"Patent Protection and Its Role in Promoting Invention, Innovation, and Technological Development"

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Introduction

At the beginning of the Uruguay Round of the GATT in 1986, the mandate of the negotiating group on intellectual property was to discuss "the trade-related aspects of intellectual property rights in the context of promotion of growth and development" a formula which seemed to leave the both the economically developed nations and the economically developing nations plenty of negotiating room. From the very beginning, the focus of the developed nations (particularly the United States) in the negotiations was upon strengthening standards of legal protection for intellectual property across the board. That was not the view of the most articulate voices in the developing countries -- particularly Brazil and India. For them, the key issue was the latter part of the mandate, the one providing them with "access to technology" -- not "intellectual property rights."

The debates over the scope of intellectual property protection within the United States, which play government policies which foster the creation of intellectual property by stimulating investment in R&D and rewarding creativity against those which foster the rapid diffusion of technology through commercialization, widespread adoption and ultimately, standardization, and which stimulate future innovation by competitors within the country, are endless and complex. By contrast, the terms of the intellectual property debate as posed by the less developed nations in the early days of the Uruguay Round were straightforward and simple: how can the developing nations get the best access to technological innovations made elsewhere -- that is, in the developed countries. Patent protection was an issue for the developed world -- not the developing one. The stance of Brazil and India, among others, on IPRs was something like the following:

- rigid IP protection impedes access to latest technological innovations, and therefore restricts the participation of developing countries in international trade;
- "abusive use" of IPRs distort international trade;
- what is "trade-related" about intellectual property rights is the "restrictive and anticompetitive behavior of the owners of intellectual property" and not the behavior of commercial interests in developing countries or that of their governments;
- patent systems can have adverse effects in critical sectors such as food production, poverty alleviation, health care and disease prevention, and have a dampening effect on the promotion of R&D in developing countries and in improving their technological capabilities;
- systems for the protection of IPRs are by nature "monopolistic" and sovereign nations should be free to attune their own systems of intellectual property protection to their own needs and conditions.

According to this view, a TRIPs agreement which was to be the "best of all possible worlds" for the developing nations would have been one in which barriers to

market entry created by the "exclusive rights" granted to the owners of intellectual property would fall, the sacred principles of national sovereignty and freedom to adopt lower standards of intellectual property protection would be preserved, and the market to which entry would be afforded would now be a global one. That is not the way it worked out, however. The "minimum standards" for the protection of intellectual property eventually enacted into international law in the TRIPS Agreement are significantly higher than the norms of substantive protection in effect in many developing nations prior to its adoption. What, then, if anything, is there of advantage in strengthening patent protection for a developing country attempting to catch up?

Extrinsic benefits of stronger patent protection emerging from the TRIPs Agreement

Reduction of Trade Conflicts and Access to Markets

From an academic and theoretical perspective, the logic of granting longer patent terms or strengthened patent subject matter protection in a comprehensive international intellectual property regime in exchange for reduction or elimination of quotas on cotton apparel or bananas, for example, may be open to question. But for most developing countries, it was the attraction of greater market access in Europe, North America, and Japan for such commodities and raw materials which sufficed to coax them to enter an overall Uruguay Round agreement -- notwithstanding the reservations they may have had about the sub-agreement on intellectual property. This is to say that acceptance of the TRIPs agreement by developing countries in the context of their accession overall to the full panoply of Uruguay Round efficiencies was deemed to be worth the bargain. But as the Members of the WTO has moved from the stage of negotiations to the mature stage of implementation of the TRIPs agreement, are there other advantages for developing nations to strengthen patent protection beyond minimal compliance with TRIPs?

Minimal Compliance with TRIPs as a Strategy

Some scholars urge that the minimum standards of TRIPs are in fact optimum standards. For WTO Members, patents are to be available by 2000 in virtually all fields of technology. Compulsory licensing of patented subject matter is sharply curtailed by Article 31 TRIPs, and the minimum term of protection for patents is no less than 20 years from the filing date. Article 27 of TRIPS provides only for exclusion of protection for animals and plants "other than microorganisms." Does that mean that microorganisms are to be protectable per se? Or does it mean that microorganisms will be protected only for an industrial process that generates a specific product?

TRIPs provides that patent rights shall be enjoyable "without discrimination as to the place of invention." Does that eliminate any requirement to work the patent within a developing country? The TRIPs agreement does not explicitly say so.

Moreover, the areas of enforcement and administration give more than a modicum of "wiggle room" to a developing nation intending to postpone if not undermine inevitable compliance with TRIPs. TRIPs Article 41 stipulates that member countries are not obliged to put in place a judicial system for the enforcement of intellectual property rights "distinct from that for the enforcement of law in general." The Agreement does

not create an obligation for a country to devote special resources to intellectual property enforcement. Due to the scarcity of resources, implementation of an expensive intellectual property enforcement and administration system shall not take precedence over allocation of resources for alleviation of poverty, improvment of health or welfare, or upgrading the physical infrastructure of a poor nation, no matter how parlous the condition of its system of law and administration may be.

Intrinsic advantages of a strong patent law in a developing country after TRIPs

Beyond alleviating trade conflicts, and notwithstanding the loopholes in TRIPs which allow developing nations to delay, there are sound reasons to comply fully with TRIPs (or go beyond TRIPs) in enacting strong patent laws. These include attraction of investment, access to the latest technology, general empowerment, and reduction in incentives for the best and brightest of its people (particularly young people) to migrate to wealthier nations.

Stimulation of Investment Which Does not Flee

Does improving the level of intellectual property stimulate foreign direct investment? Recent and not so recent studies which have sought to answer the question one way or the other do not present a full or very satisfactory answer, but at least the issue has been joined. Stronger global protection of patents is deemed beneficial to the developed countries whose economic interests are impacted by economic activity in developing ones. If stronger patent protection is intrinsically good for developing nations, it is surely only one among many factors: cost conditions, market size, human capital (both in terms of cultural cohesiveness and education), political stability, and macroeconomic conditions all affect decisions to invest in a developing nation. Any firm which does not invest aggressively in the rapidly growing developing world today is making a serious blunder.

The TRIPs Agreement came into effect in 1995. According to the IMF, 40 percent of foreign direct investment in 1993 ($70 billion out of $175 billion) flowed into developing countries. As recently as 1990, FDI in developing nations was only $40 billion out of a total of $240 billion -- a mere 16 percent. Much of the investment in 1993 was into markets which had "inadequate" patent protection prior to TRIPs, such as Mexico (over $20 billion in 1993, southeast Asia ($20 billion in 1993) and China ($27 billion in 1993.) Obviously, this investment was primarily due to factors other than strong patent protection.

But investors (and the investment bankers who back them) are notoriously fickle, as Mexico learned in 1995 and many nations of southeast Asia learned in 1997. If strong IP protection in a developing country does not equate to more direct investment by firms in the developed world, does it make it more likely that investments made will stay rather than flee? A 1994 survey of business executives in the United States by Edwin Mansfield of the Wharton School makes the point that, at least with regard to advanced technologies which are easily replicated, such as those in the chemical and pharmaceutical industries, those business executives polled subjectively believe that weak IP protection is an "important factor" in investment decisions -- particularly with

regard to the transfer of advanced technologies or for establishment of R&D facilities. Coming to a different conclusion, a 1993 study of the same issue by Carlos Maria Correa of the University of Buenos Aires (UNECOSOC 1993) asserts, with no empirical basis, that U.S. companies invest in R&D only in developing countries which also invest in R&D -- particularly in countries of southeast Asia, with little regard to the present strength of their IP protection. It further asserts that strong patent protection in developing countries will lead not to more technology or more investment -- just to more trade (and concomitantly higher transfer payments to the technology-producing developed countries.) Which view is correct?

Of the countries which most suffered capital flight in 1995 (Mexico) and 1997 (Malaysia, Thailand, Indonesia, South Korea), recovery has been swift in Mexico and South Korea and much slower elsewhere. Coincidentally, it is Mexico and South Korea which had enacted and implemented the strongest patent laws among the group.

Access to Technology

Are patents monopolies or just another form of property rights? Historically, the reasons for the creation of patents for invention in England were starkly different from those in the United States In England, the "Statute of Monopolies" of 1624 was an attempt to limit the abuses of privilege and power by the ruler. Two important sections of that Statute read as follows:

> "that all monopolies and all commissions, grants, licenses, charters, and letters-patent, heretofore made or granted, or hereafter to be made or granted, to any person or persons…whatsoever, of or for the sole buying, selling, making, working, or using of anything, within this realm or the dominions of Wales, or of any other monopolies" and all licenses to do anything contrary to law, or to confer authority on others so to do… "are altogether contrary to the laws of this realm, and so are and shall be utterly void, and of none effect, and in no wise to be put in use or execution."
> …
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> VI. "Provided also, and be it declared and enacted: That any declaration before mentioned shall not extend to any letters-patent and grants of privilege, of the term of fourteen years or under, hereafter to be made, of the sole working or making of any manner of new manufactures, within this realm, to the true and first inventor and inventors of such manufactures, which others, at the time of making such letters-patent and grant, shall not use, so as also they be not contrary to the law, nor mischievous to the state, by raising prices of commodities at home, or hurt of trade, or generally inconvenient; The said fourteen years to be accounted from the date of the first letters-patent or grant of such privilege, hereafter to be made; but that the same shall be of such force as they should be, if this act had never been made and of none other."

As was the case then in England, abuse of the practice of giving particular incentives to industry is prevalent now in many (but surely not all) countries, some of

which are countries where patents for invention are disfavored and ignored. Concessions or bribes secure valuable rights to manufacture, or to develop mineral, lumber and other natural resources, franchises for hotels or other services, government building or highway construction contracts, "public" utilities, tax holidays, or "insider information" in securities markets. These concessions are sometimes characterized as export or development subsidies, but sadly, are sometimes granted not at all on the basis of public policy but rather as paybacks to the friends and relatives of whatever group wields power. This is a reversion to the situation in the early days of English monopoly grants, which were abolished under the pressure of new economic modalities in Western Europe 375 years ago under conditions of trade liberalization and the imperative of free competition, The English historical example would seem to except and allow patents for new inventions notwithstanding prohibitions against such abusive practices. But in fact, patents are often disfavored for the very reason that they are subject to the rigorous objective tests of patentability standards -- not the product of cozy social and economic relationships -- and may in fact impede such relationships. To revise an old adage, such a policy choice, from an economic development perspective, amounts to "throwing out the baby and keeping the bath water!"

By contrast to the history of patent law development in England, in the United States the patent right was not pursuant to a limitation on the state's power to grant monopolies but a recognition of the right of the inventor, married to the public policy objective of promoting technological and cultural progress. The private right was recognized for its social utility.

In the Federalist Papers No. 42, which preceded the United States Constitution, it is stated: "The utility of this power will scarcely be questioned. The copyright of authors has been solemnly adjudged in Great Britain to be a right at common law. The right to useful inventions seems with equal reason to belong to the inventors. The public good fully coincides in both claims with the claims of individuals. The states cannot separately make effectual provision for either of the cases, and most of them have anticipated the decision of this point, by laws passed at the instance of Congress."

U.S. courts have long stated that patents are a "negative right" to exclude, not a "positive right" to make, use, or sell. While the patent contains within its terms the right to exclude competitors from engaging in economic activity, U.S. courts have insisted that this right is fundamentally different from a monopoly right -- not related to or an extension of it as in the English historical example. As stated by the U.S. Supreme Court, "monopolists have the sole right to buy, sell, or make and others are deprived of a preexisting right to buy, sell, or make. The patent grant gives the patentee only the right to exclude others; his own right to practice the invention may be subservient to another patent. Moreover, since novelty is a requisite of patentability, the grant does not exclude the public from a pre-existing right." Standard Oil v. The United States, 221 US (1911)

Likewise, in United States v. Dubilier 289 US 178 (1933) "[t]hough often so characterized, a patent is not, accurately speaking, a monopoly.... [t]he term monopoly connotes the giving of an exclusive privilege for buying, selling, working or using a thing which the public freely enjoyed prior to the grant. Thus a monopoly takes something from the people. An inventor deprives the public of nothing which it enjoyed before his

discovery, but gives something of value to the community by adding to the sum of human knowledge.... He may keep his invention secret and reap its fruits indefinitely."

Patents may be implicated in anti-competitive behavior, such as where control of a foreign patent is included in an arrangement to fix prices or to control availability of product. But competition laws and patent laws go hand-in-hand, and rarely collide with one another within a single jurisdiction. As the Court said in Atari Games Corp. v. Nintendo of Am., Inc., 897 F.2d 1572, 1576 (Fed. Cir. 1990) "[T]he two bodies of law are actually complementary, as both are aimed at encouraging innovation, industry and competition... There may on occasion exist... a fine line between actions protecting the legitimate interests of a patent owner and antitrust law violations. On the one hand, the patent owner must be allowed to protect the property right given to him under the patent laws. On the other hand, a patent owner may not take the property right granted by a patent and use it to extend his power in the marketplace improperly, i.e. beyond the limits of what Congress intended to give in the patent laws. The fact that a patent is obtained does not wholly insulate the patent owner from the antitrust laws." "The patent is a 'shield' to protect an invention," the Court went on to say, "not a 'sword' to eviscerate competition unfairly."

This typically American viewpoint toward patents was illustrated in an extreme example by Robert Nozick in his book, *Anarchy, State, and Utopia* in 1974. This author tells the story of a medical researcher who creates a new drug to treat a disease. The researcher refuses to sell the substance unless exclusive individual control over the product is guaranteed. This, according to Nozick, he is entitled to do because the absolute condition of others is unchanged from what it was before the new drug was created. Nozick at 175-181

Over and above the questionability of this position in terms of its social utility, in the view of many this is the essence of injustice, since access to technology is blocked to those who cannot meet the researcher's price. But consistently, the courts of the United States, adopting the view that the patent right is a private property right to exclude others from what did not exist before, limited in time, have upheld just that view. The logic is undemonstrated, but the result is manifest. (As the saying goes, "the proof is in the pudding.") The system of patent rights, limited in time, "promote[s] the Progress of Science and the Useful Arts." There can never be access by anyone, rich or poor, to technology which is never created. As Abraham Lincoln, himself the inventor and owner of a patent, said, "patents add the fuel of interest to the fire of genius." The inventor, the persistent problem-solver, enjoys stable material conditions for creation of technology and the satisfaction derived from it, furnished by the investor, who assumes financial risk for unproven technology and reaps the financial reward for success. This is why inventors employed by corporations in the United States are not entitled share the profits of commercial success of their inventions: the corporation's inventors provides the "fire;" but it is the corporation's shareholders who provide the "fuel." The relationship between inventor and investor is symbiotic. In the race to new products, market competition creates the conditions under which property rights over technology breeds newer technologies to compete with that which came before.

General Empowerment

Much of the ideology of capitalist development stems from the ideas of Adam Smith. One of his most famous statements in The Wealth of Nations has to do with the value of property rights and their relation to civil government.

"The acquisition of valuable and extensive property, therefore, necessarily requires the establishment of civil government. Where there is no property, or at least none that exceeds the value of two or three days labour, civil government is not necessary. Book 5, Ch. 1, Pt 2.

Returning on this point to the issue of Article 41 TRIPs, should nations which do not have strong legal protection for property rights in general use that provision as a basis legitimate under international law to deny enforcement of patent rights? Or conversely, should they foster and encourage enforcement of intellectual property rights as a lever to create civil government and, by extension, a civil society? Are poverty, underemployment, and environmental damage legitimate reasons for excusing the non-establishment of a civil order based upon the rule of law and enforceable property rights? Or does the establishment of mechanisms for enforcement of patent and other property rights divorced from connections to state power create the technological modalities, financial instruments, and wealth to alleviate such conditions? Each society and its leaders owe it to themselves to face this conundrum honestly.

Stemming the "Brain Drain"

The United States is a nation peopled virtually entirely by immigrants. Over the past half-century, even the historically oppressed Hispanic-American, Asian-American, and African-American communities in the United States have made deep inroads into a citadel of economic power which was until recently the preserve of northern European-American (and originally Anglo-American) immigrants. The blessings bestowed on the United States by these immigrant communities have in some cases exacerbated the conditions of under-development in the other countries from which these immigrants have come. Many developing countries have suffered the hemmorhage of their "best and brightest" human capital drawn to economic opportunities in the developed countries. History has demonstrated that no racial or ethnic group has a monopoly on human creativity and initiative. In a world of increasingly fluid mobility, when a nation chooses not to foster the legal conditions under which its most brilliant scientists, its most inventive innovators, and its most resourceful entrepreneurs can flourish, independent of traditional social or political connections, it cannot prosper. An advanced education in a highly developed foreign country may be the most effective form of "technology transfer," but only if the talented student, once educated, makes the difficult decision to go home. At the core of global competitiveness in the new millenium is not cheap labor, raw materials, or even fickle capital, but prowess in science and technology and the concentrated potentiality of human ingenuity. For good or ill, the revolutions in international transportation and communications are unstoppable. A functioning patent system and civil government which enforces private property rights such as patent rights, though only ingredients and not the entire foundation of an innovative economy, can

enrich the soil for the growth of indigenous technological development in any country -- whatever its stage of development -- by stemming the “brain drain” of its most talented and productive people to opportunities elsewhere.