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THE WTO TRIPS AGREEMENT AND GLOBAL ECONOMIC DEVELOPMENT

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The global system for the protection of intellectual property rights has entered a new era. The Agreement on Trade-Related Aspects of Intellectual Property Rights ("TRIPS Agreement") that is part of the new integrated World Trade Organization (WTO) system imposes on all Members of the WTO an obligation to establish high levels of intellectual property rights ("IPRs") protection, and to enforce these high levels of protection.¹ The TRIPS Agreement, when read in conjunction with other components of the new WTO system, is enforceable by WTO Member action through the imposition of trade sanctions.²

I. THE TRIPS AGREEMENT ERA

The TRIPS Agreement was concluded after seven years of Uruguay Round negotiations, several years of negotiations leading up to the Uruguay Round mandate, and earlier discussions of an anti-counterfeiting code tracing back to the Tokyo Round negotiations.³ As one of the principal multilateral trade agreements of the WTO, the TRIPS Agreement plays a new and important role in the international economic system. The Agreement was intended to conclude the era of global intellectual property administration under the auspices of

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1. Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization [hereinafter WTO Agreement], Annex 1C, LEGAL INSTRUMENTS—RESULTS OF THE URUGUAY ROUND vol. 31; 33 I.L.M. 81 (1994) [hereinafter TRIPS Agreement]. The TRIPS Agreement entered into force on January 1, 1995. See *id.* Regarding the terms of the Agreement, see generally Adrian Otten, *Improving the Playing Field for Exports: The Agreements on Intellectual Property, Investment Measures and Government Procurement*, in GATT URUGUAY ROUND 67 (Thomas Cottier ed., 1995); J.H. Reichman, *Universal Minimum Standards of Intellectual Property Protection Under the TRIPS Component of the WTO Agreement*, 29 INT'L LAW. 345 (1995).

2. With respect to the application of the TRIPS Agreement in the dispute settlement context, and to the imposition of trade sanctions, see Frederick M. Abbott, *WTO Dispute Settlement and the Agreement on Trade-Related Aspects of Intellectual Property Rights*, in INTERNATIONAL TRADE LAW AND THE GATT-WTO DISPUTE SETTLEMENT SYSTEM (E.-U. Petersmann ed.) (forthcoming 1997).

3. With respect to the negotiating history and objectives of the TRIPS Agreement, see Frederick M. Abbott, *Protecting First World Assets in the Third World: Intellectual Property Negotiations in the GATT Multilateral Framework*, 22 VAND. J. TRANSNAT'L L. 689 (1989).

the World Intellectual Property Organization (WIPO) which the Organisation for Economic Co-operation and Development ("OECD") industrial interests perceived as insufficiently forceful, and to initiate a new era of shared competence. In the new era, the primary rules governing the protection of intellectual property would be promulgated at the WTO. WIPO would step back into a secondary role. It would serve as an IPRs convention administrator, as a provider of technical assistance, and as a forum for considering secondary rules changes. The center of IPRs power, and the police function, would move across Geneva to the WTO.

The IPRs-dependent industries of the OECD countries cannot be faulted for pursuing the TRIPS Agreement. The value of their assets is to a greater and lesser extent defined by the level of protection accorded to IPRs. The importance of IPRs as a component of asset value varies across industrial and service sectors, and within narrow industry segments. Natural resources and access to capital are the principal asset components in many industries, such as the petroleum industry, and the value of IPRs is secondary in these industries. In other industries, such as the entertainment industry, IPRs are principal components of asset value. While the importance of IPRs to each OECD industry in 1996 may vary along a relative scale, there are few industries in which IPRs do not play a significant role. Farmers have become dependent on the planting of IPRs-protected seed strains, and are increasingly interested in the production of genetically-engineered produce.

OECD industries claim entitlement to the fruits of their innovative activity in the form of IPRs protection. Debate over the basis of this entitlement traces to the historical beginnings of IPRs protection, and is not a debate that will be resolved in this forum. To some, IPRs are a right of nature, as the ownership of one's own limbs, or one's home. To others, IPRs are purely the product of government. Whatever the fundamental basis of IPRs ownership, it has long been accepted that the scope of the IPR must be defined by government, under a public welfare analysis that balances the interests of IPRs owners and the public, just as government decides the extent of ownership rights afforded by title to land. It should not be doubted that perspectives on the scope of the rights that governments should afford to IPRs have varied over history, and among societies, just as have perspectives on the ownership of real property.

A. *Developing Country Interests in the TRIPS Negotiations*

It was certainly recognized during the Uruguay Round TRIPS negotiations that the proposed agreement would have an impact on the interests of developing countries.⁴ Many developing countries did not historically provide high levels of IPRs protection within their national legal systems. If, as a consequence of the TRIPS negotiations, those countries agreed to provide such protection, and if the IPRs to be protected were preponderantly held by OECD country enterprises, then the recognition of IP ownership rights would logically lead to a transfer of wealth from the developing to industrialized economies, at least over the short term. There was, and is, substantial agreement concerning this likely short term impact.⁵ The developing countries initially resisted negotiation of the TRIPS Agreement because they foresaw this economically undesirable outcome.

In the final analysis, the developing countries accepted the TRIPS Agreement. There were doubtless a variety of reasons for the change in perspective that took place over the course of the Uruguay Round, and different developing countries involved in the negotiations would have had different motivations for accepting the Agreement. Nevertheless, it is clear that the TRIPS Agreement was part of a package bargain.

The bargain included an agreement by the industrialized countries to reduce levels of agricultural export subsidies. This was of particular importance with respect to the European Union which provides massive subsidies for its farmers' exports of important staple crops such as wheat. The EU subsidies allow its farmers to undercut the prices of developing country farmers, and thereby diminish developing country export opportunities. The United States agreed to press the EU for concessions on agricultural subsidies, at least partly in exchange for developing country acceptance of the TRIPS Agreement. In addition to concessions on subsidies, the industrialized countries made substantial concessions with respect to imports of tropical products, and agreed to gradually phase out quotas on textile products.

In the TRIPS Agreement itself there are some important concessions to developing country interests. Most importantly, substantial

4. The developing country perspective on the TRIPS Agreement is discussed in Abbott, *supra* note 3, at 713-14.

5. See, e.g., Carlos A. Primo Braga & Carsten Fink, *The Economic Justification for the Grant of Intellectual Property Rights: Patterns of Convergence and Conflict*, 72 CHI.-KENT L. REV. 439 (1996).

transition periods are built into the Agreement, so that most obligations will not apply to developing country Members (and Members in transition from centrally-planned to market economies) until five years after the WTO Agreement has entered into force.⁶ In respect to countries that did not maintain patent protection for all areas covered by the TRIPS Agreement, there is an additional five-year period to extend product patent protection to new areas.⁷ This additional five-year patent transition period is tempered with respect to pharmaceuticals and agricultural chemicals by a so-called "mailbox" provision.⁸ A ten-year transition period generally applies to the least developed WTO Members.⁹ Industrialized country Members agree to provide incentives for their enterprises to transfer technology to least-developed Members,¹⁰ and to provide—on mutually agreeable terms—financial and technical assistance to developing and least-developed Members.¹¹ Rules with respect to the granting of compulsory licenses leave substantial discretion in the hands of national authorities.¹² The United States, at least, would have preferred tighter limits on the granting of compulsory licenses. The compulsory licensing provisions at least in part represent a concession to developing country interests.

Up to and through the Uruguay Round negotiations, the United States pursued an aggressive trade policy toward developing countries which it considered not to be adequately protecting U.S. IPRs interests.¹³ One of the motivations of the developing countries in accepting the TRIPS Agreement was to ameliorate this constant pressure from the United States. The WTO Agreement includes a commitment by Members to use the WTO dispute settlement mechanism as the means to settle trade disputes within the scope of the WTO Agreement (including the TRIPS Agreement).¹⁴ Thus, there is

6. See TRIPS Agreement art. 65:2. The general obligation of WTO Members to apply provisions of the TRIPS Agreement did not arise until January 1, 1996 (one year after the date of entry into force of the WTO Agreement). See *id.* art. 65:1. Provisions regarding national and most favored nation treatment, and respect for the Paris and Berne Conventions, also apply to developing Members one year after entry into force of the Agreement.

7. See *id.* art. 65:4.

8. The mailbox provision requires developing Members to expeditiously establish a mechanism for receiving patent applications, to eventually grant patents based upon prior art in existence when the application is filed, and to grant exclusive marketing rights for the product following regulatory approval (for a period not to exceed five years). See *id.* art. 70:8-9.

9. See *id.* art. 66:1.

10. See *id.* art. 66:2.

11. See *id.* art. 67.

12. See *id.* art. 31.

13. See Frederick M. Abbott, *Public Policy and Global Technological Integration: An Introduction*, 72 CHI.-KENT L. REV. 345, 346 n.3 (1996).

14. See WTO Agreement art. 23 (Dispute Settlement Understanding).

the appearance of a bargain between the United States and the developing countries: if they abide by their TRIPS Agreement commitments, the United States will not unilaterally decide that they are failing to live up to their international obligations and impose trade sanctions.¹⁵

Finally, it is certainly possible that the Uruguay Round would have failed as a whole if the TRIPS Agreement was not accepted by the developing countries. This would have had an adverse impact on all countries. Nevertheless, the developing countries could have ill afforded the potential result of more restricted access to major industrialized markets. The general advantages that would result from a successful conclusion of the Uruguay Round were thus an inducement to acceptance of the TRIPS Agreement.

15. Though not directly TRIPS Agreement-related, a unilateral U.S. action against Japan (regarding its automotive sector) immediately following entry into force of the WTO Agreement raised considerable concern about the nature of the Uruguay Round bargain. The United States ignored prescribed WTO dispute settlement procedures in a highly visible way, and authorized the imposition of trade sanctions against Japan contrary to WTO rules. For background regarding the U.S.-Japan dispute, see *U.S., Japan Strike Deal on Autos; Address Parts, Dealerships, Repairs*, 12 Int'l Tr. Rep. (BNA) 11 (July 5, 1995). The United States appeared to serve notice that it might well ignore a principal concession bargained for by the developing countries in the Uruguay Round negotiations; that is, an assurance that it would not unilaterally decide upon violations of international trade law (or find other trade practices "unreasonable") and thereafter impose trade sanctions. Going into the negotiations, perhaps the sorest spot for the developing countries was the unilateral U.S. pursuit of trade sanctions with respect to IPRs-related practices. In acting unilaterally against Japan, the United States signalled an apparent willingness to continue aggressive unilateral action against other WTO Members, including those which it considered to be inadequately protecting IPRs. Since its action against Japan in respect to the automotive sector, the United States has pursued several complaints regarding TRIPS Agreement matters within the WTO framework. It may be that the negative worldwide reaction to the action against Japan persuaded U.S. trade officials that policy could be more effectively carried out within the framework built during the Uruguay Round negotiations. Nevertheless, the U.S. Congress has legislatively authorized the United States Trade Representative ("USTR") to impose TRIPS Agreement-related trade sanctions on WTO Members which are in compliance with the TRIPS Agreement, in essence codifying an aggressive unilateral approach to assuring protection of IPRs. In connection with implementation of the Uruguay Round agreements, the United States amended its section 301 legislation to provide that "unreasonable" foreign country acts, policies or practices include those which deny "fair and equitable . . . provision of adequate and effective protection of intellectual property rights notwithstanding the fact that the foreign country may be in compliance with the specific obligations of the Agreement on Trade-Related Aspects of Intellectual Property . . ." 19 U.S.C. § 2411 (1994) (section 301(d)(3)(B)). That the United States may impose trade sanctions on a WTO Member despite its compliance with the TRIPS Agreement is difficult to reconcile with the spirit of the WTO Agreement. Presumably, the United States would intend to apply this rule to matters outside the scope of the TRIPS Agreement.

"Unreasonable" foreign country acts and practices provide the basis for discretionary action by USTR, whereas unlawful or "unjustifiable" practices entail a mandatory response (though subject to significant exceptions).

B. *Continuing Uncertainties*

Some attention was paid to the interests of developing countries in the TRIPS Agreement negotiating process. There remains, however, little doubt that the driving force behind the negotiations was OECD country industry groups that perceived a significant and growing threat to their valuable commercial assets represented and protected by IPRs. During the Uruguay Round negotiations, these groups devoted their efforts to assembling data intended to demonstrate the extent of this threat. They also promoted the idea that higher levels of IPRs protection would be in the best interests of the developing countries. The arguments are by now quite familiar: (1) OECD countries have high levels of IPRs protection; (2) OECD industries are very innovative; (3) if developing countries adopt high levels of IPRs, their industries will be very innovative; (4) if developing countries do not adopt high levels of IPRs, their scientists and other innovators will leave because they will not be adequately rewarded for their innovation; and (5) if developing countries do not adopt high levels of IPRs, then industrialized country IPRs-holders will not transfer technology to them.¹⁶

By way of contrast, a recent study under United Nations auspices sought to determine what correlation there had been between developing countries that grant high levels of IPRs protection and the level of foreign investment,¹⁷ the assumption being that increased foreign investment stimulates economic development. This study found an absence of correlation. The developing countries that have received the highest levels of Foreign Direct Investment ("FDI") over the past decade were the same countries that appeared on the USTR's list of the worst IPRs violators — Argentina, Brazil, North Korea, the People's Republic of China ("PRC"), Thailand, etc.¹⁸ Moreover, developing countries without other strong economic attractions, but which

16. The Uruguay Round negotiations generated a particular form of economic analysis of the relationship between IPRs and economic development: the "industry-" or "quasi-industry-sponsored" study. These were studies by lawyers and economists working with a consultancy or similar industry interest in the outcome of the work, that set out in advance to demonstrate the benefits to developing countries of enhanced levels of IPRs protection. See, e.g., *INTELLECTUAL PROPERTY RIGHTS: GLOBAL CONSENSUS, GLOBAL CONFLICT?* (R.M. Gadbaw & T. Richards eds., 1988); Robert Sherwood, *The Benefits Developing Countries Gain from Safeguarding Intellectual Property* (June 1988) (manuscript cited in Abbott, *supra* note 3, at 693 n.16).

17. See U.N. Transnational Corps. & Management Div., Dep't of Econs. & Soc. Dev., *Intellectual Property Rights and Foreign Direct Investment*, ST/CTC/SER.A/24 (1993) [hereinafter *Foreign Direct Investment*]; accord Edson Kenji Kondo, *Patent Laws and Foreign Direct Investment: An Empirical Investigation*, UMI Dissertation Services (May 1994).

18. *Foreign Direct Investment*, *supra* note 17, at 3-4.

granted high levels of IPRs protection (e.g., Nigeria) have not attracted higher levels of FDI than other similarly situated countries.

The arguments suggesting that higher levels of IPRs protection will benefit the developing countries are logical. They may in small or large part be correct. But the train of logic is not supported by empirical evidence.¹⁹ More importantly, these arguments capture only a small part of how IPRs and their globalization might effect economic development. For example, if a U.S. business refuses to transfer its manufacturing data to a developing country because that country does not recognize its patents, and after the developing country agrees to grant patent protection the U.S. business transfers its technology and begins to manufacture there, the developing country may experience an IPRs-related welfare gain. But there are a number of possible scenarios under which the local welfare gain may be greater, for example if a local group had been able to finance the start-up of its own manufacturing facility and obtain a reasonably-priced license of the technology. It is not just a question of whether technology will be transferred, but under what conditions.

There remains considerable uncertainty concerning the impact of the TRIPS Agreement on global economic development.²⁰ The past five years have seen an increased attention by economists to the relationship between IPRs and international economic development, and IPRs and trade.²¹ While it is clear that substantial progress is being

19. See, e.g., Keith E. Maskus, *Trade-Related Intellectual Property Rights*, in COMMISSION OF THE EUROPEAN COMMUNITIES, EUROPEAN ECONOMY, NO. 52, at 172 (1993), stating:

In truth, there is little systematic evidence that natural market mechanisms for appropriating returns on innovation have been eroded and that stronger patents would correct the situation. This is an unfortunate gap in our understanding of the situation and leaves unresolved the important empirical question of whether greater protection of IPRs would call forth substantially more inventive activity. This question lies at the heart of the debate over international protection of IPRs.

20. Up to and through the 1980s, the relationship between IPRs and international economic development was the subject of few studies by economists. This scarcity was noted in, for example, Carlos Alberto Primo Braga, *The Economic of Intellectual Property Rights and the GATT: A View from the South*, 22 VAND. J. TRANSNAT'L L. 243, 254 (1989). One excellent early study was EDITH TILTON PENROSE, *THE ECONOMICS OF THE INTERNATIONAL PATENT SYSTEM* (1951). Among studies that had been done, the absence of empirical referents was striking. The typical article would read more or less as follows: assume a two-country/two-good world. Assume that the effects of a trademark are X. If a trademark does X, and X is introduced into a developing country economy, and assuming that X is as to a developing economy as it is to an industrialized economy, then mathematical analysis suggests that Y will occur. See, for example, M.L. Burnstein, *Diffusion of Knowledge-Based Products: Application to Developing Economies*, 22 ECON. INQUIRY 612 (1984), with reference to patents. Though these studies may well have had value in suggesting areas where empirical research would be valuable, they did not appear to provide a solid foundation for international IPRs policy planning.

21. Primo Braga and Fink's contribution to this Symposium reviews these studies in detail. See Primo Braga & Fink, *supra* note 5, at 446-53; see also Maskus, *supra* note 19, at 157.

made in collecting empirical data and refining tools of analysis, the conclusions that have been reached to date only begin to illuminate the relationship between IPRs and international economic development. The contribution by Primo Braga and Fink to this Symposium reflects the *state of the art* in this field, and its authors use care in offering conclusions. Having reviewed the economics literature concerning the impact of higher levels of IPRs on developing countries, the authors observe:

This brief review underscores the limitations of normative recommendations concerning changes in the rules for IPRs at world level. The strengthening of IPRs protection will have different welfare implications depending on the characteristics of each country. Generalizations can only be made if strong assumptions are adopted. For example, if one assumes that the supply of innovations in the South (i.e., in the developing world) is rather inelastic and that IPRs regimes are of limited relevance in influencing trade, foreign direct investment, and technology transfer, then it follows that the [TRIPS] Agreement is in essence an exercise in rent transfer. A much more optimistic view of its welfare implications for developing countries, however, can be put together if the opposite assumptions are held.²²

Yet in the midst of a sea of theoretical and doctrinal controversy concerning the nature of IPRs and their potential impact on public welfare, it may nevertheless be possible to reach consensus at a high level of abstraction on the impact of the TRIPS Agreement on global public welfare. *The TRIPS Agreement in some undetermined measure enhances the economic advantages of holders of IPRs capital.* It is as if to say that all holders of \$100 capital now have \$101. We do not know what the capital owners will do with their increased assets, or whether an additional \$1 can buy additional market share. Perhaps it might merely be said that before the TRIPS Agreement the \$100 capital was rather insecure and subject to rapid dissipation, and now it is more secure. This is still an economic advantage. Perhaps it will be easier for more persons to accumulate \$100 in the future. Perhaps the formation of capital on a global basis has been facilitated. But in any event, it would seem uncontroversial to suggest that IPRs capital has been made more secure, and that in this sense the value to its holders has been increased. This, after all, was the whole point of the TRIPS negotiations.²³ There is a risk that the higher level of IPRs security

22. Primo Braga & Fink, *supra* note 5, at 443 (footnotes omitted).

23. IPRs concentration may be exacerbated by more effective systems for the globalization of IPRs made possible by WIPO-administered conventions like the Patent Cooperation Treaty ("PCT").

will lead to or embed a stratification and concentration of IPRs ownership in OECD country-based enterprises, with public consequences both in the developing and industrialized countries. Public policy makers must now earnestly turn to this other side of the TRIPS equation.

II. THE TRIPS AGREEMENT, IPRs CONCENTRATION, TECHNOLOGICAL INTEGRATION, AND PUBLIC WELFARE

A. *The Sources of Concern*

1. Technology "Have" and "Have Nots"

Trademarks are used to generate demand for products in developing and developed markets throughout the world. Patents protect the innovation embodied in the products being marketed. The entertainment media and software industry are increasingly important factors in the international economic arena, and the protection afforded by copyright has taken on a new importance. Ubiquitous trademarks, patented technology, and commercially valuable copyrighted material are preponderantly owned by OECD country-based enterprises.²⁴ A comparable ownership allocation applies to investment capital.²⁵ As noted earlier, during the Uruguay Round negotiations, OECD country industry groups promoted the idea that higher levels of IPRs protection would stimulate inventive activity in the developing countries, and would provide a secure environment which would encourage FDI and a higher level of technology transfer from the North to the South. Presumably in consequence, the disparity in ownership of IPRs between developed and developing countries would be self-correcting over time. However, neither the occurrence of this self-correcting effect nor its time frame are certain. If the dis-

24. See, for example, Primo Braga & Fink, *supra* note 5, at 442 n.8, observing: "By 1982, of the 200,000 patents awarded by developing countries, for example, 175,000 (87.5%) were awarded to foreign patentees. For the major developing countries, the share was around 79%." See also, for example, Maskus, *supra* note 19, at 157; Carlos A. Primo Braga, *Trade-Related Intellectual Property Issues: The Uruguay Round Agreement and its Economic Implications, in The Uruguay Round and the Developing Economies* (1995) (presented at the World Bank Conf., Jan. 26-27, 1995); the annual White Paper of the Japanese Ministry of International Trade and Industry, JETRO, *WHITE PAPER ON INTERNATIONAL TRADE: JAPAN 1992* (1992) (discussing the importance of technological leadership in Japan vis a vis its Asian work-sharing partners) [hereinafter *MITI WHITE PAPER*]; and Teresa Riordan, *Which Companies Had the Most Patents in 1994? It Depends on Which Set of Statistics You Believe*, N.Y. TIMES, Apr. 3, 1995, at D2 (indicating high concentration of patent grants to large multinational enterprises).

25. See D. Greenaway, *Trade and Foreign Direct Investment*, in *EUROPEAN ECONOMY* NO. 52, at 103, 105 (1993). For example, the "rest of world" outside the OECD in 1988 held 6.3% of the total world stock of FDI.

parity in technological expertise and IPRs ownership will not be self-correcting, or if the time frame for correction is lengthy, is this a concern of the international community?

Assume *arguendo* that the global economic system is or becomes sharply divided between technology "have" and "have not" countries. At least some public policy planners in the United States and Japan view the maintenance of technological dominance as critical to sustained economic growth in an increasingly competitive international economy.²⁶

There are at least two fairly realistic risks that may be associated with a substantial skewing of the international trading system among the technological haves and have nots. The first is that the developing country governments will determine that market opening and the provision of IPRs protection do not constitute effective pro-growth policies, and they will revert to import substitution policies and market closure in order to protect their markets from technologically dominant suppliers. A reversion to import substitution policies would most likely lead to a replay of the period of stagnant developing country economic activity such as what occurred from the late 1960s to the mid-1980s. Market closure and stagnant economic development in the developing countries impacts not only the directly affected states and their nationals, but also has negative consequences for OECD country trade and investment, and for the international financial system. The Mexican Peso Crisis of 1994-95 demonstrated the extent to which global economic markets have become interdependent, and highlighted the risks associated with such interdependence.

The second potential consequence is the emergence of threats to security, *i.e.*, minimum public order. If Japan treats the PRC, the Korean Peninsula, and Southeast Asia as a cheap labor haven, and the United States treats Mexico and other Latin American countries in a similar way, antagonistic political relations may result. The United States is virtually immune from military threat to its territory,²⁷ but U.S. investments in Latin America (and elsewhere) are not secure

26. The emergence of advanced technology as a key component of economic growth in the industrialized countries is a major theme of both LAURA D'ANDREA TYSON, *WHO'S BASHING WHOM?* (1992) and LESTER THUROW, *THE COMING CLASH* (1992). The MITI WHITE PAPER, *supra* note 24, at 103, notes that within Japanese international work-sharing arrangements, the higher value-added high technology component of manufacturing processes tends to take place in Japan, while the lower value-added labor intensive components are performed in Southeast Asian countries. The pursuit of policies of technological dominance, and the pursuit of benign technology transfer policies, may not be mutually exclusive, but they are facially inconsistent.

27. Though potential terrorist threats to internal security should not be discounted.

from civil or military capture. Because of its comparatively weaker military forces and its geographical situation,²⁸ Japan is in a more tenuous position than the United States with respect to both its external investments and its territory.

A pattern of wealth accumulation among the technologically sophisticated (e.g., well-educated), and the existence of a disenfranchised "underclass," is a phenomenon visible in the national sphere.²⁹ The creation of a schism between rich and poor in the national sphere has manifested itself in domestic security difficulties.³⁰ The occurrence of a similar phenomenon on the international plane can be envisaged, even if not as a "most likely" scenario. The EU has experienced some significant public order disturbances arising out of immigration from the poorer developing world. The potential for alleviating international minimum public order concerns might justify attempts by the OECD to prevent the continuation or exacerbation of a sharp skewing between standards of living in the developed and developing worlds.

But assume that the international trading system could be divided among the rich and poor, the technology haves and have nots, for an indefinite period without threat to the international economic system as a whole, and without raising minimum public order concerns. There is nevertheless an important place for *humanitarian* concern in the international economic system. From the founding of the General Agreement on Tariffs and Trade ("GATT") forward, the community of international economic specialists has maintained a strong bias in favor of promoting human rights and human dignity through special attention to the interests of developing countries. There is every indication among the present generation of international economic specialists that a strong interest persists in promoting human rights as a core goal of the international economic system.

2. Technology Concentration in the OECD

The concentration of technological expertise and IPRs ownership in large-scale OECD enterprises is not exclusively an industrialized developing country problem (or potential problem). Assuming, *arguendo*, that extending high levels of IPRs protection on a global basis

28. The proximity of Japan to the PRC and North Korea is of more concern from a security standpoint than the proximity of the United States to Mexico and Canada.

29. See, e.g., JOHN KENNETH GALBRAITH, *THE CULTURE OF CONTENTMENT* (1992).

30. For example, the South Los Angeles riots following the Rodney King verdict and the proliferation of drug-related violence.

solidifies the dominant or quasi-dominant position of existing large-scale enterprises in the global industrial and services sectors, the pattern of concentration will not only exist in the developing countries. There is a risk that the OECD economies will become more highly stratified among those enterprises that can afford to incur large-scale research and development expenses, as well as global advertising expenses, and those that cannot. It seems at least intuitively apparent that enterprises which achieve scale economies on a global basis, and penetrate the global consumer market, have significant advantages over small competitors and potential competitors, at least as far as the large-scale accumulation of capital is concerned. Would policy makers be satisfied by a world of personal computers dominated by seven large multinational producers, if two were Japanese, three were American, one was Korean, and one was Taiwanese? What if all of these computers used an operating system licensed by the same company? What if they all depended on two companies for their microprocessors? What if all of these producers had become so innovative as a consequence of huge research and development expenditures, and so efficient in production as a consequence of international work-sharing arrangements (taking advantage of the lowest production cost in each country), that it became virtually impossible for a new producer to enter the international market? Though at the moment this is a purely speculative exercise, the question is nevertheless not entirely an esoteric one, as at least some trends toward this result are evident in the computer industry. The global market in automobile production is one in which the number of producers has been consistently shrinking through merger activity, and in which capital barriers to entry have become prohibitive. The basic point is this: while concentration of capital in the OECD countries may be of greatest concern to the "have not" developing countries, it is not an entirely moot issue from an OECD public policy perspective.

In the United States and the EU, competition authorities have long sought to assure that IPRs are not abused.³¹ Recently, the U.S. Department of Justice in its IPRs Licensing Guidelines³² has suggested the IPR should be treated as other forms of property—real

31. For a survey of OECD country competition law and practice with respect to IPRs, see OECD, *COMPETITION POLICY AND INTELLECTUAL PROPERTY RIGHTS* (1989).

32. U.S. Dep't of Justice & Fed. Trade Comm'n, 1995 Antitrust Guidelines for the Licensing of Intellectual Property, 34 I.L.M. 1115 (Apr. 6, 1995) [hereinafter DOJ Guidelines]; see also OECD, *COMPETITION POLICY AND INTELLECTUAL PROPERTY RIGHTS* (1989).

property, for example—in competition law analysis.³³ To paraphrase the Department of Justice, IPRs are another component of capital, like money or machinery.³⁴ Capital may be abused in a variety of different ways for anticompetitive purposes. However, the ownership of capital is not itself abusive, nor is it evidence of abuse. As with other forms of capital, so it is with IPRs. In the acts of the IPRs owner abuse may be found; but the ownership of the IPR itself is neither evidence of market power, nor certainly of abuse. As the Department of Justice was careful to point out, federal courts in the United States have not been of one mind on this philosophical perspective, some concluding that ownership of IPRs should be equated with market power.³⁵

The European Union has actively policed against the abuse of IPRs in the inter-Member, or intra-Union, trade context. There is a rich history of decisional law from the European Court of Justice, as well as a history of policy determination by the European Commission, that places significant limitations on market allocation based on IPRs.³⁶

In addressing potential IPRs-related concentration problems at the intra-OECD level, the principal focus of public policy planners should be on the development and effective application of competition law rules relating to IPRs. The contributions by Wolfgang Fikentscher and Ernst-Ulrich Petersmann to this Symposium analyze in detail some of the important ongoing efforts to improve the interna-

33. See DOJ Guidelines, *supra* note 32, at 1120 ¶ 2.1.

34. The DOJ Guidelines state:

That is not to say that intellectual property is in all respects the same as any other form of property. Intellectual property has important characteristics, such as ease of misappropriation, that distinguish it from many other forms of property. These characteristics can be taken into account by standard antitrust analysis, however, and do not require the application of fundamentally different principles.

Id.

35. See *id.* at 1121 n.10.

36. EU and U.S. policies with respect to importation of goods place on markets with the consent of IPRs holders is described and analyzed in Frederick M. Abbott (Co-Rapporteur), *First Report to the Committee on International Trade Law of the International Law Association on the Subject of Parallel Importation*, presented at ILA Helsinki Biennial Conf. (Aug. 1996). The European Court of Justice, from the virtual inception of the European Economic Community, has grappled with the question whether Member State IPRs laws may be used to restrict the free movement of goods and services between the Member States. As a general proposition, the ECJ has been hostile to prohibitions on parallel importation within the Union, fashioning a broad “intra-Union exhaustion” rule. With respect to intra-Union exhaustion, see Giuliano Marengo and Karen Banks, *Intellectual Property and the Community Rules on Free Movement: Discrimination Unearthed*, 15 EUR. L. REV. 224, 243-44 (1990) (citing, e.g., *Deutsche Grammophon v. Metro* (copyright), *Centrafarm v. Sterling Drug*, and *Centrafarm v. Winthrop* (patent and trademark)).

tional competition law framework.³⁷ Of course, if OECD policy-makers are right, and developing country enterprises that make heavy use of IPRs become more competitive with similar OECD enterprises, the potential problem of IPRs concentration in the OECD will be reduced.

B. Responding to Development-Related Concerns

Uncertainty concerning the long range impact of the TRIPS Agreement on the developing countries is not an excuse for ignoring its potential effects. There are a number of useful steps that might be taken to promote and assure that a balance between the private advantages accorded to the holders of IPRs and the public interest is achieved. If it turns out that granting high levels of IPRs protection provides great benefits to the developing countries, it is doubtful that measures taken to promote technological development in these countries will have impeded this result.

1. Filling the Information Gap

A central item on the agenda must be to undertake a comprehensive research program concerning the impact of IPRs ownership on economic development, as well as to identify patterns of concentration in the technology and IPRs fields (and the potential effects of such concentration, if any). Progress in this field of analysis is hampered by the lack of collected empirical data. Economists have made some recent progress in this area, and the economics profession has identified this field as one of urgency. Nevertheless, a higher level of funding and coordination for such activities would certainly be desirable.

There is a critical need in the IPRs-trade arena to work toward the creation of a policy-neutral research and analysis source. It may be that academic economists and social scientists are best suited to filling this role. Alternatively, perhaps a commission(s) in which researchers with a variety of policy perspectives share the same task might produce comparatively objective results.

37. See Wolfgang Fikentscher, *The Draft International Antitrust Code ("DIAC") in the Context of International Technological Integration*, 72 CHI.-KENT L. REV. 533 (1996), and Ernst-Ulrich Petersmann, *International Competition Rules for Governments and Private Business: A "Trade Law Approach" for Linking Trade and Competition in the WTO*, 72 CHI.-KENT L. REV. 545, 554-58 (1996).

2. Institutional Responses

Financial resources are at the heart of the technology/IPRs disparity problem. Technology that is owned by OECD-based enterprises can often be licensed, but not cost-free. Developing country students can be trained at OECD institutions of higher learning, but at considerable expense. OECD-based enterprises that develop and own IPRs resources are not charitable institutions, and public planners should not expect them to donate their resources. A lack of available capital at the global institutional level must be taken into account as a significant constraint on any program to transfer technological resources to, or to create technological resources in, the developing countries.

Furthermore, the global political situation is not ripe for the creation of an international technology development and transfer-related institution on a large scale, e.g., WIPO transformed into a global technology world bank. With most OECD countries experiencing what national politicians attack as “cheap-developing-country-labor-induced-underemployment,” to suggest that these same politicians should undertake to provide funds to make developing country enterprises more competitive with the OECD industrial base would be unrealistic.

In light of the foregoing constraints, at least five potential responses to the disparity between the technology “have” and “have not” countries are likely to occur, or may be recommended. These are: (1) passive resistance to TRIPS Agreement-based changes by developing countries; (2) an international antitrust approach; (3) work by non-governmental organizations (“NGOs”); (4) the use of domestic tax policy to balance IPRs ownership and the public interest; and (5) the development and implementation of international and regional industrial policy programs.

a. Passive resistance

Perhaps the most likely course of the developing countries with respect to the TRIPS Agreement will be a continuation of past practices. They will continue to resist changes to their IPRs laws, and when they do make changes, they will be slow to enforce them in favor of foreign enterprises. To the extent that the TRIPS Agreement may adversely affect the economic interests of developing countries, passive resistance of this type may under present financial circumstances be the most likely countermechanism.

b. *International antitrust/competition law*

Effective policing of the international economic system against IPRs-related competitive abuses through the use of competition laws would be consistent with present governmental approaches to IPRs and the threat of concentration. The TRIPS Agreement permits Member governments to police against the abuse of IPRs within their own national competition law frameworks.³⁸ Members are politely encouraged to share information,³⁹ and the Agreement permits the granting by Members of compulsory licenses to remedy anticompetitive abuses of IPRs.⁴⁰ On the other hand, the TRIPS Agreement does not obligate its Members to police against IPRs-related competitive abuses.

Developing countries have a particular interest in the potential application of competition rules with respect to IPRs. Developing markets tend to be less competitive than more highly developed markets in the general market economy environment. This situation arises from a combination of factors affecting developing markets, including the relative absence of effective rule-making and enforcement structures, the presence of smaller numbers of major market participants, concentrations of ownership, and more active government participation as market actor.

There obviously remains much work to be done in constructing an effective international system for protecting against abuses in the IPRs domain. As already noted, the range of activities among governments and scholars regarding efforts to coordinate, if not harmonize, competition law at the international level is extensive. Most likely, this work will proceed through the gradual refinement of competition rules in the TRIPS Agreement, and through a combination of more general programs, within the WTO framework and elsewhere. Special attention will need to be directed to the unique problems faced by developing countries in the effective application of competition rules. Assistance by OECD competition offices in the establishment and operation of developing country competition offices may be very desirable, and might be modeled on the assistance programs operated by WIPO and national/regional IP offices in favor of developing countries.

38. See TRIPS Agreement art. 40:1-2. An illustrative list of practices refers to "exclusive grantback conditions, conditions preventing challenges to validity and coercive package licensing." *Id.* art. 40:3.

39. See *id.*

40. See *id.* art. 31(k)-(l).

c. Non-governmental organizations

NGOs have made important contributions in the field of environmental policy and international trade. NGOs have been less active, or at least less visible and successful, with respect to other aspects of international economic policy. With a more substantial presence in the international IPRs field, NGOs could make important contributions in favor of developing countries.

d. IPRs-related tax policy

The TRIPS Agreement does not require that patents, trademarks, copyrights, or other forms of IPRs protection be granted or maintained on a tax free basis.⁴¹ Patent holders, for example, could be required to pay annual taxes based on revenues received from sales of patented products or from patent licenses.

The main limitation on an IPRs-based tax is the national treatment principle as set forth in TRIPS Agreement Article 3. This article requires each Member to treat nationals of other Members no less favorably "with regard to the protection of intellectual property" than it treats its own nationals. Footnote 3 to Article 3 makes clear that the imposition of taxes would be subject to the national treatment principle. It provides that "protection shall include matters affecting the availability, acquisition, scope, maintenance and enforcement of intellectual property rights . . ."⁴² Therefore, in applying IPRs-based taxes to OECD-based enterprises, developing countries must also apply IPRs-based taxes to their own enterprises. In theory, this might discourage innovation by domestic enterprises.

There are, however, two reasons why the national treatment principle should not be an insurmountable obstacle to the use of IPRs-based taxes to balance IPRs-based wealth. First, if the preponderance of industry-related IPRs in a developing economy are owned by OECD-based enterprises,⁴³ tax burdens will fall disproportionately on these enterprises. Second, under express and customary GATT rules with respect to the GATT Article III (national treatment), the re-

41. Taxes are an ordinary incidence of property ownership, and are not expressly precluded by the TRIPS Agreement. The GATT 1994 accepts that national governments will impose taxes with respect to the production and sale of goods. *See, e.g.*, General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, T.I.A.S. 1700, 55 U.N.T.S. 194, art. III.

42. *See* TRIPS Agreement art. 3. Application of Article 3 by the developing countries is not subject to transition arrangements, and so applies one year following January 1, 1995. *See* TRIPS Agreement art. 65.

43. The nationality of ownership is an empirical issue which, at least in the fields of patents and trademarks, can be answered by a search of local patent and trademark office records.

quirement that governments treat domestic and imported products on an equivalent basis applies to "like products." Although the "like products" language of GATT Article III is not found in TRIPS Agreement Article 3, there is nothing in the TRIPS Agreement language that would preclude a government from imposing different rates of taxation on the maintenance of IPRs with respect to different classes of products. Thus, pharmaceutical product patent maintenance taxes might be different than mechanical engineering patent maintenance taxes.

It is important to stress that taxation mechanisms are subtle instruments. The goal of any IPRs-related tax policy must be to seek a responsible balance between ownership of innovation and general economic welfare. IPRs-related tax policy must not be confiscatory. IPRs-based taxes would transfer wealth from IPRs holders through governments to the public. There is no assurance that governments will pursue thoughtful public planning any more than there is assurance that private enterprises will do so. It cannot therefore be suggested that IPRs-based taxes are a panacea for the imbalance in technology ownership among OECD and developing country enterprises. Taxes may, however, prove at least to be a bargaining lever by which the developing countries can obtain a higher level of cooperation from OECD-based enterprises.⁴⁴ IPRs-based taxes appear consistent with Article 7, "Objectives," of the TRIPS Agreement, which provides:

The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.⁴⁵

It is also worth noting that IPRs-based taxes might be used in the OECD countries to balance the rights of IPRs holders and the public.

e. International industrial policy

Industrial policy refers to governmental efforts to direct private resources toward particular social goals. The U.S. government frequently employs industrial policy, for example, to promote the development of military technologies. The Japanese government employs

44. Optimally, the developing countries would seek to coordinate their IPRs-related tax policies so as to avoid presenting private enterprises with the opportunity to bargain over conditions of taxation.

45. TRIPS Agreement art. 7.

industrial policy to maintain high levels of stable employment. All other things being equal, the operation of the free market is preferable to industrial policy because recourse to industrial policy may adversely affect individual interests.⁴⁶ Nevertheless, there are circumstances under which the operation of the free market may be less than optimal from a social welfare perspective.

The TRIPS Agreement places an obligation on developed country Members to "provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least developed country Members in order to enable them to create a sound and viable technological base."⁴⁷

There are many mechanisms by which the international community could encourage the transfer of technology resources to developing countries. World Bank loans could be made available for the training of developing country engineers in OECD educational institutions. A multilateral investment agreement could obligate or encourage investing enterprises to hire and train local engineers. International financial institutions in cooperation with developing country governments could finance joint research and development efforts designed to maximize local resources. As earlier observed, international industrial policy directed at enhancing developing country technological capability is wishful thinking in the absence of financial resources. Developing countries may therefore want to explore their own pooling of financial resources, just as OECD-based enterprises pool their resources in research and development ("R&D") joint ventures.⁴⁸

f. Regional integration and industrial policy

The EU is following this path in its various plans for the development of the European technological infrastructure. Title XV of the EC Treaty (as amended by the Maastricht Treaty) is wholly devoted to a program of technology-related industrial policy.⁴⁹ The developing countries may well seek to accomplish the goal of pursuing a technological balance with the OECD by emulating the EU regional effort in

46. See Frederick M. Abbott, *Trade and Democratic Values*, 1 MINN. J. GLOBAL TRADE 9 (1993), for more detail on this theme.

47. TRIPS Agreement art. 66:2.

48. International agencies such as WIPO might assist in such enterprises.

49. Treaty Establishing the European Community, Mar. 25, 1957, arts. 130f-130p, 1992 O.J. (C 224) 1, [1992] 1 C.M.L.R. 573 (1992); see, e.g., THE FINAL REPORT OF THE EUROPEAN COMMISSION ON RESEARCH AND TECHNOLOGICAL DEVELOPMENT IN THE LESS FAVORED REGIONS OF THE COMMUNITY (STRIDE) (1987).

its research and technological development programs. The Mercosur countries, for example, might seek in their cooperation negotiations with the EU to build ties between Mercosur and EU R&D programs. Similarly, the Andean Pact, which experienced difficulties with the relatively confiscatory technology transfer approach of Decisions 84 and 85, might emphasize a redirection to a regional R&D development program.⁵⁰

A regional institutional approach to technological development, coupled with other approaches, may over the next decades begin to bring into balance the state of technological development in the OECD and developing countries.

3. The Information Revolution as a Non-Institutional Development

The changes to patterns of economic development that may be brought about as a consequence of the information revolution are exceedingly difficult to foresee or predict. What may be observed at the present is that a basic telephone connection and a fairly inexpensive computer can be used to link an individual at virtually any point on the globe to a vast collection of data and human resources. The international system for the protection of IPRs is in various measures designed to restrict open access to data that may be useful in producing goods and services, particularly as such production may conflict with the rights of patent holders. Yet the present proliferation of information, scientific and otherwise, is so extensive that its impact on the distribution and use of knowledge-based resources may be great, even in light of existing IPRs restrictions. The potential results cannot readily be extrapolated from experience.

If the Internet or comparable systems of information transfer remain as open as at present, it may be exceedingly difficult for present

50. The Andean Pact countries attempted in the mid-1970s to restructure the international IPRs balance by the adoption of Decisions 84 and 85. See generally Frederick M. Abbott, *Bargaining Power and Strategy in the Foreign Investment Process: A Current Andean Code Analysis*, 3 SYRACUSE J. INT'L L. & COM. 319, 346-51 (1975). These Decisions were intended to severely restrict the ability of foreign IPRs-owners to establish and transfer income based on IPRs ownership, and included significant restrictions on IPRs ownership. The Andean Pact countries have gradually adopted a more balanced approach to their technology sectors, and have been moving towards compliance with TRIPS Agreement standards. See Andean Group: Commission Decision 313-Common Code on Intellectual Property, 32 I.L.M. 180 (1993); *Colombia's Granting of Drug Patents Raises Questions on Andean Pact Rules*, Int'l Bus. & Fin. Daily (BNA) (Aug. 31, 1994); *Intellectual Property in Andean Accord Worries U.S. Industry, USTR Official Says*, 10 Int'l Tr. Rep. (BNA) 427 (Mar. 10, 1993). The Andean Pact historical progression appears to demonstrate the importance of and difficulties in balancing the interests of IPRs owners and the public, and the Andean Pact effort in the technology and IPRs field is worthy of close study.

holders of knowledge-based wealth to exercise control over their knowledge base. Large-scale private investments in research and development may become international public goods. Moreover, even if holders of IPRs continue to exercise control over technological resources, second-best technologies (e.g., those that have fallen outside patent protection) may be very useful in developing country markets. It must be acknowledged that access to technology alone may not suffice in the absence of investment capital. In this regard, international institutions such as the World Bank may continue to play a substantial role, at least in periods of initial capital formation in developing economies. Nevertheless, in the final analysis, the international institutional response to the problem of disparities in the ownership of IPRs-based wealth may be in the process of becoming less important—with one very significant proviso. That proviso, of course, is that international institutions do not respond to the information revolution by attempting to crush it.

4. Synthesis

The optimal approach to creating and maintaining an equitable balance in the international IPRs system will likely involve a combination of approaches. The goal of the international IPRs system should be to promote innovation, while protecting against the continuation and exacerbation of a stark division of the global economic system among the technological haves and have nots. The importance of the relationship between IPRs and economic development is apparent. Long delays in implementing policies in favor of reducing disparities in knowledge-based wealth seem likely—though not certain—to exacerbate long term problems. Developments in technology itself—embodied in the information revolution—may greatly assist in equalizing the distribution of technology. Initial capital formation may nevertheless remain an obstacle to putting technology to use. Disputes will certainly arise as to the proper means of distributing the fruits of the information revolution. Herein lies the role of the public policy planner — promoting a balance between highly useful private capital formation and the general social welfare of humankind.

