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## **Brazil and The Intellectual Property Issue**

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### **1. Introduction**

Intellectual Property Rights (IPR) involve the very basic instinct of paternity. IPRs relate to the primary notion of paternity between an author -- or an inventor -- and his work. Throughout childhood, one gathers fundamental notion about creativity, originality and, above all, the advantages derived from both.

The act of creation, as an inherent activity of human nature, has been considered by most of those who study human cultural relations and their economical, philosophical and juridical consequences throughout history.

Certainly, no intellectual work has ever been produced without some concern about its originality or about the personal benefits resulting from it. Historically, even when authors disregard the economic benefits of their work, they are yet still concerned about prestige, esteem and honor.

As far as anybody knows, copyrights and patent protection arose from the authorship idea. Both did not acquire significance before the written word and it did not arise until one and a half century after the invention of the press, about 1455 AD ( ) ( ). The idea of trade secrets, nevertheless, is ancient, and relates, for example, to the Persian rug makers, as a kind of protection to their exclusive product. The contemporary idea of Geographical Indications protects their peculiar product, nowadays.

Interestingly, intellectual protection related to inventions preceded the industrial revolution and the invention of the press().

Thenceforth, and until the last quarter of the 19<sup>th</sup> century, an absence of effective communication systems and the non-existence of a market economy prevented the 'useless' idea of a protection system (). The purpose of this paper is to demonstrate how the thesis of a weak IPR system corresponds to the fight against an international open market tendency, repelling any possibility of an increasing innovation process, technology transfer, technology development and innovation, as occurred happened in the former stage of the world economy

The consequences were obvious. The protection failure prevailed in association with the creation of futile work. *Research & Development* was frequently a repeated process, as in discovering something or improving a given condition.

It is verisimilar to imagine how many times different inventors who never knew each other reinvented the wheel(). Yet nowadays, when IPRs constitute sophisticated systems, it is possible for an inventor not to be aware of another earnest contemporary development of the same invention.

The main contemporary IPR issue, at the international level, is not a mere question of fairness on the adoption of a strong IPR system. Self-determination is the key to approaching the matter. If we extend the expression -- self-determination -- for the international level, we will begin to discuss *sovereignty*. Any kind of 'moral' or 'ethical' approach to this subject will lose meaning and transmute to economical and political request, in the wide *spectrum*.

During the eighties, developing countries such as Brazil abandoned their import substitution policies. The establishment of continental blocks enforced the search for another way to deal with the international community, rather than trying to industrialize and grow up isolated.

Before -- and yet after -- the rise of multilateral agreements, there was no enforcement against counterfeiting other than economic sanctions. Such a penalty, on the international level, has been discussed in terms of policies and related to material rather than 'moral' options. An economic sanction can be held out by the 'counterfeiter' country, if it corresponds to the price it can afford in order to keep its insulated position.<not clearly expressed, but a good point [I've made changes and hope I have clarified the point]>

When one approaches the 'ethical' reasons for strengthening IPR, the attempt certainly leads to endless discussions about fairness in restricting the supply of essential products in developing countries, namely food, drugs and medical discoveries. Otherwise, there were, and still are, huge concerns about how the subsequent increase of domestic prices would oppose the welfare of the poorest segment in those developing societies. All of them, including Brazil, are still concerned about the matter, as we will further see. <c>You might make it clear that in these paragraphs you are reporting the public discussion which took place in Brazil over the last ten years>

Finally, the mere foresight of a huge displacement of domestic producers in favor of foreign business diluted the 'moral' issue and stirred a political discussion about advantages and disadvantages of entering the 'world-wide club'.

There is no more debate about open economies. The question is how to do it, and what is the safety rhythm to do it. The object is also considering how to conciliate interests and commitments in order to harmonize the developing countries' necessities with the developed countries' concerns.

According to Diebold, in reference to the International Trade Commission, the estimated U.S. losses for piracy total approximately \$40 to \$60 billion per year.

The purpose of this paper is to discuss the IPR, namely the so called Industrial Property, especially in Brazil, before the new world stage of the multilateral agreements, also considering the inter-regional blocks' formation and the near integration of the crescent economies. Also, we will address the Brazilian system, and discuss possible improvements and alterations that can lead it to attain the international standards of integration.

The world reached a mature level of concern about IPRs. This matter achieved the international multilateral trade level, including developing countries which policies formerly opposed the idea of strengthening their respective systems. This is the juncture of two different stages, when the present behavior will especially determine, in the short-run, the quality of a long future.

## **1.2. Historical Briefing of the IPR Issue in Brazil**

Despite the unquestionable failures in Brazil's IPR system, this great but poor country can be charged with many failures, but not negligence from the IPR issue! A thorough assessment provided by Sherwood(), shows how the country has attended major forums on the IPR matter, except for UPOV, the International Convention for the Protection of New Varieties of Plants.

Brazil subscribed the Berne Convention for The Protection of Literary and Artistic Works, on September 9, 1886, and the Paris Convention for the Protection of Industrial Property, on March 20, 1883. This fact, by itself, discloses significant early commitment to the subject. <d>I was told that Dom Pedro I himself was granted the first patent in Brazil. This must have been around 1840. There is a recent book about Count Maua which mentions this.[As long I could not quote the information, I opted for avoid the inclusion, and insert it later, after research]

Since the first half of the 19<sup>th</sup> century, the 1830 Brazilian Criminal Code was pioneer, in Latin America, when its legislator stated:

"...

*Art. 261.[precept] To press, to print, to engrave or to introduce any scripts or stamps which had been done, composed or translated by Brazilian citizens, during their lives, and yet during ten years after their death, if there's inheritors: **Penalty:** Lost of the whole volumes in author or translator's benefit, or, if there's no more available examples, the loss of the double value, plus fine in three times value..."*

The choice of a criminal enforcement ("Direito Penal") denotes the importance given thereupon to the matter. Brazil was, then, a mere Portuguese colony. The 'Court' had regulated the inventions' intellectual protection (Constitution from 1824, Art. 26), but had stated nothing, until that moment, about copyrights.

With no concern - - for the time being - - to the point and the reasons adopted, Brazil has had an active participation in all the important IPRs' forums, especially in respect to the developing countries interest.

Unfortunately, this 'active Brazilian participation' included the deliberately weakening of its IPR system, after the Second World War(). <e>You could mention that Brazil, like other developing countries, deliberately weakened its IPR system after the Second World War, in part because of the influence of thinkers like Raul Prebish and others<<I'd better avoid quoting Raul Prebish, as long as I have not this source available; I think of improve the work, later, including such information; Although, I included your suggestion, using the UN material.

Brazil has subscribed the Uruguay Round Agreements Act, promoted the prior reforms on its statutes and has been expected, like the other developing countries, to improve its judicial and administrative system, providing means for enforcement of rules stated in the Treaty ().

The general outline of the matter in this paper includes (1) copyrights, neighboring rights and software protection, (2) industrial property related to patents (including pharmaceutical products and *pipeline()*), trademarks, trade secrets (3) transfer of technology (its possibilities and necessities, in order to guarantee the maintenance of a future 'new good system'.

## 2.Copyrights - Introduction

In terms of authorship, the negative of 'paternity is the natural tendency, rather than the positive authorship attribution, as long as (a) copyright systems provide preventive protection to be discussed only in case of eventual dispute; (b) there are, of course, more "non-authors" than "authors"; (c ) the object of protection, is extremely subjective and personal().

Nevertheless, we will skip practical discussions, entering, briefly into the authorship issue, an extremely important matter for discussion.

Although there is no scientific evidence about Homer's authorship, tradition drove humanity to the belief in his existence and in his skill. One could say he has been given the benefit of the doubt, despite all the uncertainty around him(). However, the events surrounding Homer's authorship are considerable better than Shakespeare's fate.

The objectors of Shakespeare's authorship are not anonymous. Mark Twain and Sigmund Freud are among them. These regarded individuals, as well as others, vary between denying his existence, his name's spelling, his identity and even his honesty. But all of them, the so-called anti-Stratfordian, deny his authorship!

Those historical controversies are, in this paper, not important by themselves. They are important to support the value of authorship thesis, beyond the economic realm.

Postponing for a while the "moral rights" issue, the point is the significance that authorship sustains throughout time. Authorship not only tells us who produced something, but it also provides reference, context, and credibility to a considered source. The historic element is responsible for the significance of the artistic or scientific work.

These above reasons lead us to the preliminary discussion of copyrights: the public interest.

When James Madison stated "*Copyright is an instance in which the public good fully coincides with the claims of individuals*"(), he was personally reaffirming the principle written and introduced by himself in United States Constitution ("SECTION 8. The Congress shall have Power...To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries";)

From the public interest derives important universal characteristics of copyrights as, for instance, its limited protraction in time and its entrance to the public domain.

## **2.2.Copyrights, its Concept and Contemporary Stage**

Copyright is the protection of an author's right from counterfeit, misuse and exploitation. Such right is related to the way something is expressed. In this sense, copyrights don't protect the content of the idea, which is the object of other forms of IPR, like patents, industrial design etc.

Formerly, when the printer activity was still rising, copyrights were appropriated by printers, in part because, originally, printers themselves wrote the first works to be published, in part because they were the owners of the production means and responsible for sales and distribution, in a commercial way. As the press became a novelty, it was reasonable for people to think of the *media* as the main component of the new product. Author's income were the publishing by itself, and, at best, their own pride.

The first significant world regulation of the matter was the Berne Convention for the Protection of Literary and Artistic Works, in 1886. Berne was signed by 90 countries and was later organized by the United Nations, under direct coordination of the World Intellectual Property Organization (WIPO), since it was founding, in 1967.

Nonetheless, the conventions performed under WIPO administration -- meaning also the Paris Convention, on patent rights and its subsequent international rounds -- seemed not to achieve results in terms of uniformity and enforcement. There was significant lack of effectiveness not only between developed and developing countries, but even among developed countries themselves.

As we will further see, even after the TRIPs, those differences and inconsistencies between North-South and North-North were replaced by exemptions, in the fold of the agreement, confirming the feeling that it is better to have a 'contract' with many '*grandfathers*' than one single dispute.

The lack of uniformity and enforcement under the Berne Convention system brought the discussion – not without protest from the developing countries – to the multilateral trade agreements table.

The virtual dispute was the inadequacy of that instance, in the extent that WIPO was supposed to host such a debate. Of course, the real point was the agenda of developing countries and the difficulties they were supposed to face in adopting the IPR international standard.

GATT assumed the negotiation, after the intervention of international diplomacy (mainly Switzerland and Colombia), and after a long dispute between developing countries, as Brazil and India, and the developed countries (namely United States). The latter became naturally victorious in the task of bringing the matter to the GATT multilateral forum().

The so-called "GATT legislation (referring to the Trade-Related Intellectual Property Rights, often called TRIPs firmed in the Uruguay Round of the GATT negotiations) changed important aspects in copyrights.

### 2.3. The Moral Rights

An important aspect in which both forums diverge is the treatment given to the so called 'moral rights'. The Berne Convention reflected a European doctrine, in terms of copyright, while the GATT legislation reflects an American doctrine associated with the idea of exclusive patrimonial effects of copyrights. This philosophical difference was certainly one of the reasons for which United States did not become a Berne-adherent for more than a century. Only in 1989, did the United States sign the Convention.

For this reason, the GATT regulation disregarded moral rights, though it was not mandatory to the member countries to change the matter, in their own legislation. In fact, the device contented in the Berne Convention was formally excluded on the first part of TRIPs, Article 9(). Even though, such rule is not mandatory. Brazil, for instance, preserved the Berne Convention principle, maintaining the protection of the moral rights in its juridical system.

The 'moral rights' consists in the power of the author to restrain a publication that affects his honor, neglects his authorship, or yet distorts the content of his work. They are directly related to authorship and should not be confused with the patrimonial rights, directly related to copyrights.

Some hypothesis seem to be a problem, when they, in fact, are not. Consider contract-work, for instance. The employer is supposed to worry about a posterior change in the authors mind or his discordance with the use of the work. One could argue that such uncertainty means damage to the activity, namely that one who depends exclusively on such contracts, such as journals, artistic productions etc.

Suppose the authors decide to use this right and start hindering publications, for example, because of a dissension about the media or the environment in which his work will be disclosed. Such disputes are perfectly solvable in terms of indemnity and fines, according to the contract or the respective judicial decision.

The few dispute cases in this area represent a minus, in terms of losses, than the disregard for the principle, like the European Community, for instance.

Also, the parties (author and editor) may agree to a *hidden-name clause* in the contract. Although, it is not possible to obtain legal support in a clause adjusting, for instance, the transference of the authorship person to person.

There is no horizon for possible changes in this matter, at least in Brazil, in the extent that principles evolve mainly in the public interest for the source references and also in order to prevent future litigation, in such an overcharged judicial system. The moral rights protection established in the Berne Convention will remain in Brazilian law, despite of the content of TRIPs, Article 9, second part. <f>This paragraph is the key to this section of the paper. It should be expanded to help us understand you position better. Is this only a negative comment on the judicial system of Brazil? Or is there another reason for resistance to change? You need to explain why Brazil is different.>[I've done some changes, in order to clarify. I don't think the treatment to moral rights is a Brazilian deficiency; neither the US lack of 'moral rights' is a problem. The point is only the difference. Such difference - I guess - is not a problem, as explained below]

In any case, the lack of protection for moral rights is irrelevant, if compared to the high level of harmonization that the GATT/TRIPs granted to parties, including countries that were not Berne subscribers.

TRIPs addressed a roll of important questions related to (a) uniformity of time-protection, (b) the so-called 'related' or 'neighboring' rights, (c) software protection and (d) rental rights.

The member countries used not to have uniformity in regulating copyrights, before TRIPs. Some were not even subscribers of the Berne Convention. The Berne Convention adherents, overall, had not uniformity in reference to time of protection for copyright, as long as the convention provides only a guidance about the issue(). From now on, all the Parties rely on the same variation of the rules, according to the text of Berne, adopted in TRIPs (see note n . 7).

Regarding neighboring (or related) rights, TRIPs uniformed the obligation of the Parties, in that they shall, henceforth, regulate and protect the right of performers, producers of phonograms, and broadcasters. The main obligation of the Parties is to guarantee to those right-holders the power to preventing unauthorized public exhibition and broadcasting.

The Uruguay Round had an important result, which was the definition of copyrights as the adequate instrument of software protection. Thus the software producer is a copyright right-holder, into the TRIPs/WTO area.

## **2.4.Copyrights to Protect Software**

The eighties set the stage of never ending debates about the adequate form of IPR protection for computer programs. Copyrights seemed to be the easiest solution and patents seemed to be the most suitable option. Trade secrets were also considered as a possible option.

Nevertheless, patents are generally <often?>[No. I included some discussion, about the possibility of different systems, even patents, for software protection. My emphasis was just on the main tendency favorable to copyrights in software protection] > too rigorous and specific to be used by software 'authors', and trade secrets are extremely lack security. Universities claimed the use of patents as the best solution, leaving copyrights to authors (Benko, R. P., "Protecting Intellectual Property Rights: Issues and Controversies, 1987, AEI, quoted by Braga, 1990:52)

In any case, the generalized world 'copyrightability' tendency drove TRIPs to adopt this kind of protection as the adequate. However, neither 'pros' nor 'cons' offered an alternative solution.

The indication of copyright protection for software (TRIPs, Article 10) is not mandatory. However, there is no reason to believe that a sui generis protection would oppose TRIPs' rules. It is not feasible, the use of such kind of protection in software's case, in an institutional way. Although, there are some circumstances in which the patent should be allowed to protect the use of software. French law, for instance, allow the patent system, when the 'logiciel' (software) is included in a patentable product or process().

<g>You could note that even though TRIPs indicates copyright protection must be available for software, there is nothing in TRIPs which would prevent protection for software through the use of patents and trade secrets in appropriate situations.>[ok. See underlined text above]

Brazil enacted software protection in 1987(), specifying copyrights as the means of addressing software piracy.

Although software is under copyright protection, there is no doubt of its industrial characteristics. In Brazil, the National Institute of Industrial Property (Instituto Nacional da Propriedade Industrial - INPI) is responsible for filing software applications.

The United States provided the 1976 Copyright Act which protects, among others, the works first published on or after March 1, 1989, in any foreign nation that ratified the Berne Convention. In the United States, copyrights protect original works of authorship that are fixed in a tangible form of expression and that are included in the categories 'literary works', 'musical works', 'dramatic works', 'pantomimes-choreographic' works; 'pictorial-graphic-sculptural' works, 'motion pictures and audiovisual works', 'sound recordings' and 'architectural' works. Computer programs are included in the 'literary works' categories.

## 2.5. Rental Rights - A Developed Country's Dispute

TRIPs established the necessity of rental rights regulation. Japan is a leading user of this kind of commerce, which consists primarily of CD and Video rentals, rather than sales. Lack of compliance with the rule was against the American producers interest, who expected an effective prohibition of such practice. This market segment became particular discontent with TRIPs' results and, certainly, will try to reverse the rules, in the next WTO rounds.

## 2.6. How Do Copyrights Work?

Despite its importance, Copyrights are the easiest instrument of IPR protection. Copyrights practically works automatically. One is the author of a work, provided there is no proof against such authorship. It is appropriate to say that authorship, under the copyrights system, is positively presumed. In a dispute, for example, the file evidence implies a truth presumption, provided there is no strong evidence in the opposite way. In Brazilian law this kind of evidence is classified as a 'relative efficiency presumption proof', meaning an evidence which can be objected, if there is another stronger one().

In truth, there are some forms of preventing disputes, by providing an adequate agency to receive the 'deposit' of the works which are supposed to be protected. Such protection, nevertheless, corresponds to a mere evidence. Copyrights does not works as patents. Authors can choose where to file their work or even how to create an evidence. In Brazil, for instance, authors can file their work on the National Library (Biblioteca Nacional), if they are manuscripts, or in the Rio de Janeiro Federal University School of Music (Escola de Música da Universidade Federal do Rio de Janeiro), if they are musical compositions. In United States, the Library of Congress, in Washington, provides the most complete service in this matter.

Countries who are Berne adherents will not have to expend too much money to change some fundamental rules or to administrate some activities.

Further discussion about copyrights will later be addressed, in order to question the pros and cons of using the copyright system for software protection, as established in TRIPs.

## 3. The Industrial Property Issue

With the emergence of the post-industrialized world stage, especially after the rise of wide international blocs, IPR protection became, gradually, an object of huge concern, rather than a mere segmental issue.

The world trade economy can no longer stand the old protectionist system, which was turned to the simple 'internal growth' idea. Yet, the surge of MERCOSUL, for instance, constitutes the acknowledgment of such a truth. Even the member countries of 'free-trade-areas', 'custom-unions' and 'common markets' will be fated to collapse, if they intend on remaining an insulated policy.

Although, TRIPs was the *possible* result of the intensive efforts driven especially by the Developed Countries (led by the United States), to reach a reasonable level of uniformity. The agreement is far from effectively enhancing creativity, innovation, and Research & Development intensification.

Sherwood states that "*Its primary aspiration was to reduce trade conflicts. The stimulation of private investment for economic development was virtually ignored by the negotiating countries in that context*". In his opinion, the "TRIPs" agreement constitutes an effort toward establishing a common base, while the developed countries' systems represent a fertile ground for the innovation and toward the strengthening of most high levels of technology.

Actually, TRIPs means a significant step toward IPR system strengthening. Nevertheless, results will not appear immediately. From any given IPR system improvement forth, there is a long time since economic effects of such improvement start coming out.

As a very recent agreement, TRIPs provides both the parties (developed and developing countries) significant uncertainty, despite their hope for future high investment and high technology transfer patterns.

The uncertainties are related to innovation, domestic prices equilibrium, technology transfer, improvement in human skills development, research & development, industrial base shifting to higher levels, administrative costs to afford improvements, direct foreign investment etc., as consequence of the changes agreed upon.

One could subdivide two main levels of uncertainty, about the TRIPs results. The first are the specific and practical uncertainties, directly linked to the second: the general macro-economical uncertainties.

The former, consists in inquire whether developing countries will implement their respective changes in a reasonable period of time, whether they will afford the administrative implementation costs and even whether a success in such implementation will allow a future push toward higher standards of IPR protection, more consistent to the level of strongest economies, like NAFTA member countries reached.

The latter uncertainties have to do with technical unpredictability of questions, like: (a) will the success of TRIPs eradicate 'piracy' and 'counterfeit', diminishing the huge losses for the big high-technology producers? (b) Will TRIPs mean an intensification of the world market, improving developing countries imports of industrialized and high-tech goods (so, technology) with reduced prices? (c) Will developing countries benefit from an expected increase in foreign direct investment and high-technological improvement?

### **3.1. Practical Uncertainties**

As we have seen, of the severe criticisms against TRIPs by developed countries' firms we have, mainly, the extensive period of tolerance content in the 'Transitional Arrangements' (Article 65) for implementing protective measures.

Once the principles are established, national regulation failures, if they occur, are to be driven to the competent instance, as specified by the Article 65, in TRIPs (Dispute Settlement). Although it is possible, the international enforcement against the infringer - - it means, the worst hypothesis -- should not be anticipated, even theoretically, as long as the multilateral negotiation became, itself, an adequate and wise alternative to bilateral measures.

#### **3.1.1. Enforcement**

The most important way to achieve success in TRIPs' implementation is by providing administrative and judicial enforcement for national and foreign applicants. Enforcement should provide administrative and judicial decisions in reasonable timing, without corruption or abuse of power, or without prejudice or bias against foreign or national applicants.

There are no doubts about the expected administrative costs increase within developing countries, even in those who have, already, some complete material infrastructure, as Brazil, for instance. Nevertheless, most of these administrative costs will be largely offset by increased income from the corresponding fees. In fact, INPI counts on its own resources and its finance autonomy certainly assures it the possibility of adjusting its fees to the new reality.

In reference to the Brazilian schedule, Law n. 9.279, enacted on May 14, 1996, contains a specific device, according to which the Government is supposed to promote the means to assure financial and administrative autonomy to the Instituto Nacional da Propriedade Industrial (National Institute of Industrial Property), INPI. The Institute will, thus, be authorized to increase personnel, establish its wage table and improve its internal structure.

Besides, the law authorizes the Judiciary Branch to create specialized courts in order to provide IPR enforcement (Article 241).



Also, INPI has already published filing regulation for patent requests in pharmaceutical and chemical products, under the articles 230 and 231, from Law 9279.

Since 1995, many changes have been made in the Brazilian Civil Process and Criminal Law, in order to simplify, generally speaking, judicial enforcement. Such improvements have counted on the most specialized national attorneys and have brought considerable advantages to judicial procedures, mainly in terms of judge timing.

Thus, the Courts of Petty Cases ("Juizado de Pequenas Causas"), for example, were recently eliminated and substituted() for the Special Criminal and Civil Courts. The Special Civil Courts judge specific matters, not only considering, among other criteria, their low value. The Special Criminal Courts judge criminal offenses punishable with less than a year penalty. Both Courts are supposed to follow the principles of orally, simplicity, informality, celerity and processual economy. A lot of new rules were enacted, in Civil Process and Criminal Process, in order to accelerate and ameliorate judicial enforcement, in a general extent.

There is still much to be done, in terms of improvement, but even in those above related measures, considerable resources have been spent. It is important to underline how significant those expenditures are, considering the current stabilization administrative budget constraint policy, in the country.

Brazil is not the poorest member country among the developing nations involved in TRIPs rearrangement. How can it and other member countries afford the agreed changes and reach at least the minimum standards foreseen in the Uruguay Round?

Sherwood addresses the matter, by suggesting many alternatives and complementary means. Such mechanisms include: cost reduction measures such as the establishment of regional patent offices; an increase in the use of the Patent Cooperation Treaty (PCT) utilization; improving a suggested 'Reference System' by allowing a previous filing containing information to identify a 'notice of intention' subject to local specific grounds and administered against a regional fee payment, etc., Such proposals and the improvements suggested by the Author for developing countries system would certainly correspond to a sensitive cost reduction on TRIPs national arrangements.

It is not possible to anticipate, even in the long-run, a minimum approach from TRIPs standards to those related to the strong IPR protection systems. However, there is no doubt about TRIPs weakness, if compared to the patterns it could have followed. Primo Braga and Sherwood sustain such opinion.

Diebold anticipated the Developed Countries 'Industry Position', in 1992, demonstrating the failures and deficiencies contained in the text discussed. As those 'deficiencies' (long transition period for developing countries to implement changes related to pharmaceutical, agricultural and chemical products, contrary to their proposal of one year for all the IPR elements; lack of pipeline protection, etc.) prevailed, we can assume there is no contentment, in the sector, about the current agreed text.

### **3.2.Economic and General Uncertainties**

Eradicating losses estimated in hundreds of billion dollars by merely strengthening the IPR system is not verisimilar. Even if TRIPs were a strong IPR system, a large fraction of this incredible number, estimated about 1990, would persist, in the extent of neither NAFTA IPR system, for instance, is capable of eliminating piracy and counterfeiting.

But certain improvement is expected. It is conceivable even the transmutation from piracy to regular contractual exploitation, in some specific cases.

The first ground against adopting an IPR system, even TRIPs which contains too much exemptions and complacency, is the rapid increase in domestic prices. Developing countries know how the 'monopoly' enforcement is responsible for the imposition of the real cost.

Piracy is a comfortable activity. Pirates do not have to worry about R&D. Normally, they do not pay taxes. Also pirates do not risk, because they do not copy, for example, the worst market option. They can provide the cheapest supply of goods without concern for quality. If the product fails, the Trademark title-holder will 'pay the bill'.

Thus, there is no reason to expect an adequate and fair IPR system to provide better prices or even their maintenance in the piracy level.

It is historically known that in Italy, specifically, the extension of the patent protection to pharmaceutical products, in 1978, transformed a trade balance surplus of \$40.6 million, in that specific area, into a deficit of \$826,8 million, ten years later.

This is a good illustration of why there was so much resistance to absorb the new agreed model. Ten years cannot be called 'the short-run' and a billion cannot be called 'change'. Brazil, for instance, abolished pharmaceutical patents in 1949, and now, after almost five decades, reintroduced the protection. Of course, some difficulties are expected.

Considering the changes agreed upon, one should say that the worst option for developing countries, henceforth, is the dubious position. The target for developing countries, since TRIPs' adoption, should be investment in competition, skills improvement and system use from an active perspective, rather than remaining as a victim of the enforcement. Brazil, for instance, is the most industrialized country in Latin America and the most important manufactured goods producer beyond the MERCOSUR members. From 1970 to 1992, the amount of Brazilian machinery and transport equipment increased more than 400%. In the same period, the amount of "other manufactured goods" increased more than 200%, while the United States, in the same period and in both sectors, increased about 14%.

Such circumstances determine that Brazil must consider its productive potential, searching for benefit from the new rules, rather than merely following them. <j>Your discussion might be extended to include consideration of the increased manufacturing of products within Brazil that could be stimulated after patent protection becomes available. Your observation assumes that all products will be imported. In fact, there is already a good deal of manufacturing in Brazil, even before the law changed.>[OK. See underlined text]

The payments for new technology will certainly imply losses. Primo Braga quoted an estimate made by the Rural Advancement Fund International, in his study for the World Bank (1990:76). According to the survey, after the implementation of TRIPs, countries would be expected to pay, in royalties, 5% of the global trade, causing an increase of \$60 billion in the outflow exchange. Even considering those numbers -- which includes export losses, reduced profit margins, foregone research opportunities etc. -- as an overestimate analysis, they show, however, the dimensions of the problem.

The answer for developing countries to overtake the difficulties are in hope and work. Hope that the new model adopted implies a real increase in foreign direct investment, for instance, contrary to Nigeria's case where strengthening IPR resulted in nothing.

The United Nations concluded that foreign direct investment is not clearly related to IPR strengthening.

Notwithstanding such conclusions, there are serious indications that high-technology investments, through joint-venture capital and high-embodied and disembodied technology concern would be driven to less-risky areas, in terms of IPR. An accurate survey made by Edwin Mansfield (), for the World Bank, demonstrates that American, German and Japanese investors, in areas like pharmaceutical-chemical industry and machinery/electric equipment drive their investment priority concerning IPR as a relevant factor of decision.

Also, the effects of this trend, assuming it is consistent, is not clear. Depending on the developing country, it would be better to have an increase in innovation, creativity and technology independence. In some cases, purchasing technology would be better than encouraging a 'costlier indigenous substitute'.

### **3.3.Criticism**

Aside from uncertainties, there are severe criticisms from both the main North and South groups. The pharmaceutical and the chemical American industries disapprove the large period of time allowed for developing countries to adopt the changes (Article 65), while developing countries criticize the non-appliance of such complacency for the principles of 'Most-favored Nation' and 'National Treatment' (Article 65) and the restrictions in 'Compulsory License' (Article 31), to be approached further.

Doctrines, although, admit that, despite the defects, TRIPs represented a significant advance. It brought to the world stage at least the certainty of some technical and political harmony as a basis for constructing the ideal system, rather than absolute chaos.

### **3.4.Patents**

Patents are the most important instrument of IPR, as inventions require the most expensive R&D process. It protects the invention which attends to principles generally accepted in the international system.

The invention ought to represent novelty. It would be non sense to stimulate reprises. The patent system ensures rights, in one hand, but technological and economic development in the other. It must represent inventive activity. Thus, 'discoveries' are not covered by the system. Finally, inventions must be useful, in the sense that they must be industrially applicable.

Once the inventor concludes his work, he will engage the new task (sometimes more difficult than the first) of obtaining protection for his invention, applying for the right of exclusively exploiting it, for the extent of 20 years.

The TRIPs unification granted the advantage of protection in most parts of the world. The best guarantee to inventors, in order to file their application around the world, is using the Patent Cooperation Treaty, which has, as members, about 90 countries, including Brazil. The manner in which PCT works is further discussed in this paper, in 3.4.2.

#### **3.4.1.TRIPs Changes**

##### **a) patent grant criteria**

Some countries, as the United States, used to follow the date-of-invention principle, while others, as Brazil, followed the date-to-file principle, as the criteria to grant the patent. There are important consequences from each.

In the date-to-file system, the most important applicant concern is the eligibility to obtain the protection before filing. It varies from country to country, but, generally, the same rules about eligibility apply. The main question, in this area, is prior publishing. If the inventor neglects the time between the publishing of his invention and the request of the patent, he neglects the concept of novelty. Once published any matter about his work, the inventor has to file his application in the subsequent twelve months.

The former 'date-of-invention' system implies different rules. The 35 U.S.C. (a), (e) and (g), for instance, provided that a person was entitled to a patent unless there was some type of evidence of prior invention by another before the 'date of invention'.

The changes in GATT and NAFTA legislation established the possibility of foreign inventor interference, barring the American inventor from obtaining a patent, provided he (the interferer) has the prior invention and has not abandoned, suppressed or concealed it.

Except for transition questions, there is no longer a reason to worry about the 'date of invention' issue, nor the idea of 'prior art'. The United States adopted the 20-year term system and the date-to-file system.

Presently, the amount of time Patent and Trademark Office (PTO) will expend in examining the application is relevant for American applicants. The examination period, except for a maximum process delay of 5 years, is now included in the 20-year period.

### **b) provisional application**

Before applying for a patent, the inventor, in all the World Trade Organization countries (which adhered to TRIPs) is allowed to apply for a provisional patent. The provisional patent application, simply and cheaper, will not be examined in its contents, but will imply the priority for an additional year, with no prejudice to the 20-year period.

### **3.4.2. The Exam, Administrative Costs, the PCT**

The patent exam is precisely one of the most important issues. The difference between each country, in providing this kind of service is higher. The American PTO, for instance, count on a budget of \$300,000,000.00 a year, against \$ 30,000.000.00, provided to Instituto Nacional da Propriedade Industrial - INPI (National Institute of Industrial Property), in Brazil().

Sherwood() shows that Pakistan, a 100 million people country, has only four patent examiners.

Examiners are supposed to conduct studies and inquiries, about the invention, its applicability and the state of technic. 'State of technic' relates to the contextual invention status, when compared to others, in the world. It is easy to imagine that the examiners (a) are supposed to have large scientific and technical knowledge; (b) must remain up-to-date about this knowledge; (c ) should be available in quantity and quality enough to avoid excessive delays - implying serious damages for the applicant.

It is intuitive the huge future increase in costs for developing countries, in order to afford the changes, specifically in these kinds of measures. As we have seen, Brazilian plans include INPI personnel increase, among other measures.

In our point-of-view, the Brazilian administration should consider the possibility of expanding the use of the Patent Cooperation Treaty (PCT), signed by 86 countries worldwide. Brazil, for instance, adhered the Treaty in 1978, when there were, in a whole, 9.021 International Applications under the PCT. At that time, the number of Demands for International Preliminary Examination were 1.321. In 1994, the number of applications was 34.104, with 23.133 demands for preliminary examinations().

Under PCT rules, an applicant applies for simultaneous patent protection, by filing one international patent application. The applicant has also the opportunity of access and international search report, with relevant information about the prior art, and the patentability, itself, before incurring the costs of the patent procedure in his own country.

Besides the advantages granted by the PCT system, there is the reflexive benefit of relieving the national service of the national patent office. Developing countries, such as Brazil, should lead to increase and facilitate the use of PCT and similar alternative solutions, as proposed by Sherwood, quoted above. Increasing the national system in order to achieve the international standards sounds inviable, vis-à-vis the proportion of the developed available systems, as shown above.

### **3.4.3. The Ideal Life of the Patent 'Monopoly'**

Some studies about patent were made, considering its special monopoly characteristic. One assumes such nature ('special monopoly') in order to discuss patents optimal term of life. Nevertheless, it is important to remind that we are speaking of a certain temporary privilege. Besides, the exclusive right to the invention is granted to the inventor, but the market covered by his invention is not exclusive, as long as others can develop new ideas, around it. Those two exceptions make the difference between patents and the adequate concept of monopoly.

Such considerations are also extensive for other forms of IPR. Patents and copyrights, however, are the most examined elements, under this point-of-view, for their consequences are more relevant to society, than the exclusive use of a mark, for instance.

The amount of monopoly time stated in TRIPs and, even before it, in the Paris Convention or in the respective national regulation, about 17 or 20 years, is not an aleatory or arbitrary number. Many profound studies have been conducted on it. Most of them were considered in this sense.

Northaus was one of the first scholars concerned about the matter. He is noted for his famous studies about the less-important patent granting - - 'run of the mill' - - (see Note n° 7).

The studies provided by Northaus, Scherer, Barzel and others, despite the controversies about internal economic concepts, illustrate the relation between patent lifetime, costs of R&D, incentive to innovation and creativity, social benefits (surplus of production and also the technologic/economic gains post-patent).

The patent lifetime, thus, corresponds to the optimal period, in terms of innovation and production incentive, and, at the same time, to the necessary later transfer of the idea to the public domain, avoiding the perverse consequences of the definitive monopoly.

### **3.4.4. Considerations about TRIPs main innovations, in terms of patents: seeds and plants, pharmaceutical products**

Sensitive changes were established in the Uruguay round, resulting in the 'GATT legislation', as TRIPs are well known, in the United States.

Important (and costly) modifications were, thus, provided, as (a) necessity to improve the domestic enforcement system, (b) protection for plants and seeds, pharmaceutical and chemical products.

As we have seen above, Brazil has shown a true commitment in its judicial and administrative enforcement. There is too much to be done and even results of already adopted measures will only be witnessed in the long run.

Regarding the protection of seeds, plants and microorganisms, Brazil is among those developing countries which, according to William Lesser, exclude living organisms other than microorganisms from patent protection. The issue is brand new in the Brazilian legal system and, as established in Law n° 9.279, article 18, III and 'parágrafo único', only microorganisms are able to be protected by patent, provided they adhere to the principles of 'novelty', 'inventiveness' and 'industrial applicability'.

Brazil, thus, applies microorganisms to the patent system issue, contrary to those countries that adhered to the UPOV (International Convention for the Protection of New Varieties of Plants). Others, like Argentina and Chile, have not signed UPOV, but have adopted similar sui generis system, rather than patents.

In Lesser's opinion, the lack of protection to the matter in developing countries may explain their low performance, in terms of R&D, mainly because of the exclusive governmental research in the field. The private sector is frequently disinterested in the activity, in part because of such absence of guarantee.

Certain facts are unarguable: in Brazil, most of the research in the area is conducted by specialized government agencies, such as EMBRAPA, in a national branch, and the EMATERs, in the regional branches. Research levels, however, are extremely lower than expected of a country which has considerable agricultural boundaries to be expanded. Private researches are virtually nonexistent.

An important event in Brazilian administration is the agreement between INPI and Fundação Tropical de Pesquisas e Tecnologia André Tosello, in order to construct the "Base de Dados Tropical" (Tropical Data Base), which contains the most recent information in Biotechnology, and also provides information about the patent application process.

Even so, the effects of IPR improvement are far from what is needed to produce a result consistent with the size and regional importance of Brazil.

#### **3.4.4.1. Pharmaceutical and chemical patent protection**

Pharmaceutical and Chemical products are new and important elements object of patent protection in Brazilian system. New, in the extent of the matter is enacted from the TRIPs sign forth. Important, because of the controversy over timing and the way to achieve the changes.

TRIPs text provided a huge gap of tolerance for the developing countries to adopt the protection of patents. Also, there is no determination for developing countries to accept 'pipelines' as guarantee devices to protect or privilege pharmaceutical inventions. The comfort developing countries were given seemed to be compensation for their compliance.

The Brazilian pharmaceutical/chemical protection system, for instance, became regulated by Law 9279/96, articles 229 and 230, in transitory clauses. Brazilian law protects applications filed in foreign WTO countries, even for substances, materials and products gathered through chemical means or process, and the substances, materials, blends or nutritive products, chemical-pharmaceutical and medicines, and also their respective production and alteration process, provided that its object were not available in any market, with the patentee permission.

The worst legal clause contained in Brazilian Law is the Article 232, which allows Brazilian firms to benefit from the lack-protection, provided by the Article 230. The legal device established that the production and commerce existent before the new rule will remain in the same old circumstances, that is: the patent protection for drugs and chemicals are to be applied just henceforth.

As we have seen, the hardest criticism against TRIPs came from the pharmaceutical industries, that criticized the delay in compliance granted to the least-developed countries. The complaints are really reasonable, in the extent of some developing countries were given the possibility to count on more than ten years, according to Article 66, of TRIPs (Least-Developed Countries).

The facts are consistent with the profound survey provided by Edwin Mansfield, quoted above, who demonstrates that the Chemical-pharmaceutical sector is the most dependent on IPR protection, and the most concerned to the IPR issue, when considering their future investments abroad. See Mansfield tables, in Appendix IV, demonstrating the results in research turned to joint-venture investment and technology transfer to wholly subsidiaries.

#### **3.4.5. The Compulsory License Issue**

Compulsory License (CL) is the capital problem to be solved in TRIPs settlements. IPR strengthening does not depend only on the accomplishment of TRIPs parameters. Developing countries should also think of overtaking these rules and approaching higher standards of investment and innovation incentive. The actual TRIPs standard is limited to the standard of uniform rules, and to prevent commercial losses. It

A good step toward IPR higher standards is to extinguish - - or at least diminish - - the Compulsory Licensing hypothesis.

Compulsory Licensing is treated in TRIPs in its Article 65; TRIPs negotiators avoided the expression CL, in the text, but were clearly enough, about the meaning of the legal device. The idea is to preserve the possibility of the Government to intervene and grant the exploitation of patents by a third person, provided the latter has the interest.

The criticism about the element (CL) is the huge disincentive for investments under such conditions. The tittle-holder is not allowed to research and look for the adequate strategic moment to start producing.

What justifies such rules? The main target is to guarantee that patents will not offend public interest, by speculation, dumping and 'bad' monopoly.

We would not go as far as Sherwood, in affirming that there is 'a policy contradiction' between the existence of a patent system and the 'compulsory license'. All major juridical systems in the world - including the United States system - concern the 'abuse of rights' as an evil to be fought, in a judicial manner. The Corporate Entity Disregard Doctrine, for instance, is a typical American Creation, in order to bar the 'right-abuser'. According to this principle, for instance, a judge can decide against the firm's manager or owner, reaching its own patrimony, instead of merely applying the law, in a strict sense.

Nevertheless, the author is precise in demonstrating the CL incompatibility with the security and certainty the investor would demand, in order to risk.

The 'abuse of economic power's' concept, for instance, as provided by Brazilian Law (art.68), has a very broad meaning. Unless there is sufficient jurisprudence establishing the parameters of such abuse, it will remain as one of the weaker points, in Brazilian Law. *'To some - says Sherwood - the existence of the patent itself is the abuse'*.

Certainly, the rules of the game should, at least, be clearly defined.

### **3.5.Trade Secrets**

Trade secrets are the most primary element of IPR protection. TRIPs regulated it at Article 39, under the name of "protection of undisclosed information", and treated the matter in terms of preventing unfair competition, as well as did the Brazilian legislator.

The spin of TS is the certainty the title-holder is given about his data and strategy, especially for those facts and ideas which are not able to be protected by patents, trademarks etc., or even those in an elaboration stage (pre-patent timing). 'Secrecy' has a large meaning and involves everything which constitutes value information to the commercial/industrial activity, provided it is not generally known and since it has been subject to reasonable steps to keep it secret.

In this sense, trade secrets may protect a specific industrial design in its developing phase, while also protecting the software development, before copyright or patent filing. A simple receipt is object of protection by TS, as well as a sophisticated satellite design.

Trade secrets, contrary to patents, for example, is a negative right. TS is the right of the title-holder to deny the disclosure of his strategic secrets. Article 195, in Brazilian law, in a peculiar manner, states that it is a crime to offend the undisclosed data: a negative legal command.

Thus, it is obvious that 'improving TS' means to improve the judicial system, while assuring the due enforcement and law effectiveness to the title-holder.

According to a survey provided by Spencer Bacal, of the 246 United States companies (46% in aerospace, computer, electric and utility industries) studied in 1993, reported approximately 589 incidents involving undisclosed information were reported. The losses of the 32 larger companies totals \$1.8 billion.

The author demonstrates that the most targeted information are: customers list/pricing, product development information, research information, sales information, strategic plans, cost information and personnel information. The 'stealers' use the most known access methods, as theft/break-in, unauthorized reproduction of information, communication interception, electronic surveillance, bribery, etc.

According to the survey, 30% of the wrongdoers are employees, 28% are former employees, and 42% are foreign businesses, foreign governments, competitors, etc.

As show above, 58% of the cases of illegal/unfair disclosure is related to employees/ex-employees. The idea of a strong trade secret protection is directly related to the idea of providing incentives to improve personnel skills.

Under a strong TS protection, employers tend to be comfortable training employees in their higher knowledge standards, with no concern for the risk of unfair concurrence.

The adoption, in international level, of the first-to-file system, rather than the date-of-invention formerly adopted by the United States increased the TS importance, in a general sense, as long as the most important market in the world (United States) converted its system to the dangerous formal filing criteria which allows one to apply for another's invention.

Regarding the Brazilian system, it is possible to affirm that, once the TRIPs main principles are inserted in domestic law (Article 195, XI, XII and XIV), the success of TS is absolutely dependent on the quality of judicial reforms and its correct application throughout time. Additionally, such dependency is not the privilege of trade secrets. Even patent elements and trademarks, so sophisticated in their devices and rules, will collapse, without adequate enforcement, as we have seen, in 3.1.1., above.

### **3.6. Trade Marks & Geographical Designations**

Trademarks are among the most important elements in terms of IPR protection. There is, in trademarks, a double importance: it is supposed to defend the title-holder interest beside the general consumer protection. Piracy often implies an offense to a patent right or a copyright simultaneously to an offense to a Trademark. The damages, in terms of Trademark, are probably more relevant than the damages concerned to the individual cost of the product.

At first, because it is not certain that the consumer would buy an original product for a - naturally - higher cost. But certainly, the inferior quality of the product will imply serious damages to the image and reputation of those who research and expend time and resources to improve their products.

In Brazil, the whole terms of the Law n° 9.279/96 are in accordance to TRIPs text and is supposed to work in its terms.

Geographical designations, and origin indication are protected by both TRIPs and the Brazilian law which establishes the means to protect them. They are related to the name or signal which indicates the origin and, thus, the qualities and proprieties of certain products or services. The famous 'port wine', for example, constitutes a geographical indication. Member countries are supposed to ensure protection against the unfair use of these indications, protecting not only the economic interest of the right-holders, but also the consumer's rights.

The Brazilian law delegates to INPI the establishment of the way of filing the geographic indications.

The law grants protection to collective-certificate marks, such as certificates of quality or authenticity provided by associations or specialized private or public forums.

### **3.7. Industrial Designs**

Addressing the Industrial Design issue, content in TRIPs, section 3, the country members achieved the minimum standards to treat this element.

Industrial design protection regarding the plastic shape given to an object or to a group of lines and colors applied on a product, giving it a visual identification before the market.

It is not mandatory for the member country to provide sui generis protection to industrial design. Country members can provide copyright protection or specific industrial design law, as adopted in Brazil.

## **4. Conclusion**

The former ideological debate over the convenience and fairness in adopting the international standards of IPR protection seem to have been smoothed or, at least, brought to a consistent platform. Developing countries



recognized the importance of adopting a minimum standard of IPR, whether they intend to speak the same language of developed countries in the international market.

Once TRIPs was signed, the principles were established and there was no place for flashbacks and rewinds in the IPR matter. Countries ought to increase their systems, and not make them weak, as has occurred, in the past.

This trend towards strengthening is a very important point, in TRIPs. Its patterns, yet still lower, are involved in a commitment of increase and improvement anchored to the future. However, developing countries should, henceforth, work in using the new settlement not as a table of rules to be followed, but as incentive to innovation, creativity and production.

The most wise behavior will be searching for improvement in Research & Development as it was the best and more profitable investment, in order to benefit of the 'richest side' of TRIPs. This 'richest side' is related to research, education, personal development, sound imports, soundest exports, technology transfer (in both the ways) and innovative creation.

Social return should be considered as a good consequence of IPR strengthening, while the efforts should be driven to obtain private return of the new international order. It is largely known that the rate of benefit to the collectivity is higher than to the firms, due to their incapability to capture the benefits from practice R&D. This principle is universal truth, on both domestic and international levels. What differs, in one way or another, is the capability to enhance the object of IPR protection.

Brazil, specifically, is completely prepared to face the international standard as a future 'new industrialized country', de per se, or viewed within the MERCOSUR stage, as a country entirely turned to innovation and production.