmaceuticals and that had transferred technology to firms in Latin American countries, concluded that these firms made "almost no contribution to local R&D operation" in Latin America.\textsuperscript{235} The code could require the multinational enterprises to increase R&D in the developing countries for certain endemic problems and for the development of technological infrastructure.

\textsuperscript{234} See GATT FRAMEWORK, supra note 5, at 38.
\textsuperscript{235} See Oddi, supra note 168, at 848; Greer, The Case Against Patent Systems in Less Developed Countries, 8 J. INTL L. & ECON. 223 (1973).
The code could provide for exceptions to the least developed countries by giving them more time and exemptions from the obligations of the code. In the longer run, these countries would be subject to code obligations and the developed countries could help them with the installation and working of the 'IP protection' infrastructures.

The Basic Framework of GATT Provisions on IP, which encompass the views of the U.S., the EC and Japan, sets out the dispute settlement and enforcement mechanisms which should be adopted by the TRIPs negotiators in the GATT. It suggests that a specialized dispute settlement mechanism should be included in the code to address only IP rights infringement which should be based on the current dispute resolution mechanism found in Article XXIII of the GATT.236 There should be provisions for the formation of a single panel composed of technical experts within the GATT who can be assembled easily when the dispute arises. This mechanism would be brought into effect by the initiative of the individual parties; a private party would request its government to use the TRIPs dispute resolution mechanism.237

Three enforcement mechanisms set out by the GATT Framework to ensure and maintain the agreed upon minimum standards are: First, the owners of IP rights in signatory countries would be able to stop the infringing imports at their borders.238 Second, the owners of IP rights in signatory countries, when confronted with the infringing product that has been produced locally or abroad, would be able to obtain remedy through the

236 See GATT FRAMEWORK, supra note 5, at 31.
237 Id. at 32.
238 Id.
local courts.\textsuperscript{239} Third, where such owners are unable to obtain redress through the local courts, their own government will be able to invoke the dispute resolution mechanism of the GATT code.\textsuperscript{240} This three-tiered enforcement structure would be able to resolve the international disputes arising due to the IP problem.

In sum, a variety of concessions can be made available by the developed countries to the developing countries in order to obtain an IP agreement. An approach using multiple instruments may have the greatest prospect for success.

\textsuperscript{239} Id.
\textsuperscript{240} Id. at 35.
7. CONCLUSION

While the proposals discussed so far in the GATT negotiating group have given prominence to the granting of higher protection to the IP owners, the aspects related to technology transfer and diffusion, are virtually absent from the current debate. Discussions under this approach would have to address also the issues which are of particular interest to technology importing countries. The reinforcement and expansion of IP protection in developing countries is not likely to create, of itself, more favorable conditions for technological development or growth in international trade. Free flow of important technology and information is imperative for the technological growth and economic progress of the developing countries which would ultimately enhance the world trade and economic prosperity of all the nations. The interdependence of the prosperity of the developed and the developing world is well stated by the late Stephen Ladas, who was one of the leading supporters of the International Patent System:

Failure to extend the benefits of technology and science to large parts of the world is not only morally wrong, but in the long

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241 Following issues are of special interest to the developing countries:
(i). Remedies for insufficient disclosure of the invention, (ii). Remedies for lack of use or inadequate use of patented inventions, (iii). Avoidance of unjustifiable or abusive restrictive practices in licensing agreements, (iv). Provisions for the facilitation and promotion of transfer of technology to developing countries, (v). Exemption from patentability of certain subject-matter: e.g., plant varieties and animal breeds, foods and drugs and processes relating to their manufacture, (vi). Limits on the scope of protection of computer programmes under copyright law etc.. For details, refer to chapter 4 of the draft international code of conduct on the transfer of technology (TD/CODE TOT/47).
run it denies to the total system its ultimate fulfillment.

Prosperity like peace is invisible. The accelerated pace of the West’s own economic progress could be nullified by the failure of the rise in the standard of living of the largest part of the world.242

Finding an acceptable balance between public and private use, between the sharing of knowledge and the marketing of information, have never been easy. GATT disciplines on TRIPs are not a panacea to the IP problem although they seem to be a worthwhile goal in the long run. Recognizing that the growing alternatives of unilateral and bilateral actions can easily backfire and also lead to the contamination of other negotiating areas in the GATT negotiations, many developing and developed nations have now joined in the current GATT endeavor to solve the IP problem. The increasingly flexible attitude of the developing countries suggests that a final consensus lies within reach, provided that their special needs and requirements are taken into account by the proponents of stronger IP rights protection.

The challenge for developing countries is great, as is the responsibility of the international community to ensure that the new rules do not deepen the present economic and technological asymmetries.

The outcome of the Uruguay Round is still uncertain. Although significant disagreement persists, especially in a North-South context,

considerable progress towards a workable agreement has already been made. If further progress is made and extended to TRIPs, a stronger and more harmonized IP system seems likely to emerge. However, the result is not to be expected tomorrow, the movement will be evolutionary rather than revolutionary.