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The Economics of Intellectual Property Rights and the GATT: A View From the South

Carlos A.P. Braga

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*Carlos Alberto Primo Braga**

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I. INTRODUCTION

Knowledge is a very elusive commodity.[1] But the ability to create new knowledge and to use it efficiently in the productive process is a funda-

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* Assistant Professor of Economics, University of Sao Paulo; Senior Researcher, Fundacao Instituto de Pesquisas Economicas, Sao Paulo, Brazil. This Article was written while the author was a Visiting Professor at the School of Advanced International Studies/The Johns Hopkins University with support from the program CAPES/Fulbright. The author gratefully acknowledges comments by Alice T. Zalik, Alison J. Sondhaus, John H. Welch, Robert E. Hudec, and Robert M. Sherwood. The views expressed here are the sole responsibility of the author.

1. For the sake of consistency, this Article will employ the following *arbitrary* definitions: a) Knowledge is a stock concept. When it flows in or out its point of storage (*e.g.*, the mind, a book, software, a computer memory), it becomes information; b) Science is the "body of verifiable knowledge and an associated conceptual framework that attempts to structure the observable features of the natural world and to predict the outcome of observations and experiments yet to be conducted." J. GRANGER, TECHNOLOGY AND INTERNATIONAL RELATIONS 9 (1979); c) Technology is knowledge employed in the pro-

mental requirement for economic development.[2] *Knowledge products* (or products of the mind) resemble a pure public good to the extent that their benefits are usually characterized by incomplete appropriability. Such a characteristic provides the basic economic rationale for government intervention in the production of knowledge.[3] Granting intellectual property rights via legal codes to the producers of new knowledge is a common response to this problem.

Although most societies recognize the importance of intellectual property protection, there are significant differences in the way in which nations approach this issue. Differences among national intellectual property systems are tantamount to nontariff barriers (NTBs) to trade insofar as they may affect trade in knowledge-intensive products.[4] Yet, these differences are not cognizable under GATT despite "GATT's proscription of NTBs."[5] In the 1980s, industrialized countries began to change their trade laws, classifying "defective" intellectual property systems as a type of unfair trade practice. Meanwhile, under the leadership of the United States, the First World began to press for the extension of GATT disciplines to trade-related aspects of intellectual property rights (TRIPs). As a consequence, TRIPs became one of the formal negotiating groups in the Uruguay Round of multilateral trade negotiations.

This Article explores the attitude of less developed countries (LDCs) with respect to the debate on TRIPs at the Uruguay Round.[6] Part II

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duction of goods and services for the satisfaction of human needs. For further details on these concepts, see ECONOMIC COUNCIL OF CANADA, REPORT ON INTELLECTUAL AND INDUSTRIAL PROPERTY, 1-30 (1971); P. DASGUPTA & P. STONEMAN, ECONOMIC POLICY AND TECHNOLOGICAL PERFORMANCE (1987); G. YANKEY, INTERNATIONAL PATENTS AND TECHNOLOGY TRANSFERS TO LESS DEVELOPED COUNTRIES (1987).

2. *See generally* Solow, *Technical Change and the Aggregate Production Function*, 39 REV. ECON. & STAT. 15, 12-20 (1957); E. DENISON, ACCOUNTING FOR SLOWER ECONOMIC GROWTH (1979); Mansfield, *Intellectual Property Rights, Technological Change, and Economic Growth*, in INTELLECTUAL PROPERTY RIGHTS AND CAPITAL FORMATION IN THE NEXT DECADE (C. Walker & M. Bloomfield eds. 1988).

3. *See generally* Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in THE RATE AND DIRECTION OF INVENTIVE ACTIVITY 609 (R. Nelson ed. 1962).

4. The expressions "intellectual property system" or "intellectual property regime" will be used here to summarize the whole array of intellectual property laws (patents, copyright and neighboring rights, trademarks, geographic denominations and designs, chip topography protection, trade secret rights) as well as enforcement practices concerning these laws.

5. Stern, *Intellectual Property*, in THE URUGUAY ROUND: A HANDBOOK FOR THE MULTILATERAL TRADE NEGOTIATIONS 202 (J. Finger & A. Olechowski eds. 1989) [hereinafter HANDBOOK].

6. In many instances in this Article, the LDCs will be referred to as if they had a

addresses the evolution of the debate at the GATT level. Part III presents the economics of intellectual property rights protection from the point of view of LDCs. Finally, Part IV summarizes the main conclusions and recommendations of the Article.

II. INTELLECTUAL PROPERTY RIGHTS AND THE GATT

By the end of the Tokyo Round (1979), both developed and developing contracting parties of the GATT shared a sense of frustration. Despite important results in the Tokyo Round— particularly in extending some discipline to the use of NTBs—there was a widespread feeling that the multilateral trade system was not working well.[7] For the LDCs, the shortcomings of the "special and differential treatment approach" (S&D) coupled with GATT's deficient coverage of their main trade interests were the basic reasons for frustration. For the industrialized countries, frustration reflected the concern with *free-rider* behavior by LDCs and the recognition of the growing importance of trade issues that were not dealt with properly in the GATT—such as services, intellectual property rights, trade-related investment measures, and high-technology trade. The economic crisis of the early 1980s put additional pressure on the system because it accelerated the adoption of protectionist measures throughout the world. Against this background, the United States called a GATT Ministerial Meeting in 1982 to serve as a *launch pad* for a new round of multilateral trade negotiations (MTN).

The agenda suggested by the United States included the so-called *new themes*, a more stringent discipline for agricultural export subsidies and the creation of a safeguards code. To a certain extent, the American proposal tried to pave the way for a GATT *reform* (that is, the inclusion of the new themes).[8] By putting together the new themes with issues of

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joint position with respect to intellectual property rights and the Uruguay Round. Of course, this is an oversimplification of the issue. Most of the time, what is presented as the position of the LDCs reflects positions adopted by Brazil and India, which are the most active Third World countries in these negotiations. At the same time, the positions of the industrialized countries are presented from the perspective of the "maximalist" proposals of the United States. These simplifications help to emphasize the main differences in the debate in a "North-South" framework.

7. *See* Martone & Primo Braga, Brazil and the Uruguay Round, Paper presented at the Conference on the Multilateral Trade Negotiations and the Developing Countries, sponsored by the Rockefeller Foundation, Washington, D.C., Institute for International Economics (1988).

8. For additional details on the antecedents of the Uruguay Round, see Bergsten & Cline, *Conclusion and Policy Implications,* in TRADE POLICY IN THE 1980'S, 747, 760-63 (W. Cline ed. 1983); Maciel, *O Brasil e o GATT*, 3 CONTEXTO INTERNACIONAL 81-

interest to numerous countries (agriculture and safeguards), the American negotiators expected to find enough support for the launching of a new round. This agenda, however, was not well received in Geneva. The European Community, particularly France, was skeptical about the prospects of trade liberalization efforts amid world recession. The LDCs stressed that the main problems with the multilateral trade system, from their point of view, were related to the lack of compliance by industrialized countries with GATT disciplines in traditional trade areas (such as agriculture, textiles, and clothing). Accordingly, the task of recovering the GATT's credibility would be best served not by extending its disciplines to new areas, but by addressing the *old* problems of the system.

These different views clashed in Geneva, and the Ministerial Declaration of November 1982 reflected the lack of consensus in favor of a new round.[9] The Declaration included general remarks about the desirability of a more efficient safeguard system, recognized the "urgent need to find lasting solutions to the problems of trade in agricultural products," and recommended "to each contracting party with an interest in services" to develop national studies in order to form the basis for future debate.[10] LDCs' priorities were also acknowledged with reference to the importance of S&D and pledges of further trade liberalization in textiles and clothing and in tropical goods. In practical terms, however, effective measures were postponed at least until the 1984 Session of the Contracting Parties.

Intellectual property rights were also mentioned in the 1982 Ministerial Declaration. Actually, some analysts[11] consider the inclusion of a section entitled *Trade in Counterfeit Goods* in the Declaration as a milestone in the history of dealing with intellectual property rights within the GATT. This section stated that the Council should be instructed:

> to examine the question of counterfeit goods with a view to determining the appropriateness of joint action in the GATT framework on the trade aspects of commercial counterfeiting and, if such joint action is found to be appropriate, the modalities for such action, having full regard to the com-

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91 (1986); R. Barros, *O GATT de Havana a Punta del Este*, REVISTA BRASILEIRA DE COMÉRCIO EXTERIOR 9 (1987).

9. *Ministerial Declaration of November 1982*, GATT Doc. No. 1328, BISD/29S/9 (1983) *reprinted in* LAW AND PRACTICE UNDER THE GATT 111.A.1 (K. Simmonds & B. Hill eds. 1988).

10. *Id.* at 5, 10, 16.

11. *See, e.g.*, Greenwald, *The Protection of Intellectual Property Rights in the GATT and the Uruguay Round: The US Viewpoint, reprinted in* LAW AND PRACTICE UNDER THE GATT, *supra* note 9, at IV.A.5, 1.

petence of other international organizations.[12]

It is worth mentioning at this point that intellectual property considerations were present in the GATT since its origin. Article IX, for instance, establishes that marks of origin (trade names, geographical indications, etc.) should not be used in such a way as to hamper international trade.[13] This article also seeks to prevent misleading indications of the "true origin of a product, to the detriment of such distinctive regional or geographical names of products as are protected by legislation."[14] Article XX(d), in turn, places the adoption or enforcement of measures necessary to secure "the protection of patents, trade marks and copyrights, and the prevention of deceptive practices" among the so-called general exceptions in the GATT.[15] These measures, as long as they are non-discriminatory and necessary to assure compliance with GATT-compatible laws and regulations, are not bound by GATT disciplines. In addition, there are references in articles XII:3(c) and XVIII:10 to the fact that trade restrictions allowed under balance-of-payments crises should not be inconsistent with intellectual property rights laws.[16]

It is also true that many instruments negotiated under GATT auspices, using GATT procedures and practices, took into account intellectual property rights—such as the 1958 recommendation on marks of origin,[17] the Customs Valuation Code,[18] and the Standards Code negotiated during the Tokyo Round.[19] The 1982 Ministerial Declaration nevertheless constituted a major development in the history of intellectual property rights in the GATT system. It is important to remember that since 1978 the United States had attempted to garner support for an Anti-

12. LAW AND PRACTICE UNDER THE GATT, *supra* note 9, at I.13.

13. *The General Agreement on Tariffs and Trade*, 61 Stat. A3, T.I.A.S. 1700, 51-61 U.N.T.S. [hereinafter GATT], art. IX, Oct. 30, 1947, GATT Doc. No. BISD IV (1969).

14. GATT, *Trade in Counterfeit Goods and Other Trade-Related Aspects of Intellectual Property* (II), 49 GATT FOCUS NEWSLETTER 2 (1987).

15. GATT, *supra* note 12, art. XX(d), *reprinted in* LAW AND PRACTICE UNDER THE GATT, *supra* note 9, at 53.

16. *Id.* arts. XII(3)(c), XVIII(10), *reprinted in* LAW AND PRACTICE UNDER THE GATT, *supra* note 9, at 31, 43-44.

17. *See Trade and Customs Regulations: Marks of Origin*, 1959 BASIC INSTRUMENTS AND SELECTED DOCUMENTS 117; GATT, *supra* note 12, art. IX, *reprinted in* LAW AND PRACTICE UNDER THE GATT, *supra* note 9, at I.A-19.

18. GATT, *supra* note 12, art. VII, *reprinted in* LAW AND PRACTICE UNDER THE GATT, *supra* note 9, at I.A-15.

19. *Agreement on Technical Barriers to Trade (Standards Code)* (Jan. 1, 1980) *reprinted in* LAW AND PRACTICE UNDER THE GATT, *supra* note 9, at II.C.4-99.

Counterfeiting Code.[20] This effort, which gradually gained support from the European Community, Japan, and Canada, did not reach the *consensus* level needed for incorporation in the results of the Tokyo Round. With the Ministerial Declaration, however, the debate on intellectual property rights gained new momentum.[21] In 1984, the GATT established a Group of Experts to study trade aspects of commercial counterfeiting.[22] Although this Group could not reach a final decision, the growing concern for intellectual property-related issues paved the way for the inclusion of TRIPs in the Uruguay Round.

The road to the Uruguay Round, however, was not an easy one. The idea of a new round of MTN was raised again by Japan in 1983. By 1985, the common perception that the multilateral trading system was in jeopardy fostered the search for compromises to brighten the gap between developed and developing countries. The introduction of the *dual track* approach, concerning negotiations on services, is a good example in this context.[23] After tense negotiations, the eighth round of MTN was finally launched in September of 1986.

The fact that TRIPs became a subject for negotiation in the round did not mean that an international consensus on the issue had been reached. Actually, it only meant a change in the focus of the debate which became centered on the issue of the coverage of the negotiations. The Ministerial Declaration of Punta del Este represents a masterpiece of diplomatic compromise and, consequently, allows many interpretations. In the case of TRIPs, for instance, the negotiating objective read 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 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.*

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20. GATT, *Trade in Counterfeit Goods and Other Trade-Related Aspects of Intellectual Property* (III), 50 GATT FOCUS NEWSLETTER 2 (1987).

21. In a parallel development, GATT's dispute-settlement mechanism began to be used frequently to analyze trade-related aspects of intellectual property rights. GATT panels have addressed, for instance, the use by the United States of section 337 in allegations of patent infringement, the United States copyright "Manufacturing Clause," and the Japanese labelling practices on imported wines and alcoholic beverages. *See id.* at 2, 8.

22. Greenwald, *supra* note 11, at 6.

23. For a description of the *dual-track* procedure presented by Brazil in June 1985, see Bhagwati, *Services*, in HANDBOOK, *supra* note 5; Martone & Primo Braga, *supra* note 7.

> Negotiations shall aim to develop *a multilateral framework of principles, rules and disciplines dealing with international trade in counterfeit goods*, taking into account work already undertaken in the GATT.
>
> These negotiations shall be without prejudice to other complementary initiatives that may be taken in the *World Intellectual Property Organization* and elsewhere to deal with these matters.[24]

It is quite clear in this Declaration that a major objective of the negotiations should be the drafting of an Anti-Counterfeiting Code (*a multilateral framework*). In this context, one could say that the American position had finally been vindicated. Ironically, this objective was now further down on the American intellectual property rights agenda. By 1986, pushed by the interests of knowledge-intensive industries, the United States saw as its main objective the development of a set of standards for intellectual property rights protection in order to curb "piracy."[25] These standards, "presumably . . . modelled after [United States] legislation,"[26] and the GATT's dispute-settlement mechanism, would provide the means for enhancing intellectual property rights protection on a world-wide basis. The adoption of such standards in the GATT system would mean a radical departure from the original GATT approach to intellectual property. As described above, the only GATT provision which requires the protection of intellectual property rights by contracting parties is article IX(6). One could argue, however, that the Declaration provides for such a broad negotiating objective to the extent that "effective and adequate protection of intellectual property rights" is accepted as a necessary condition to reduce the distortions and impediments to international trade.

From the point of view of the LDCs, such an objective was well beyond the legal mandate for negotiations on TRIPs at the Uruguay Round. The LDCs accepted the existence of a clear mandate to negotiate trade in counterfeit goods, but these negotiations should be restricted to the examination of the trade effects of counterfeiting without entering

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24. GATT, *Ministerial Declaration of Punta Del Este, of September 20, 1986, reprinted in* LAW AND PRACTICE UNDER THE GATT, *supra* note 9, at 111.A.3, 25 (emphasis added).

25. C. Yeutter, *An Agenda for the New GATT Round*, Address before the U.S. Chamber of Commerce, September 10, 1986, *reprinted in* LAW AND PRACTICE UNDER THE GATT *supra* note 9, at 111.C.1, 6-7; Gadbaw & Gwynn, *Intellectual Property Rights in the New GATT Round*, in INTELLECTUAL PROPERTY RIGHTS: GLOBAL CONSENSUS, GLOBAL CONFLICT? 38 (R. Gadbaw & T. Richards eds. 1988) [hereinafter GLOBAL CONSENSUS].

26. Greenwald, *supra* note 11, at 9.

the discussion of "what constitutes counterfeiting."[27] Another facet of the LDCs' position was the resistance to any attempt to transform the negotiations into "an exercise to set standards of protection of intellectual property rights or to attempt to raise the levels of such protection under existing multilateral agreements through the strengthening of enforcement procedures. . . ."[28] LDCs also emphasized their strong support for the existing international agreements administered by the World Intellectual Property Organization (WIPO)[29]—that is, the Paris Convention (patents, utility models, designs and trademarks, trade names, and appellation of origin),[30] the Berne Convention (copyrights),[31] the Madrid and Lisbon Agreements (repression of false or deceptive indications of source on goods, and the protection and registration of appellations of origin)[32]—and by the United Nations Educational, Scientific and Cultural Organization (UNESCO)—namely, the Universal Copyright Convention.[33] By disputing the adequacy of GATT as a forum for a broad debate on intellectual property rights, the LDCs raised jurisdictional arguments against the American agenda.

The other major players from the First World, the European Community, and Japan, adopted a less radical approach in the negotiations compared to the United States.[34] Both Japan and the European Community supported the goal of better intellectual property rights protection around the world. Yet, they did not share the United States enthusiasm

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27. Brazil-MRE, *As Negociacoes da Rodada Uruguai: Os Novos Temas*, Paper presented at the seminar GATT e a Rodada Uruguai, Sao Paulo, Ministerio, das Relacoes Exteriores, Doc. No. FIESP/CIESP, FA DVSP, 18 (1988).

28. Statement of Brazil to the Negotiating Group on Trade-Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods, (March 25, 1987) at 1; Gadbaw & Gwynn, *supra* note 25, at 41-2 n.6.

29. Convention Establishing the World Intellectual Property Organization, July 19, 1967, 21 U.S.T. 1749, T.I.A.S. No. 6932, 828 U.N.T.S. 3.

30. Paris Convention for Protection of Industrial Property of March 20, 1883, 13 U.S.T. 1, T.I.A.S. No. 4931, as revised at Stockholm July 14, 1967, 21 U.S.T. 1508, T.I.A.S. No. 6903, 828 U.N.T.S. 305.

31. Berne Convention for the Protection of Literary and Artistic Works, Sept. 1886, 828 U.N.T.S. 221 (implemented by the United States in H.R. Doc. No. 609 100th Cong., 2nd Sess. (1988)).

32. Madrid, Agreement Concerning the International Registration of Marks of April 14, 1981, as revised at Stockholm on July 14, 1967, 828 U.N.T.S. 389, 201 W.I.P.O. 1983; Lisbon Agreement for the Protection of Appellations of Origin and their International Registration of October 31, 1958, as revised at Stockholm on July 14, 1967 and Regulation of October 5, 1976, 264 W.I.P.O. 1976.

33. Sept. 6, 1952, 6 U.S.T. 2731, T.I.A.S. No. 3324, 216 U.N.T.S. 132.

34. P. Carl, *Intellectual Property Rights in the Uruguay Round: The EC Viewpoint*, in LAW AND PRACTICE UNDER THE GATT, *supra* note 9, at IV A.6, 19.

concerning the use of GATT to set international standards for intellectual property systems. Among their major concerns was the use of national intellectual property laws as "barriers to legitimate trade," as in the case of section 337.[35] There were also significant differences in terms of negotiating tactics. The European Community, for instance, suggested that negotiations should first address the issue of repression of counterfeiting and piracy. Only after *sufficient progress* in this area has been achieved should the negotiations focus on "weaknesses in the availability and scope of basic rights."[36]

Given these conflicting agendas, the lack of substantive progress in the negotiations on TRIPs at the Uruguay Round is not surprising.[37] The next section summarizes the main arguments for and against intellectual property rights protection, emphasizing the economic implications of enhanced intellectual property rights for LDCs.

III. THE ECONOMICS OF INTELLECTUAL PROPERTY RIGHTS PROTECTION

The debate on intellectual property rights at the GATT level has thus far been dominated by the following issues: the question of jurisdiction (the WIPO v. GATT debate), the interpretation of the negotiating mandate of the Punta del Este Declaration, and procedural questions (the precedence of the *anti-counterfeiting code* negotiation and the pace of negotiations on TRIPs vis-à-vis other negotiating groups in the Uruguay Round).[38] Some believe that the debate has focused on form rather than substance, and hence has failed to generate results. If one tries, however,

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35. 19 U.S.C. § 1337, 1337a, (1982 & Supp. V 1987); *See* Barshefsky & Zucker, *Amendments to the Antidumping & Countervailing Duty Laws Under the Omnibus Trade and Competitiveness Act of 1988*, 13 N.C.J. INT'L L. & COM. REG. 251, 251 n.2 (1988).

36. Greenwald, *supra* note 11, at 12 (quoting the EC Commission).

37. The Ministerial Meeting at Montreal in December 1988 confirmed the complexity of the negotiations on intellectual property rights at the GATT level. TRIPs were among the items (the others being Agriculture, Safeguards, Textiles, and Clothing) that required further consultations, placing on hold all the results achieved in the other areas of negotiation. *See* GATT, *Trade Negotiations Committee Meeting at Ministerial Level*, (1988) GATT Doc. No. MTN, TNC/7 (MIN).

38. The issue of the relative pace of the negotiations on TRIPs, not addressed above, has been another point of contention. The United States pressed for an early commitment to negotiate a comprehensive GATT agreement that would establish substantive standards for protection on intellectual property rights. Yeutter, *supra* note 25, at 6. LDCs opposed the idea that TRIPs should "move forward more rapidly than any other area of the GATT negotiations." Richards, *Brazil*, in GLOBAL CONSENSUS, *supra* note 25, at 184.

to identify substantive issues that are at the core of the debate, changing the focus would not help bring the negotiating parties any closer to consensus. There are major conflicts in the way different nations approach the issue of intellectual property rights protection lurking behind procedural discussions.

At the legal level,[39] the conflict reflects a century old debate on the territoriality of intellectual property rights laws and its implications for international trade. Another legal dimension of the debate is to what extent infringement of private property rights can be attributed to the state, justifying external reprisals. The Uruguay Round can be interpreted as a new attempt to promote universality in the protection of intellectual property rights. Previous attempts, beginning with the Paris Convention for the Protection of Industrial Property of 1883,[40] have always encountered difficulty in imposing strict international law standards in the area of intellectual property rights. The continuing debate is even more complex because of its ambitious coverage and the widespread perception that the United States is trying to translate its domestic provisions into international standards.

The debate also carries clear political connotations. After all, a common definition of international leadership is based on the capacity of a country to maintain a relative primacy in the generation and commercialization of new technologies.[41] Some analysts[42] interpret the growing concern of industrialized nations with intellectual property rights as an attempt to control the diffusion of new technologies or "as a weapon in the struggle of 'haves' against 'have nots'."[43] Accordingly, the ultimate goal of the industrialized countries would be to freeze the existing international division of labor by way of the control of technology transfers to the Third World. Another political dimension of the debate from the perspective of LDCs has to do with the role of foreign capital in these economies. The major beneficiaries of better intellectual property rights protection, at least in the short run, would be transnational corporations. In most Third World countries, a reform of intellectual property laws

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39. Wilner, *An International Legal Framework for the Transfer of Technology*, in THE POLITICAL ECONOMY OF INTERNATIONAL TECHNOLOGY TRANSFER, 53 (J. McIntyre & D. Papp eds. 1986); Meessen, *Intellectual Property Rights in International Trade*, 21(1) J. WORLD TRADE L., 67 (1987).

40. Paris Convention, *supra* note 30.

41. Rostow, *Is There Need for Economic Leadership? Japanese or U.S.?*, 75(2) AM. ECON. REV., 285 (1985).

42. Barbosa, Por Que Somos 'Piratas'?, Revista Brasileira de Comécio Exterior (1988).

43. Stern, *supra* note 5, at 203.

perceived to favor foreign capital would be highly controversial.

There are also significant philosophical differences along the North-South divide with respect to intellectual property rights. In the First World, intellectual property protection is usually presented "as a fundamental right comparable to rights to physical property."[44] The criticism of countries with "defective" intellectual property systems is often designed to stress the high moral ground from which these attacks are made. The thesis that natural law provides a firm basis to the notion of inherent rights in products of the mind, however, is at best debatable. One can make an eloquent case for the importance "to conceive of ideas as property, and of property not solely as material but also as spiritual."[45] Yet, the history of the evolution of national patent systems suggests that "economic expediency" has usually dominated legal and moral considerations.[46] As a consequence, any attempt to present a country's intellectual property system as a model of "enlightened" virtues is bound to face a great deal fo skepticism in the Third World. Moreover, in contrast with developed economies, LDCs tend to assign a higher weight to "social" interests (often loosely defined) than to private interests. Intellectual property systems always entail a compromise between private and social interests. Arguments against intellectual property rights protection for pharmaceutical and food products, for example, are often based on social considerations, such as the objective of avoiding price increases in health and nutrition.[47]

At the core of the conflict between industrialized countries and LDCs, however, are some basic economic issues. A common belief was that lawyers took intellectual property rights protection too seriously while economists took the issue too lightly. Economists' attitudes towards intellectual property rights, however, have been changing significantly over the

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44. Gadbaw & Richards, in GLOBAL CONSENSUS, *supra* note 25, at 2 (Introduction).

45. Novak, Built Wiser Than They Knew, Lecture in Honor of the Two-Hundreth Anniversary of the U.S. Constitution, delivered at the University of Santa Clara, at 4 (1987).

46. Anderfelt argues that the notion of inherent rights is hardly compatible with "systems in which examination (as to novelty, inventiveness, etc.) precedes the patent grant" as occurs in most countries. U. Anderfelt, International Patent-Legislation and Developing Countries, Doctoral Dissertation, n. 204, Geneve: Martinus Nijhoff-Den Haag atg 19 (1971).

47. A good example of this position can be found in the words of Indira Gandhi at the World Health Assembly in May 1982: "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." Gadbaw & Kenny, *India*, in GLOBAL CONSENSUS, *supra* note 25, at 86.

last decade. The growing share of knowledge-intensive products in international trade, the economic impact of new copying technologies, the possibilities of world-wide integration brought by communication networks, and the increase in international technological rivalry have magnified the economic significance of "piracy." At the same time new technologies (computer software, semiconductor chip design, etc.) are challenging existing patterns of intellectual property rights protection. Consequently, there is growing interest in the economics of intellectual property rights. Nevertheless, the analysis of the costs and benefits of more sound intellectual property systems for LDCs is still in its infancy.[48]

The conventional reasons for intellectual property rights protection—to promote investments in research and development (R&D) and technological innovation, and to encourage the disclosure of new knowledge—are not enough to make an economic case for the adoption of intellectual property laws. First, one can argue that there are other institutional arrangements which could in theory generate the same results of the concession of legal rights in new knowledge. As Dasgupta and Stoneman point out, the theory of public goods suggests at least two other solutions for the problem of efficient production and allocation of knowledge: (1) the direct production of knowledge by the government which would "allow free use of it, and finance the expenditure by the imposition of lump-sum taxes"; or (2) the encouragement of "private production of knowledge by the imposition of (differential) subsidies for their production and the levying of lump-sum taxes to finance these subsidies."[49] This is not the place to discuss these alternative institutional arrangements, particularly because the debate at the GATT level is not concerned with this type of discussion. My position is that, not to mention practical considerations, historical hindsight and public choice theory (in essence the criticism of the idea that public officials in performing their tasks would be basically concerned with the well-being of the nation) provide strong support for the superiority of the *proprietary* approach.

It is, however, important to recognize that the economic rationale for intellectual property rights protection goes beyond the issue of underproduction of knowledge in the absence of government intervention. It re-

48. *See* MacLaughlin, Richards & Kenny, *The Economic Significance of Piracy*, in GLOBAL CONSENSUS, *supra* note 25, at 89; Sherwood, The Benefits Developing Countries Gain from Safeguarding Intellectual Property, Paper prepared for the Intellectual Property Committee, Washington, D.C. (1988).

49. DASGUPTA & STONEMAN, *supra* note 1, at 3.

quires that the benefits associated with increased production of knowledge be greater than the costs due to its underutilization, a possible by-product of monopolization. The literature tends to support the proposition that a net positive welfare effect results from intellectual property rights protection.[50] This conclusion, nonetheless, becomes disputable when the focus of analysis changes from a closed economy (or from a global perspective) to an open economy. Berkowitz and Kotowitz, for example, point out that a national government "is bound to value the welfare of its own citizens or residents more heavily than that of foreigners."[51] In this context, they were able to derive results showing that for an LDC a shorter period of patent protection (vis-à-vis an industrialized country) may be optimal in terms of national welfare.[52] Lyons adopts a more provocative position based on these results, stating that "[t]here appears to be little reason for small countries to adopt a patent system."[53]

The implications of these results for the North-South debate on intellectual property rights, however, have to be qualified. First, the model is developed for a small country "in which little invention takes place and/or in which invention markets are competitive."[54] Some of the newly industrialized countries (NICs) of the Third World no longer fit this description. Second, the model assumes away the possibility of retaliation against defective intellectual property systems. As recent United States actions against Korea, Taiwan, and Brazil, as well as European Community measures against Indonesia suggest, the possibility of intellectual property-related trade retaliations has to be taken into account for an adequate evaluation of an intellectual property-system reform. Finally, the model does not capture some of the benefits that sound intellectual property systems may generate.[55]

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50. Regarding the patent system, see W. NORDHAUS, INVENTION, GROWTH AND WELFARE: A THEORETICAL TREATMENT OF TECHNOLOGICAL CHANGE (1969); Nordhaus, *The Optimal Life of A Patent: A Reply*, 62 AM. ECON. REV. 428 (1972); Scherer, *Nordhaus' Theory of Optimal Patent Life: A Geometric Reinterpretation*, 62 AM. ECON. REV. 422 (1972); Tandon, *Optimal Patents with Compulsory Licensing*, 90 J. POL. ECON. 470 (1982). For an analysis of the effects of increased copyrights protection, see Novos & Waldman, *The Effects of Increased Copyright Protection: An Analytical Approach*, 92 J. POL. ECON. 234 (1984).

51. Berkowitz & Kotowitz, *Patent Policy in an Open Economy*, 15 CAN. J. ECON. 1, 2 (1982).

52. *See id.* at 3.

53. Lyons, *International Trade and Technology Policy*, in DASGUPTA & STONEMAN, *supra* note 1, at 199.

54. Berkowitz & Kotowitz, *supra* note 51, at 3.

55. For example, the inducement of foreign investment. For a discussion regarding this point, see *infra* page 268.

Despite these considerations it is important to recognize that for a Third World country a reform designed to increase intellectual property rights protection will tend to generate a welfare loss at its initial stages. Because LDCs are typically net importers of technology, a usual consequence of a more strict regime of intellectual property laws would be an increase in royalty payments to foreigners (d$R). A related cost would be the displacement of firms devoted to "piracy" (d$P).[56] From a social perspective, the costs of dislocation of "pirates" will only be relevant as long as foreigners benefit from the process (either by an increase in imports or by an increase in license fees paid by domestic firms to the foreign owners of intellectual property rights). As MacLaughlin, Richards, and Kenny point out the "transfer of sales or royalty payments to other nationals would represent merely a transfer of income from one member of society to another."[57] In this context, this income transfer would not generate a social welfare loss.

Other social costs associated with the reform would be the opportunity cost of additional domestic R&D (OCdR&D) and the eventual loss of consumer surplus (dCoS) brought by higher prices that could result from the "monopolization" process.[58] The issue of the opportunity cost of additional R&D has received little attention in the debate since most analysts seem to profess an unlimited admiration for the benefits of investments in R&D. Without disputing the importance of R&D for economic development, one should also take into account its related costs. In LDCs, human-capital tends to be the scarcest factor of production. As a consequence, an increase in domestic R&D will increase the demand for this scarce resource with potential implications for other productive ac-

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56. One might also argue that in addition to the displacement of *piratical* activities one should consider the loss in potential capital formation in these areas after the change in the intellectual property regime. For the sake of simplicity, however, we will assume that this effect is captured by the coefficient of d$P.

57. MacLaughlin, Richards & Kenny, *supra* note 48, at 107 n.22.

58. In most LDCs, the danger of monopolization may be secondary given the existence of price controls. In other words, increased intellectual property rights protection will not necessarily be translated into higher prices, particularly in industries—such as the pharmaceutical industry—for which price controls are usually rationalized in terms of social goals. Indeed, price controls can even play a role in explaining the evolution of intellectual property systems in the Third World. In the case of Brazil, for example, Danneman suggests that patent protection for pharmaceutical products was revoked in 1969, because national laboratories under the impact of "a rigid system of price controls . . . convinced the government that their difficulties derived from an unfair advantage foreign laboratories enjoyed in the Brazilian market because of their exclusive patent rights for the production of most drugs." Danneman, *Brazil Not a Pirate of Intellectual Property* (interview published in INFOBRAZIL, 10(2), 9 (1989)).

tivities and could even have a negative short term impact in terms of income distribution.[59] Another source of potential costs, which were not considered in the model, are the local subsidiaries of transnational corporations. Local R&D by these companies can be translated into future royalty payments abroad if intellectual property rights "reside with the parent company, regardless of the location of the research."[60] The model also does not take into account the costs of establishing an effective, intellectual property system (from the organization of a "cadre" of patent examiners to the costs of enforcing intellectual property rights). For a small LDC, these costs can be substantial.

Turning now to the social benefits that an LDC would achieve by enforcing more strict intellectual property rights, one could list the following impacts: (a) cost savings associated with new technologies developed by additional R&D and by the disclosure of new knowledge (CSdR&D); (b) cost savings associated with technological transfers that could only occur under more strict intellectual property rights protection (CSdTT); and (c) additional investment fostered by the new regime of protection (dK). Items (a) and (b) can be interpreted as the main channels through which the benefits of technological change are translated into economic growth. Other potential benefits could accrue in the form of higher quality products becoming available for consumption[61] and through the contribution of better national intellectual property rights protection to world technological growth. The magnitude of this contribution is an open question, but it seems reasonable to assume that the impact of any individual intellectual property reform in the Third World would be marginal at best.

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59. Another way to look at the opportunity cost of additional R&D, which is relevant for both LDCs and industralized countries, is suggested in an unconventional note entitled *The Uruguay Round Comes to the NFL* (1988) by J.M. Finger. Finger presents the following arguments and questions looking at the intellectual property issue from the United States perspective:

> An extensive governmental system of intellectual property protection encourages industry to always develop new things that the law will protect for them. A less extensive system encourages industry to do the old things better. Would we be better off if all the ways that Japanese cars are better than their competition could be protected by law? . . . Are we, a society that chooses to set aside very little of our income for savings and investment, really advantaged by a legal system that encourages frequent changeover of what we produce, and frequent changeover of the equipment we use to produce it?

Finger at 2-3.

60. Berkowitz & Katowitz, *supra* note 51, at 16.

61. For an interesting analysis of the benefits of trademarks for consumers, see McLaughlin, Richards & Kenny, *supra* note 48, at 103-04.

Assuming that these costs and benefits can be expressed in monetary terms, the analysis of an intellectual property-system reform from the point of view of an LDC would require the comparison of the following functions:

(1) C = f(dR, dP, OCdR&D, dCoS)

(2) B = g(CSdR&D, CSdTT, dK)

where, C = social costs associated with a higher level of intellectual property rights protection.

B = social benefits associated with a higher level of intellectual property rights protection.

A proxy for the net welfare impact (NW) of the reform over a period of time would be estimated in the following way:

$$(3)\quad nw = \int_{t_0}^{T} (B - C)e^{-\alpha t}\, dt$$

where, α = social rate of discount.

t_0 = the moment of introduction of the reform.

T = the time horizon relevant for the evaluation.

Equation (3) provides the basic framework for the analysis of an intellectual property-system reform in an LDC. In the case of **NW** $>$ **0**, the reform should be adopted. In the case of **NW** $<$ **0**, the reform (from a national point of view) should not be implemented. Its simplicity, however, is misleading. The shape and the evolution over time of functions **f** and **g**, as well as the value of its parameters—such as α—provide many points of contention. Different specifications of **f** and **g**, for instance, will generate conflicting results. Besides, equation (3) does not take into account the possibility of trade retaliations against "defective" intellectual property systems.

A typical LDC would most likely incur a net loss in the initial moments after the reform. In other words, it seems reasonable to assume that $C_{t_0} > B_{t_0}$ in the Third World for while the costs associated with the reform would be immediately felt, the benefits would take time to materialize. A necessary condition for the reform to generate a positive **NW** in an LDC (with the above mentioned initial conditions) is:

$$(4)\quad g' > f'$$

where, $g' = dg/dt$ and $f' = df/dt$.

A. *The Case Against Intellectual Property Rights Protection*

Those who oppose more strict intellectual property rights protection tend to dispute the benefits summarized by equation (2). The rationale for this attitude is partially based on the hypotheses that domestic R&D will not respond significantly to the reform, that the growth impact of any additional R&D will be marginal, or that capital formation and

technological transfer are not very sensitive to intellectual property rights protection. Some alternative formulations of the above hypotheses are: local incompetence; a very inelastic supply of human capital; the argument that intellectual property rights protection is only one of the relevant variables which explain R&D and that it can be ineffective in the absence of additional conditions (such as a larger stock of human capital); the belief that modern technology is carried forward by large enterprises (particularly transnational corporations); and doubts about the net contribution of foreign capital to economic development.

The criticism is also directed to the cost aspects of an intellectual property-system reform. First, it is argued that the weight of additional royalties would be disruptive given the foreign-exchange constraint faced by many LDCs. Second, a high value is assigned to the perceived benefits of having access to technology in the cheapest possible way. According to this approach, by "taxing" imported products of the mind,[62] LDCs would be lowering the costs of important inputs in the productive process and they would increase consumption possibilities. In other words, it is assumed that dCoS would have a very high coefficient. The question of dislocation of "piracy," however, does not receive much attention from those who oppose more strict intellectual property laws in the Third World for tactical and legal reasons. For some countries, particularly those with problems of enforcement of intellectual property laws, it would not be wise to acknowledge the magnitude of the problem. For many LDCs the problem simply does not *exist* since from a legal standpoint their intellectual property systems comply with international agreements, such as the Paris Convention (which allows each country to choose its own patent conditions as long as there is no discrimination against non-nationals).[63] As Barbosa notes, entrepreneurs in countries with "defective" intellectual property systems, from a United States perspective, could at best be called *corsairs* with all the legal licenses to operate.[64]

Hence, the economic case against intellectual property rights protection can be presented in three different formats, all of them based on the above considerations. The first is the *radical format*, which basically denies the possibility of $\mathbf{g}' > \mathbf{f}'$. According to this approach, which is often combined with political considerations, costs would not only continue to exceed benefits over time, but the wedge between them would tend to

62. Stern notes that "defective" intellectual property systems are equivalent to a "tax" on the returns of intellectual property. Stern, *supra* note 5, at 206.

63. Paris Convention, *supra* note 30, at art. 2.

64. Barbosa, *supra* note 42, at 1.

increase. This latter effect would be caused by the growing dependence of the LDC on foreign technology. There is also the fear that modern technology, particularly robotics, would allow countries in the technological frontier to reshape their structures of comparative advantage. Advanced countries could even recuperate competitiveness in traditional labor-intensive activities—such as textiles—imposing structural adjustment costs upon LDCs. In this context, attempts to back the United States proposal with static comparative advantage arguments do not find much echo in the Third World.

The second format, the *pragmatic format*, accepts the possibility of $g' > f'$, but maintains that NW would be negative. Several reasons can be advanced to explain this result: a very high net loss at the initial stages of the reform; a high social rate of discount; or f' being only marginally smaller than g'. The third format is the *threshold format*, which argues that the shapes of f and g change as development (particularly in terms of human capital accumulation) evolves. In this context, LDCs would be advised to wait until the *development threshold* was reached (from then on g' not only would be larger than f' but NW would be positive) in order to increase their level of intellectual property rights protection.

B. *The Case for Intellectual Property Rights Protection*

The economic arguments for intellectual property rights protection in the Third World are built around the concept of self-interest. Most analyses implicitly assume not only that condition (4) is obeyed but also that $g' >> f'$, generating $NW > 0$. Emphasis is usually placed on the high social rate of return from investments in new technology and the tendency for under-investment in this area when intellectual property rights are not well-protected.[65] The effectiveness of local R&D is heralded and the micro benefits of sound intellectual property regimes is suggested by case studies at the firm level. Some analysts, such as Sherwood,[66] recognize that these benefits are difficult to quantify, but they tend to stress that small firms and universities will become much more active in the process of technological innovation under enhanced intellectual property rights protection.

An argument which is becoming quite influential is the thesis that presently "technology drives investment" and to the extent that technology "is reluctant to flow where it is not protected" the lack of an adequate level of protection could stunt technological transfer and foreign

65. *See generally* Mansfield, *supra* note 2.
66. Sherwood, *supra* note 48.

investment.[67] The relationship between technology and investment can also be explored at the domestic level based on the proposition that enhanced intellectual property rights protection, particularly trade secret laws, would be an important stimulus for local capital formation.

Turning to the social costs of a reform, analysts tend to downplay the importance of the displacement of *pirates*. This attitude reflects strong assumptions about labor mobility in the Third World coupled with the belief that growth in sectors benefited by the reform would rapidly absorb displaced workers. The potential loss of consumer surplus (dCoS) is also downplayed because these *benefits* would be achieved at the high cost of fostering imitation and copying instead of invention and creativity.

Hence, the case for protection is built mainly around the potential benefits of *sound* intellectual property regimes for LDCs. The microfoundations of these arguments are quite appealing but a great deal of research is still needed to support their claims. The research agenda will have to address issues like the R&D response of small firms and the reaction of individuals in the Third World to enhanced intellectual property rights protection, the role of transnational corporations, the effectiveness of local R&D (the issue of domestic competence), the importance of protection for technology transfers, the *threshold* argument, and the impact of the injection of new technology in terms of economic growth for LDCs. A parallel effort will have to be developed in order to estimate the magnitudes of **d$R** and **d$P**. There are some analyses on the economic impact of piracy from an industrialized country perspective.[68] These studies focus on revenue loss estimates for United States industries and are limited in terms of their coverage of industries and countries. The same methodology, however, can be adapted to estimate **d$P**.

In sum, a much higher degree of knowledge on the characteristics of **NW** in LDCs will be necessary if economic calculus is expected to play a more influential role in the negotiations. The benefits of this research agenda should not, however, be oversold in terms of their impact on trade negotiations. A look at the political economy of intellectual property reforms illustrates this point.

C. *The Political Economy of Intellectual Property Rights Protection*

In this section I assume that additional research will confirm that condition (4) holds in most LDCs (or at least in the NICs). Such a result,

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67. Sherwood, Investment: Driven by Technology, 1.

68. *See, e.g.*, U.S. INTERNATIONAL TRADE COMMISSION, FOREIGN PROTECTION OF INTELLECTUAL PROPERTY RIGHTS AND THE EFFECT ON U.S. INDUSTRY AND TRADE, PUB. NO. 2065 (1988); MacLaughlin, Richards & Kenny, *supra* note 48.

however, would not mean the end to resistance to more strict intellectual property rights protection in the Third World. As previously noted, inequality (4) is a necessary but not a sufficient condition to ensure that **NW** > 0. *Impatient* societies, that is countries with very high social rates of discount, could still find out that a reform would generate a net economic loss. Politicians and policy-makers in the Third World tend to adopt very high α's in response to the instability of their environments. Consequently, perceptions about the proper range of values for the rate of discount can be quite different from the ones that prevail in industrialized countries.

Another possibility, perhaps even more interesting from a political economy perspective, would be the situation in which the government would not be able (or willing) to reform the country's intellectual property system despite recognizing that **NW** is positive. The rationale for this attitude is analogous to one that usually hinders trade liberalization attempts: while the benefits would evolve gradually and would affect the society as a whole (mainly through higher rates of economic growth), the costs would be immediate and focused on very specific sectors (those dedicated to "piracy"). Those who have a vested interest in avoiding the reform would tend to lobby forcefully against enhanced intellectual property rights protection. The potential beneficiaries, in turn, would tend to be much less organized and prone to adopt a *free-rider* attitude in the policy debate. As a result, the political support for such a reform may not be sufficiently strong to override the opposition. Hence, it is not enough to point out that an LDC would need only a small increase in its rate of economic growth in order to offset the "short term benefits of piracy."[69] The allocation and concentration of costs and benefits of the reform is also a major factor in the process.

Up to this point, all economic evaluations assume a small country context. In other words, the country's choice in terms of intellectual property regime would induce neither antagonism nor cooperation from its trade partners. As suggested above, this hypothesis has been outpaced (at least in the case of the NICs) by the reality of industrialized countries' unilateral actions against "defective" intellectual property systems. The possibility of retaliation has to be taken into account in terms of its impact on NW and on the relevant *political equation*. Expected export revenue losses (**ERL**) should be included among the variables considered in the benefit function (**g**).[70] The expected value of **NW** would then be

69. MacLaughlin, Richards & Kenny, *supra* note 48, at 107.

70. As in the case of d$R, the social cost of ERL should be estimated using the shadow-price of foreign currency relevant for the economy.

estimated as a weighted average of **NW** with and without retaliation, the weights being the perceived probabilities of retaliation and its complement. In the case of an LDC with a high **ERL**, as the probability of retaliation approaches one, the expected value of **NW** could change from a negative to a positive sign. In this context, from the perspective of an industrialized country, the appeal of *aggressive reciprocity* with respect to intellectual property rights protection is high. The political economy of a reform induced by trade retaliation, however, is quite complex.

As discussed above, the fact that **NW** becomes positive does not guarantee the reform, especially in a situation where economic calculus is influenced by external pressure. No government likes to be perceived as submitting to foreign threats. Once retaliation is implemented, domestic support for stronger intellectual property rights protection may be negatively affected. Trade retaliations are always blunt weapons. The economic groups affected by this process most likely will not be the ones that profit from "piracy." The burden of retaliation will tend to fall upon export-oriented sectors that are typically more receptive to arguments in favor of intellectual property rights protection. This fact may not influence the overall attitude of export sectors towards change, but certainly it will not enhance their commitment to the cause of intellectual property rights protection.

A final comment worth making at this point concerns the role of bureaucracies in the intellectual property systems of the Third World. These bureaucracies are quite influential in the debate and tend to adopt a critical view of First World proposals for enhanced intellectual property rights protection. Their attitude is often influenced by ideological interpretations, such as the concept of technological imperialism.[71] It is important to recognize, however, that their attitudes also reflect the predominance of a *scientific ethos* which has at its basis the norm of complete disclosure. This "culture," as Dasgupta poses it,[72] is hostile to the view of knowledge as a *private capital good* that is the foundation of the so-called mature intellectual property systems of the industrialized economies. Consequently, the dialogue between technology-oriented interests and government bureaucracies, an important domestic facet of the intel-

71. Arruda, for example, suggests that by excluding the clause of *full disclosure* in the context of patents in new technologies, industralized countries would be able to dominate markets and to control competition. Arruda, O Desenvolvimiento Tecnològico Brasiliero Atraveès de Internacionalizacão de Economica, Paper presented at the seminar A Nova Polìtica Industrial, Sao Paulo, FIPE (1988).

72. Dasgupta, *The Economic Theory of Technology Policy*, in DASGUPTA & STONEMAN, *supra* note 1, at 10.

lectual property rights debate, tends to be a difficult one.

IV. CONCLUSION

This Article has summarized the economic aspects of the debate on intellectual property rights and their relevance for the Uruguay Round negotiations from a Third World perspective. The main points are the following:

First, the impact of enhanced intellectual property rights protection upon Third World economies may vary significantly among different countries. There is no a priori strong evidence that these countries will necessarily benefit or lose from a reform of their intellectual property systems.

Second, the political economy of intellectual property rights protection helps to explain the resistance of LDCs to reforms even when a strong case based on economic self-interest can be developed.

Third, the uncertainty in terms of economic calculus, as well as legal, political and philosophical differences along the North-South divide, suggest that radical proposals will not lead the way in the Uruguay Round negotiations. The importance of trade distortions generated by discrepancies among national intellectual property systems, however, will probably continue to increase over time. In this context, GATT disciplines for TRIPs are a worthwhile goal to be pursued in the long run. Gradualism is probably the best strategy to achieve this goal. The completion of an Anti-Counterfeiting Code could be a first step in the right direction. The comity approach followed by WIPO should also be encouraged.

Finally, experience in this area has shown that unilateral actions designed to force LDCs to reform their intellectual property systems may easily backfire and, given the present stage of the debate, can lead to the *contamination* of other negotiating areas in the Uruguay Round.