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THE TRUST AND DISTRUST OF INTELLECTUAL PROPERTY RIGHTS

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Article abstract

Access to information and knowledge is closely linked to intellectual property rights, and a fair, balanced, and robust international intellectual property regime is needed to give everybody an equal opportunity to fully participate in the information revolution. This article examines the international intellectual property regime as it relates to the development of an inclusive global information society. It begins by providing an overview of intellectual property rights and justifications for protecting those rights. It then explores the increased distrust of the intellectual property system, especially among less developed countries, human rights advocates, development specialists, and those on the unfortunate side of the digital divide. The article delineates five prerequisites for the development of a fair, balanced, and robust international intellectual property regime: (1) thorough understanding, (2) balanced debate, (3) equal dialogue, (4) a fair regime, and (5) global solidarity. It concludes by critically examining those portions of the WSIS *Declaration of Principles* and *Plan of Action* that are related to intellectual property and traditional knowledge.

THE TRUST AND DISTRUST OF INTELLECTUAL PROPERTY RIGHTS

By Peter K. Yu[*]

Access to information and knowledge is closely linked to intellectual property rights, and a fair, balanced, and robust international intellectual property regime is needed to give everybody an equal opportunity to fully participate in the information revolution. This article examines the international intellectual property regime as it relates to the development of an inclusive global information society. It begins by providing an overview of intellectual property rights and justifications for protecting those rights. It then explores the increased distrust of the intellectual property system, especially among less developed countries, human rights advocates, development specialists, and those on the unfortunate side of the digital divide. The article delineates five prerequisites for the development of a fair, balanced, and robust international intellectual property regime: (1) thorough understanding, (2) balanced debate, (3) equal dialogue, (4) a fair regime, and (5) global solidarity. It concludes by critically examining those portions of the WSIS *Declaration of Principles* and *Plan of Action* that are related to intellectual property and traditional knowledge.

L'accès à l'information et au savoir est une question étroitement liée à celle des droits de la propriété intellectuelle, et un régime international juste, équilibré et robuste de la propriété intellectuelle est nécessaire afin de donner à tous une opportunité équivalente de participer pleinement à la révolution s'opérant dans le domaine de l'information. Cet article examine le lien amené à s'établir entre le régime international de la propriété intellectuelle et le développement d'une société de l'information globale et inclusive. Il commence par une vue d'ensemble sur l'état actuel des droits de la propriété intellectuelle et les justifications avancées pour protéger ces droits. Il explore par la suite la méfiance croissante entretenue à l'égard du système de la propriété intellectuelle, particulièrement parmi les pays moins développés, les défenseurs des droits de l'homme, les spécialistes en développement, et ceux se trouvant du côté malheureux du fossé numérique. L'article trace cinq préalables au développement d'un régime international juste, équilibré et robuste de la propriété intellectuelle : (1) une compréhension approfondie, (2) un débat équilibré, (3) un dialogue d'égal à égal, (4) un régime juste, et (5) une solidarité globale. Finalement, il conclut par un examen critique des parties de la *Déclaration de principes* et du *Plan d'action* du SMSI traitant de la propriété intellectuelle et du savoir traditionnel.

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> The arrival of the digital era provides great opportunities for developing countries in accessing information and knowledge. The development of digital libraries and archives, Internet-based distance learning programmes, and the ability of scientists and researchers to access sophisticated on-line computer databases of technical information in real time are just some examples. But the arrival of the digital era also poses some new and serious threats for access and dissemination of knowledge. In particular, there is a real risk that the potential of the Internet in the developing world will be lost as rights owners use technology to prevent public access through pay-to-view systems.
>
> Commission on Intellectual Property Rights[1]

> It is intellectual property […] that provides the key to the distribution of wealth, power, and access in the information society. The intellectual property regime could make or break the educational, political, scientific, and cultural promise of the Net.
>
> James Boyle[2]

Introduction

In the past, intellectual property issues were considered arcane, obscure, complex, and highly technical; they were only of interest and concern to specialized attorneys, legal scholars, technology developers, and intellectual property rights holders. As Professor Susan Sell wrote, "[t]o a certain extent IP law is reminiscent of the Catholic Church when the Bible was in Latin. IP lawyers are privileged purveyors of expertise as was the Latin-trained clergy."[3]

Thanks to the Internet and new communications technologies, intellectual property has now begun to play a more significant role in society. Using these technologies, people can converse with others via e-mail and online chat rooms, look up information in virtual libraries, increase their knowledge by taking distance-learning courses, and publish social commentaries on their own websites. Because these activities often implicate intellectual property protection, policymakers have increasingly had to consider intellectual property a matter of public significance – something that affects the daily lives of their nationals while providing them competitive advantages against rival trading partners. Ultimately, intellectual property

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1 U.K., Commission on Intellectual Property Rights, *Integrating Intellectual Property Rights and Development Policy: Report of the Commission on Intellectual Property Rights* (London: Commission on Intellectual Property Rights, 2003) at 100.

2 James Boyle, "A Politics of Intellectual Property: Environmentalism for the Net?" (1997) 47 Duke L.J. 87 at 89-90.

3 Susan K. Sell, *Private Power, Public Law: The Globalization of Intellectual Property Rights* (New York: Cambridge University Press, 2003) at 99.

protection could affect whether a country will thrive in cyberspace, how information will spread from one country to another, and how fully a country can participate in the information revolution.

In December 2003, the first phase of the World Summit on the Information Society (WSIS) was held in Geneva. While the summit affirmed the importance of intellectual property rights and free access to information and knowledge, the resulting *Declaration of Principles* and *Plan of Action* fails to address issues concerning the recent expansion of intellectual property rights. The documents are vague and abstract, and do not to provide concrete actions the international community can take to improve the international intellectual property regime.

This article examines the international intellectual property regime as it relates to the development of an inclusive global information society. Part **I** provides an overview of intellectual property rights and the justifications for protecting those rights. Part **II** explores the increased distrust of the intellectual property system, especially among less developed countries, human rights advocates, development specialists, and those on the unfortunate side of the digital divide. Part **III** delineates five prerequisites for the development of a fair, balanced, and robust international intellectual property regime: (1) thorough understanding, (2) balanced debate, (3) equal dialogue, (4) a fair regime, and (5) global solidarity. Part **IV** concludes by critically examining those portions of the WSIS *Declaration of Principles* and *Plan of Action* that are related to intellectual property and traditional knowledge.

I. The Trust of (So-called) Intellectual Property Rights

> Human thought is astonishingly creative in finding solutions to applied technical and scientific problems, in communicating the existence and quality of products and persuading consumers to buy them, and in expressing images and ideas. These intellectual efforts create new technologies, products, and services, describe new ways of doing things, and expand the cultural richness of society. They result in intellectual assets, pieces of information that may have economic value if put into use in the marketplace. To the extent that their ownership is recognized, such assets are called intellectual property. The economic returns on them depend on the costs of their creation, their desirability to potential users, the structure of markets in which they are sold, and the legal rights that permit their owners to control their use. The legal devices that provide such control are called intellectual property rights.[4]

At the outset, it is important to note that "intellectual property" is a controversial term. Some critics have pointed out that the term is a misnomer – "an unwise generalization" that is biased and confusing.[5] By glossing over the differences

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[4] Keith E. Maskus, *Intellectual Property Rights in the Global Economy* (Washington, D.C.: Institute for International Economics, 2000) at 27.

[5] See *e.g.* Richard Stallman, "Some Confusing or Loaded Words and Phrases that Are Worth Avoiding", online: GNU Project <http://www.gnu.org/philosophy/words-to-avoid.html>; Peter K. Yu,

between abstract ideas and physical objects, the use of the term perpetuates the misunderstanding that one can develop property interests in ideas and information. Such usage also encourages simplistic thinking that ignores the different characteristics and limitations of the various disparate rights grouped collectively as intellectual property rights, such as copyrights, patents, trademarks, and trade secrets. While this article is sympathetic to these arguments and acknowledges the term's limitations, it seeks neither to reinvent the wheel nor to perpetuate the misunderstanding. Rather, it adopts the term in light of its wide usage in international fora and the WSIS documents, and it does so with the understanding that readers need to keep in mind the term's uneasy analogy to real property and "what is meant when the term is used in the context of information."[6]

Being a catch-all term, intellectual property includes a wide variety of legal rights. For example, copyrights protect authors of literary, scientific, and artistic works from the unauthorized reproduction, adaptation, distribution, performance, or display of their works.[7] Patents protect inventors against the unauthorized manufacture, sale, distribution, importation, or use of their creations.[8] Trademarks offer protection to distinctive signs that identify the source and quality of the products or services.[9] In addition, the international intellectual property regime covers many other areas, such as geographical indications, industrial designs, layout designs of integrated circuits, trade secrets, and other undisclosed information.[10]

Commentators have advanced at least four different theories to justify intellectual property protection.[11] The first is the incentive theory.[12] Under this theory, economic incentives are needed to encourage authors and inventors to invest time, effort, skill, and resources into the creative process. Unless these individuals are able to recover from their investment, most of them will not have the incentive to create. After all, very few people will be willing to spend years writing a novel or working on a movie if a free rider can copy the work once it is completed. Most corporations

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"Intellectual Property and the Information Ecosystem" (2005) 2005 Mich. St. L. Rev. 1 ["Information Ecosystem"].

6 Jacqueline Lipton, "Information Property: Rights and Responsibilities" (2004) 56 Fla. L. Rev. 135 at 142; Yu, "Information Ecosystem," *supra* note 5 at 6.

7 These works include novels, photographs, sculptures, movies, sound recordings, computer programs, and architectural designs, among others.

8 These inventions include mechanical processes, chemical compounds, computer programs, business models, and genetically engineered microorganisms.

9 These signs can be words (including personal names), designs, letters, numerals, shapes of goods or packaging, sounds, smells, three-dimensional objects, logotypes or advertising slogans.

10 See *e.g. Agreement on Trade-Related Aspects of Intellectual Property Rights*, 15 April 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (entered into force 1 January 1995) [*TRIPs*].

11 Some of these theories may offer better justifications for one form of intellectual property rights than for the other. For an excellent anthology discussing the various intellectual property theories and concepts, see Robert P. Merges & Jane C. Ginsburg, eds., *Foundations of Intellectual Property* (New York: Foundation Press, 2004).

12 See generally Earl R. Brubaker, "Free Ride, Free Revelation, or Golden Rule?" (1975) 18 J.L. & Econ. 147; William M. Landes & Richard A. Posner, "An Economic Analysis of Copyright Law" (1989) 18 J. Legal Stud. 325; Stewart E. Sterk, "Rhetoric and Reality in Copyright Law" (1996) 94 Mich. L. Rev. 1197.

will also be reluctant to invest hundreds of millions of dollars in research and development if their competitors can copy the developed product immediately after it is released. By granting a limited monopoly that prevents copyists from free riding on others' creative efforts, intellectual property protection provides the needed economic incentives.

However, not everybody needs economic incentives to create. Parents do not need economic incentives to take snapshots of their children, although these snapshots are eligible for copyright protection. Likewise, we do not need economic incentives to write letters or e-mails to our friends, even though these correspondences are also eligible for copyright protection. Indeed, before intellectual property rights emerged, many farmers and craftsmen had created tools and devices without thinking about their potential rewards under the system. A countless number of people also had engaged in creative endeavours that helped lay the foundation of our culture and technical base. Because intellectual property rights are not the only means to generate incentives to develop intellectual creations, it is very important to strike the right balance between providing adequate incentives for authors and inventors to create and enabling public access to the protected information.

The second theory is the prospect theory,[13] which provides a strong justification for intellectual property protection in situations where the economic rewards are uncertain and unknowable and the creator's investment is costly and highly risky. Unlike the incentive theory, this theory posits that intellectual creators might not be able to divine the future commercial benefits of their creations. Rather, these creators stake out the territory defined by their creations regardless of their immediately foreseeable commercial value, just as miners stake out their claims on land without knowing exactly how much gold or silver they may find. For example, a novelist writing in the 1950s was unlikely to have been able to predict the commercial benefits derived from electronic books, which were non-existent at that time. A movie producer who created a motion picture in the 1970s probably did not foresee the possibility of reissuing movies in digital versatile disc (DVD) format, which was also non-existent at that time. Indeed, the inventor of the lasermight not have foreseen the potential use of his invention in optical surgery.[14] Yet, intellectual property law allows creators to capture financial benefits in all of these creations regardless of whether the creators knew about the benefits at the time of creation.

The third theory is the natural rights theory,[15] which has two main strands. The first strand utilizes John Locke's *Second Treatise of Government* and treats

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[13] See generally Edmund W. Kitch, "The Nature and Function of the Patent System" (1977) 20 J.L. & Econ. 265; John F. Duffy, "Rethinking the Prospect Theory of Patents" (2004) 71 U. Chicago L. Rev. 439.

[14] Anthony D'Amato & Doris Estelle Long, eds., *International Intellectual Property Anthology* (Cincinnati: Anderson Publishing, 1996) at 18-19; Nicholas Varchaver, "The Patent King" *Fortune* 143:10 (14 May 2001) 202 at 202 (criticizing the United States patent system for stifling innovation).

[15] See generally Wendy J. Gordon, "An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent and Encouragement Theory" (1989) 41 Stan. L. Rev. 1343; Wendy J. Gordon, "A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property" (1993) 102 Yale L.J. 1533.

intellectual property as the creator's "fruits of labour."[16] According to this line of thought, creators have an inherent right to reap the fruits of their creations and obtain rewards for their contributions to society. The second strand builds on Hegel's theory of property, which considers an intellectual creation to be an extension of the creator's personality.[17] Under this premise, creators have an inherent right to protect the integrity of their creations just as they have the right to protect their own personalities. As Article 27 of the Universal Declaration of Human Rights states: "Everyone has the right to the protections of [both] the *moral* and material interests resulting from any scientific, literary, or artistic creation of which he is the author."[18]

Finally, the development theory, or at least the one to which policymakers in the developed world subscribe, considers intellectual property protection as a form of catalyst for economic development and modernization. It is believed that such protection will increase agricultural and industrial production, attract domestic and foreign investment, create new jobs, and promote indigenous authors and inventors.[19] By encouraging the development of legitimate businesses that are more likely than pirates and counterfeiters to pay taxes, the intellectual property system will also generate considerable tax revenues. These additional revenues will, in turn, allow governments to allocate scarce resources to other needy areas and to reduce poverty.

Furthermore, a well-functioning intellectual property system might prevent domestic problems that are generally attributed to widespread piracy and counterfeiting.[20] For example, adulterated drugs and counterfeit products could lead to illnesses, extended injuries, and unnecessary deaths. Emerging local authors and inventors might not be able to capture the benefits of their creative endeavours. Consumers, businesses, educational institutions, and research centers might have to pay more for needed foreign materials to make up for the potential losses caused by piracy and counterfeiting problems. Moreover, despite paying the same price, consumers might receive products of inferior quality. Foreign entities also might be reluctant to invest in the country owing to the lack of intellectual property protection, especially when the concerned country has a strong imitative capacity but very weak intellectual property protection. And the worst of all, the best and brightest might feel compelled to leave the country for more remunerative systems abroad, thus draining the country of scarce human capital.

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16 See John Locke, "Second Treatise of Government" in Peter Laslett, ed., *Two Treatises of Government*, 3rd ed. (Cambridge: Cambridge University Press, 1988) ("Whatsoever then he removes out of the state that Nature hath provided, and left it in, he hath mixed his Labour with, and joyned to it something that is his own, and thereby makes it his Property" at 288).

17 See generally Justin Hughes, "The Philosophy of Intellectual Property" (1988) 77 Geo. L.J. 287; Margaret Jane Radin, "Property and Personhood" (1982) 34 Stan. L. Rev. 957.

18 *Universal Declaration of Human Rights*, GA Res. 217(III), UN GAOR, 3d Sess., Supp. No. 13, UN Doc. A/810 (1948), art. 27(2) [UDHR] [emphasis added].

19 Commission on Intellectual Property Rights, *supra* note 1 at 1; Peter K. Yu, "From Pirates to Partners: Protecting Intellectual Property in China in the Twenty-First Century" (2000) 50 Am. U. L. Rev. 131 at 192-93 [Yu, "Pirates to Partners"]; Peter K. Yu, "Piracy, Prejudice, and Perspectives: An Attempt to Use Shakespeare to Reconfigure the U.S.-China Intellectual Property Debate" (2001) 19 B.U. Int'l L.J. 1 at 62-64 [Yu, "Piracy, Prejudice, and Perspectives"].

20 Yu, "Pirates to Partners", *ibid.* at 189-90; Yu, "Piracy, Prejudice, and Perspectives", *ibid.* at 61.

II. The Distrust of (So-called) Intellectual Property Rights

Critics sometimes question the benefits of intellectual property protection for less developed countries. They argue that such protection drains these countries of scarce financial resources through payment of royalties, imports, and infrastructure costs required by the examination, enforcement, and adjudication of intellectual property rights.[21] With a nationalist overtone, these critics also argue that intellectual property rights are "Trojan horses" that help erode these countries' cultural identities and protect the dominant position of developed countries.

To some extent, these critics have overstated their arguments. Intellectual property protection benefits less developed countries just as it benefits their developed counterparts. Undeniably, less developed countries need foreign books and materials, especially those in the fields of science, technology, education, and research. However, they also need works created by indigenous authors and written in the local language, as well as inventions developed by local inventors based on the country's unique needs and conditions.[22] Thus, intellectual property protection is needed to provide incentives for local authors and inventors to participate in the creative process.[23]

Nevertheless, the critics' concerns are understandable, and somewhat valid, as there is no universal standard for intellectual property protection. Moreover, critics are primarily concerned with the *existing* intellectual property system. Today, the problem with the intellectual property system lies not in the fact that it offers protection to authors and inventors, but that it does not strike an appropriate balance between proprietary interests and public access needs.

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21 Yu, "Pirates to Partners", *ibid.*; Yu, "Piracy, Prejudice, and Perspectives", *ibid.* at 61-62; see also Commission on Intellectual Property Rights, *supra* note 1 at 15 (discussing the high transaction costs of instituting an intellectual property system).

22 See *e.g.* Edmund W. Kitch, "The Patent Policy of Developing Countries" (1994) 13 UCLA Pac. Basin L.J. 166 at 172. As Professor Kitch explained: The technological needs of a developing country are not the same as the technological needs of a developed country. A technology does not exist apart from the needs, conditions, and resources of its users. A technology must be sensitive to the educational background of the users, and the related available technologies. For instance, it will often be critical what type of repair and maintenance services are available. A certain type of machinery may be highly effective and productive when used in a mass production system with an ample supply of electric power, skilled electronic engineers, and easy access to spare parts, but utterly useless at a more remote location. Thus, technological improvements which can make a substantial contribution to the lives of people in a developing country may be irrelevant in a different setting. A private firm has an incentive to make such an improvement only if it will be protected against immediate copying in those markets where the product has value. Thus, a no patent strategy may enable a country, to some extent, to appropriate the technology of others, but that technology will often not be the technology that the country needs. (*Ibid*. at 176-77).

23 To be certain, countries can choose to protect their authors and inventors without offering similar protection to their foreign counterparts. Indeed, lack of protection for foreign creations was the international norm before the development of the Berne and Paris Conventions. See Peter K. Yu, "Currents and Crosscurrents in the International Intellectual Property Regime" (2004) 38 Loy. L.A. L. Rev. 323. However, most countries today, as members of the World Trade Organization, are required to offer to foreign authors and inventors the same protection they offer to their nationals.

While developed countries might have resources and regulatory mechanisms to reduce the impact of an unbalanced intellectual property system, such a system would substantially hurt less developed countries.[24] Many of these countries do not have the wealth, infrastructure, and technological base to take advantage of the opportunities created by the system. Many of these countries also lack the national economic strength and established legal mechanisms to overcome problems created by the system if it turns out to be unbalanced and inappropriate under local conditions.

Because countries differ in levels of wealth, economic structures, technological capabilities, political systems, and cultural and historical traditions,[25] there is no universal template or one-size-fits-all solution that would promote the needs and interests of all of these countries.[26] Oftentimes, policies that aim for greater international harmonization lose sight of the public interest and ignore the needs of less developed countries. The resulting international regime therefore has enlarged the gap between developed and less developed countries while creating tension and conflict within the international community.[27] The harmonization efforts also have taken away possibilities for careful tailoring, nuanced analysis, and legal experimentation within each individual country.[28]

The current international intellectual property regime offers very strong protection and tends to favour developed countries at the expense of their less developed counterparts. Unfortunately, as many scholars have demonstrated both empirically and theoretically, the presumptions that stronger protection will benefit less developed countries and that a universalized intellectual property regime would

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[24] As the Commission on Intellectual Property Rights stated: "[W]e consider that, if anything, the costs of getting the IP system 'wrong' in a developing country are likely to be far higher than in developed countries. Most developed countries have sophisticated systems of competition regulation to ensure that abuses of any monopoly rights cannot unduly affect the public interest. In the US and the EU, for example, these regimes are particularly strong and well-established. In most developing countries this is far from being case. This makes such countries particularly vulnerable to inappropriate intellectual property systems".
Commission on Intellectual Property Rights, *supra* note 1 at 4; Maskus, *supra* note 4 at 237 (noting that developed countries "have mature legal systems of corrective interventions" where the exercise of IPRs threatens to be anticompetitive or excessively costly in social terms).

[25] See Michael P. Ryan, *Knowledge Diplomacy: Global Competition and the Politics of Intellectual Property* (Washington, D.C.: Brookings Institution Press, 1998) at 191; Yu, "Pirates to Partners", *supra* note 19 at 239; Yu, "Piracy, Prejudice, and Perspectives", *supra* note 19 at 84; see also Peter K. Yu, "Toward a Nonzero-sum Approach to Resolving Global Intellectual Property Disputes: What We Can Learn from Mediators, Business Strategists, and International Relations Theorists" (2002) 70 U. Cin. L. Rev. 569 [Yu, "Toward a Nonzero-sum"].

[26] See Peter K. Yu, "World Trade, Intellectual Property, and the Global Elites: An Introduction" (2002) 10 Cardozo J. Int'l & Comp. L. 1.

[27] See Peter K. Yu, "Dis-networking Rules in the Networked World" *STS Nexus* 3:2 (Supp.) (Spring 2003) at 6, online: Center for Science, Technology & Society (Santa Clara University) <http://sts.scu.edu/nexus/Issue3-2/Nexus3-2supplement.pdf>; Peter K. Yu, "How the International Intellectual Property System, Meant to Create Global Harmony, Has Created Conflict Instead", *Findlaw's Writ: Legal Commentary* (14 November 2002), online: FindLaw <http://writ.news.findlaw.com/commentary/20021114_yu.html>.

[28] See John F. Duffy, "Harmony and Diversity in Global Patent Law" (2002) 17 Berkeley Tech. L.J. 685 at 707-09.

maximize global welfare are questionable.[29] Equally doubtful is the assumption that the existing international intellectual property regime has struck the proper balance "between incentives to future production, the free flow of information and the preservation of the public domain in the interest of potential future creators."[30] As Professor Jerome Reichman noted,

> policymakers concerned to promote investment in important new technologies often overstate the supposed benefits of specific intellectual property regimes while ignoring the negative economic functions of these regimes in relation to the complementary operations of competition law generally.[31]

Indeed, when the United States Congress undertook a critical examination of the American patent system, one of its experts remarked famously:

> If one does not know whether a system […] is good or bad, the safest "policy conclusion" is to muddle through – either with it, if one has long lived with it, or without it, if one has lived without it. If we did not have a patent system, it would be irresponsible, on the basis of our present knowledge of its economic consequences to recommend instituting one. But since we have had a patent system for a long time, it would be irresponsible, on the basis of our present knowledge, to recommend abolishing it.[32]

Today, commentators heatedly debate about where the balance of the intellectual property system should lie. Among the controversial issues in the current intellectual property debate are the compulsory licensing of HIV/AIDS vaccines and drugs, protection of traditional knowledge and indigenous creations, extension of the duration of copyright, anti-circumvention protection and the increased erosion of the fair use/fair dealing privilege, *sui generis* protection of databases, and strong

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[29] See Carlos M. Correa, "Harmonization of Intellectual Property Rights in Latin America: Is There Still Room for Differentiation?" (1997) 29 N.Y.U. J. Int'l L. & Pol. 109 at 126; see also Claudio R. Frischtak, "Harmonization Versus Differentiation in Intellectual Property Rights Regime" in Mitchel B. Wallerstein *et al.*, eds., *Global Dimensions of Intellectual Property Rights in Science and Technology* (Washington, D.C.: National Academy Press, 1993) 89 (urging countries to develop their intellectual property rights regime according to their own needs); Robert O. Keohane, "The Demand for International Regimes" in Stephen D. Krasner, ed., *International Regimes* (Ithaca: Cornell University Press, 1983) 141 at 152 (arguing that an international regime may not yield overall welfare benefits and that actors outside the regime may suffer).

[30] James Boyle, *Shamans, Software and Spleens: Law and the Construction of the Information Society* (Cambridge: Harvard University Press, 1996) at 124; Jerome H. Reichman, "From Free Riders to Fair Followers: Global Competition Under the TRIPS Agreement" (1997) 29 N.Y.U. J. Int'l L. & Pol. 11 at 24 (arguing that policymakers in many developed countries take the existing levels of innovative strength for granted and mistakenly promote protectionism).

[31] Jerome H. Reichman, "Beyond the Historical Lines of Demarcation: Competition Law, Intellectual Property Rights, and International Trade After the GATT's Uruguay Round" (1993) 20 Brook. J. Int'l L. 75 at 81.

[32] Fritz Machlup, *An Economic Review of the Patent System, Study No. 15 of the Subcomm. on Patents, Trademarks and Copyrights of the Senate Comm. on the Judiciary* (Washington, D.C.: U.S. Government Printing Office, 1958) at 80.

protection of proprietary software and its related impact on free and open source software. This Part highlights only those areas that have ramifications for the development of the global information society.

Extension of the Duration of Copyright. In 1993, the European Communities enacted the *Council Directive Harmonizing the Term of Protection of Copyright and Certain Related Rights*, which requires all EC member states to implement legislation to extend the term of copyright protection to the life of the author plus seventy years.[33] Following their lead, the United States, in 1998, enacted the *Sonny Bono Copyright Term Extension Act*, which extended the copyright term in the United States in a similar fashion.[34] Although such extensions had previously taken place, this recent extension is particularly disturbing, as it comes at a time when the Internet offers an attractive model of distribution that allows for cheaper, broader, and wider dissemination of information while freeing individual authors from the stranglehold of the copyright industries. As Professor Lawrence Lessig lamented, if every creative act reduced to a tangible medium of expression is protected for upward of 150 years, whether or not the protection benefits the author, the work will fall into "a copyright black hole, unfree for over a century."[35]

Anti-circumvention Protection and the Increased Erosion of the Fair Use/Fair Dealing Privilege. In 1996, members of the World Intellectual Property Organization adopted the 1996 Internet Treaties,[36] which strengthened copyright protection in the online environment. To implement these treaties, many countries have enacted new legislation; for example, the United States enacted the *Digital Millennium Copyright Act of 1998* ("DMCA").[37] This statute is problematic on two counts. First, it creates a "safe harbour" for Internet service providers to remove any hosted content that allegedly infringes upon the work of a copyright holder.[38] This safe harbour provision has therefore created a substantial chilling effect, as it requires the providers to remove content even if the reproduction of such materials is permissible under existing copyright law – for example, under the fair use/fair dealing privilege. Second, the DMCA prohibits the circumvention of encryption technologies that copyright holders use to protect creative works, as well as the dissemination of information concerning how to defeat those technologies.[39] This provision prevents people from engaging in actions that traditionally have been considered fair use or fair dealing. Indeed, anti-circumvention legislation can be especially damaging to less developed countries. As the Commission on Intellectual Property Rights cautioned us,

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33 EC, *Council Directive 93/98/EEC of 29 October 1993 Harmonizing the Term of Protection of Copyright and Certain Related Rights*, [1993] O.J. L. 290/9.

34 Pub. L. No. 105-298, 112 Stat. 2827 (1998).

35 Lawrence Lessig, *The Future of Ideas: The Fate of the Commons in a Connected World* (New York: Vintage Books, 2001) at 251.

36 *WIPO Copyright Treaty*, 20 December 1996, WIPO Doc. CRNR/DC/94 (entered into force 6 March 2002) [*WCT*]; *WIPO Performances and Phonograms Treaty*, 20 December 1996, WIPO Doc. CRNR/DC/95 (entered into force 20 May 2002) [*WPPT*].

37 Pub. L. No. 105-204, 112 Stat. 2860 (1998).

38 17 U.S.C. at para. 512 (2000).

39 17 U.S.C. at para. 1201 (2000).

> For developing countries, where Internet connectivity is limited and subscriptions to on-line resources unaffordable, it may exclude access to these materials altogether and impose a heavy burden that will delay the participation of those countries in the global knowledge-based society.[40]

Sui Generis Protection of Databases. In 1996, the European Union promulgated the *European Parliament and Council Directive on the Legal Protection of Databases*, which requires all EU member states to implement legislation that grants *sui generis* protection to databases created as a result of "substantial investment" by database producers, regardless of whether the compilation is original.[41] This regime is troublesome from the public interest standpoint. By granting database producers a monopoly over their collected data, the regime allows private entities to lock up information that is essential to basic scientific research and future creative endeavours.[42] The regime also creates an anti-competitive environment that makes it difficult for valued-added products and services to enter the market, thus making information products more expensive.[43] Moreover, the regime stifles freedom of expression, freedom of the press, and free access to information and knowledge. It also might lead to overprotection by enhancing the already significant protection database producers currently enjoy under contract and unfair competition laws and via technological protective devices.[44] Like anti-circumvention legislation, a *sui generis* database protection regime would have a substantial impact on less developed countries, which "often lack the financial means to pay for the necessary subscriptions."[45]

Protection of Proprietary Software and Its Impact on Free and Open Source Software. Computer software is the lifeblood of the information revolution. Although countries need a wide range of software applications, most individuals and businesses "need affordable access to off-the-shelf business software packages, such as word-processing, spreadsheet, e-mail and Internet browsing products."[46] By strengthening

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40 Commission on Intellectual Property Rights, *supra* note 1 at 106.

41 EC, *Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the Legal Protection of Databases*, [1996] O.J. L. 77/20. In Latin, *sui generis* means "of its own kind or class".

42 See Jerome H. Reichman & Pamela Samuelson, "Intellectual Property Rights in Data?" (1997) 50 Vand. L. Rev. 51 at 113-24 (discussing the adverse impact of *sui generis* database protection on scientific research and education); Jerome H. Reichman & Paul F. Uhlir, "Database Protection at the Crossroads: Recent Developments and Their Impact on Science and Technology" (1999) 14 Berkeley Tech. L.J. 793 at 796-821 (discussing the adverse impact of database protection laws on scientific, technical, and educational users of factual data and information).

43 See Yochai Benkler, "Constitutional Bounds of Database Protection: The Role of Judicial Review in the Creation and Definition of Private Rights in Information" (2000) 15 Berkeley Tech. L.J. 535 at 562-65 (discussing the anti-competitive nature of database protection laws); Reichman & Samuelson, *supra* note 42 at 124-30 (discussing how *sui generis* database protection would frustrate competition in the market for value-added products and services).

44 See Jonathan Band & Makoto Kono, "The Database Protection Debate in the 106th Congress" (2001) 62 Ohio St. L.J. 869 at 869-70; Jane C. Ginsburg, "Copyright, Common Law, and *Sui Generis* Protection of Databases in the United States and Abroad" (1997) 66 U. Cin. L. Rev. 151 at 176.

45 Commission on Intellectual Property Rights, *supra* note 1 at 107.

46 *Ibid*. at 104.

protection of proprietary software – through copyright and patent laws – the international intellectual property regime would make these applications highly unaffordable, especially among less developed countries. Even worse, stronger software protection might make it difficult for end-users in those countries to adapt the software for local needs or update the products when they become obsolete. Instead, such a regime would require users to constantly purchase new upgrades and undertake training and retraining, making the products highly unaffordable.

While copyright protection for computer software is already strong, patent protection, in particular the grant of low-quality and questionable software and business method patents, has made it difficult for innovators to develop new software.[47] Even worse, such protection is unlikely to encourage disclosure of information and know-how to society. Because software patentees often keep their source code secret, they "generally disclose little or no detail about their programs to the public."[48] Thus, in recent years, many commentators have criticized the grant of software patents while at the same time advocating the use of free and open source software – software whose source code has been made publicly and freely available. Unfortunately, the increased protection afforded to proprietary software has greatly threatened this promising development.

Protection of Traditional Knowledge and Indigenous Materials. In recent years, the misappropriation of folklore, traditional knowledge, and indigenous practices has become an increasingly important issue in global politics. Although these materials "are not necessarily IP resources in the sense that they are understood in developed countries, […] they are certainly resources on the basis of which protected intellectual property can be, and has been, created."[49] If instituted, protection of such materials would impact a wide variety of policy areas, including agricultural productivity, biological diversity, cultural patrimony, food security, environmental sustainability, business ethics, global competition, human rights, international trade, public health, scientific research, sustainable development, and wealth distribution.[50] The traditional knowledge debate to date has been particularly intense, and the international community has yet to become able to reach a consensus on how to protect indigenous materials, partly because of the limited understanding of the issue and partly because of the complexities involved in defining and classifying the materials.[51]

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47 See generally Rochelle Cooper Dreyfuss, "Are Business Method Patents Bad for Business?" (2000) 16 Santa Clara Computer & High Tech. L.J. 263.

48 Dan L. Burk & Mark A. Lemley, "Is Patent Law Technology-Specific?" (2002) 17 Berkeley Tech. L.J. 1155 at 1165.

49 Commission on Intellectual Property Rights, *supra* note 1 at 7.

50 See Peter K. Yu, "Traditional Knowledge, Intellectual Property, and Indigenous Culture: An Introduction" (2003) 11 Cardozo J. Int'l & Comp. L. 1.

51 See generally Symposium, "Traditional Knowledge, Intellectual Property, and Indigenous Culture" (2003) 11 Cardozo J. Int'l & Comp. L. 1.

III. The Five Prerequisites

Today, most countries seem to have agreed on the importance of intellectual property protection. The debate is no longer about whether countries should institute intellectual property rights, but what intellectual property system these countries should adopt – in particular how this system balances the protection of intellectual creators against the public interest in obtaining access to their creations.

If this system is over-protective, intellectual creators will not have enough raw materials to develop their creations, and the public, especially those on the unfortunate side of the digital divide, will not have adequate access to information and knowledge they need to participate in the information revolution. After all, "knowledge production is a cumulative enterprise; the storehouse of information does not grow unless creators have the freedom to learn from, and build on, earlier work."[52] However, if the system is under-protective, intellectual creators will not have adequate incentives to create. Many of them will find the system unfair and unattractive and will prefer to take up more remunerative jobs in other jurisdictions.

To strike an appropriate balance in the international intellectual property regime, the international community must have (1) a thorough understanding of the intellectual property system, (2) a balanced and well-reasoned public debate about intellectual property protection, (3) an effective and equal dialogue on intellectual property rights between developed and less developed countries, (4) a fair regime that will benefit all the stakeholders of the information society, and (5) solidarity among developed and less developed countries as well as among state and non-state actors.

A. A Thorough Understanding

Intellectual property rights are abstract and complicated in nature. A thorough understanding of how these rights function is a prerequisite for the development of a fair, balanced, and robust international intellectual property regime.

First, one must understand that intellectual property rights are both non-excludable and non-rivalrous. They are non-excludable because an intellectual property right holder may not prevent others from using and or enjoying an intellectual work once it has been created, performed, sold, or distributed. Second comers, therefore, are likely to copy and free ride on the creators' efforts. Intellectual property rights are non-rivalrous because the use of such a creation would not deprive others of using and enjoying the same work or invention. Thus, multiple individuals can use and enjoy a single creation at the same time. As a result of these characteristics, the property model used to protect physical objects might not be ideal for protecting expressions of ideas and creative inventions. Additional adjustments

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[52] Rochelle Cooper Dreyfuss, "TRIPS-Round II: Should Users Strike Back?" (2004) 71 U. Chicago L. Rev. 22.

might be needed, especially in light of the rapid advances in communications technologies and the drastic reduction of copying costs.[53]

Second, an intellectual property regime is like a hydraulic system. A change in this system may be easily offset by an identical change in the opposite direction. Thus, limitations on the rights are just as important as the grants of the rights themselves. Indeed, the intellectual property system qualifies most of its rights with exceptions and limitations. Consider the copyright system, for example. Copyright law grants to holders the exclusive rights to reproduce, adapt, distribute, perform, and display the copyrighted work. The law also provides safeguards to protect the public domain against impoverishment, such as the originality requirement, the fair use/fair dealing privilege, the idea/expression dichotomy, durational limits of protection, and other public interest exceptions.

Finally, it is difficult to distinguish materials that are protected by intellectual property laws from those in the public domain. Many people consider the public domain the "conceptual opposite" of intellectual property.[54] However, as Professor Pamela Samuelson explains, some rights are hybrid in nature; they are "outside the public domain in theory, but seemingly inside in effect."[55] Examples include free and open source software, as well as materials created under a creative common license. Although these types of materials depend on the existence of the copyright system, the licensing arrangement provides great flexibility for others to adapt and build on the existing materials. As Professor Samuelson wrote:

> Open source or 'free' software is among the most interesting developments contributing to the digital public domain, even though open source software is not, strictly speaking, in the public domain. Open source software contributes to the public domain because its licenses require that source code instructions be publicly available. All of the know-how embodied in the program is thus accessible. Because open source licenses encourage follow-on innovation, open source contributes to ongoing learning that further enhances the public domain. Open source software, however, is not itself in the public domain. Rather, it invokes intellectual property rights as the basis for a licensing strategy aimed at preserving the digital commons that the program's developer wished to establish for it. From the standpoint of many open source developers, dedicating a program to the public domain is a suboptimal strategy for achieving open source objectives because proprietary derivatives can be made of public domain programs. Those who breach the terms of an open source license by making a proprietary derivative program will be deemed infringers of the underlying intellectual property rights in the program and may be enjoined from this form of free-riding on open source development. Thus,

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53 See generally Committee on Intellectual Property Rights and the Emerging Information Infrastructure, National Research Council, *The Digital Dilemma: Intellectual Property in the Information Age* (Washington, D.C.: National Academy Press, 2000) at 28-51.

54 See James Boyle, "Foreword: The Opposite of Property?" (2003) 66 Law & Contemp. Probs. 1 at 8.

55 Pamela Samuelson, "Mapping the Digital Public Domain: Threats and Opportunities" (2003) 66 Law & Contemp. Probs. 147 at 149.

> open source licenses use property rights to preserve and maintain a commons in an existing intellectual resource.[56]

B. Balanced Debate

The public debate today is far from balanced and tends to divide between "high protectionists" and "low protectionists". Oftentimes, the two groups talk *past* each other, rather than talk *to* each other. While the high protectionists emphasize the need to create incentives for intellectual creations, low protectionists emphasize the importance of the public domain. What these groups fail to realize, or at least acknowledge, is that the positions they take represent two different sides of the same coin. By not talking to each other, they fail to work together to find a mutually beneficial solution.

More problematically, those who see themselves as low protectionists are sometimes tempted to take high protectionist positions. In the traditional knowledge debate, for example, those who are sympathetic to the plight of less developed countries often consider themselves low protectionists. To them, it is very important to have wider access to generic drugs, free and open source software, and non-copyright-protected textbooks. However, they might find themselves on the side of the high protectionists as far as indigenous creations are concerned. As much as they want to have free and open access to copyrighted or patented products, they also are concerned that the same free access to indigenous knowledge and materials would lead to biopiracy that jeopardizes the heritage and culture of indigenous communities – or worse, threatens the survival of these communities. Indeed, to many less developed countries, "free and open access had the tendency to suggest 'a commons where resources are up for grabs by the most technologically advanced.'"[57]

Similarly, policymakers in less developed countries often find themselves confronted with contradictory intellectual property policies. China and India are good examples. It is logical for policymakers there to push for stronger copyright protection in light of their booming software and movie industries.[58] However, they might prefer weaker protection, or even some special exceptions, for pharmaceutical products and foodstuffs in light of their enormous population and substantial needs in the public health arena.[59]

Commentators have recently embraced the use of the free and open source software to alleviate the economic plight and technological backwardness of less

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[56] *Ibid*. at 167-68.

[57] Anupam Chander & Madhavi Sunder, "The Romance of the Public Domain" (2004) 92 Cal. L. Rev. 1331 at 1356, n. 131 (quoting Jem M Spectar, "Saving the Ice Princess: NGOs, Antarctica & International Law in the New Millennium" (1999) 23 Suffolk Transnat'l L. Rev. 57 at 63).

[58] See *e.g.* Commission on Intellectual Property Rights, *supra* note 1 at 97 (discussing the India software industry); Daniel J. Gervais, "The Internationalization of Intellectual Property: New Challenges from the Very Old and the Very New" (2002) 12 Fordham I.P. Media & Ent. L.J. 929 at 940, n. 22 (discussing Bollywood, the India movie industry).

[59] Commission on Intellectual Property Rights, *supra* note 1 at 20 (discussing the weaker patent protection offered to pharmaceutical products in India).

developed countries. Free and open source software has many benefits. For example, it provides users with the ability to experiment with software development at no cost. It gives them freedom to modify the program code to suit local needs. It also helps develop "a learning environment," in which technology is transferred through "a massive apprentice-teacher network."[60] Through participation in free and open source software communities, users not only learn computer and programming skills, but also teamwork, team management, and coordination as well as copyright and licensing.[61]

Although the major attractions of free and open source software are freedom and community, users are often "attracted to [the] software by its low cost" before they begin to appreciate its other benefits.[62] Compared to proprietary software, free and open source software is generally cheaper—and much cheaper in countries with low labour costs.[63] As Rishab Ghosh noted:

> The price of a typical, basic proprietary toolset required for any ICT infrastructure, Windows XP together with Office XP, is US$560 in the U.S. This is over 2.5 months of GDP/capita in South Africa and over 16 months of GDP/capita in Vietnam. This is the equivalent of charging a single-user licence fee in the U.S. of US$7,541 and US$48,011 respectively, which is clearly unaffordable.[64]

Notwithstanding these benefits, there remain many policy questions that require serious discussion and careful evaluation. First, the costs of using free and open source software are not necessarily lower, although they often are. Policymakers therefore should not focus only on license costs; they need to consider other costs, such as training, software installation and customization, computer servicing and maintenance, and the costs of complementary hardware and software.[65]

Second, policymakers need to evaluate whether users in the country are ready for the software, especially if they plan to have large-scale deployment of such

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60 Rishab Aiyer Ghosh, "The Opportunities of Free/Libre/Open Source Software for Developing Countries" (Paper presented to the Fourth Bellagio Dialogue on Development and Intellectual Property, November-December 2004) at 1, online: IPRsonline.org <http://www.iprsonline.org/unctadictsd/bellagio/docs/Gosh_Bellagio4.pdf>.

61 *Ibid.* (noting that the skills "required to coordinate the smooth collaboration of 1500-plus people who rarely see each other is more intensive and far subtler than what is required to coordinate smaller teams employed in a single software company" at 9).

62 *Ibid.* at 5.

63 As Rishab Ghosh explained: "[W]hen labour costs are high, labour-intensive components of the total cost represent a high share of the total cost, making the licence fee itself less crucial. As a result, since the only certain saving with open source software is the (zero) licence fee, the cost advantages are not necessarily always clear. In contrast, when labour costs are low, the share of the licence fee in the total cost of ownership is much more significant, even prohibitively so. This is the case in public sector organisations, economically disadvantaged regions, small businesses and most dramatically, developing countries." (*Ibid*).

64 *Ibid.* at 6.

65 Commission on Intellectual Property Rights, *supra* note 1 at 105; Ghosh, *supra* note 60 at 5.

software.[66] There have been discussions about whether free and open source software is user-friendly enough for individual consumers, many of whom have limited interest in tinkering with new technology. These discussions are important, because people tend not to make changes once they have become familiar with a particular piece of software. Psychologically, it is also more difficult to convince end-users to switch back after they have had negative initial experiences with the software. Indeed, Eric Raymond was worried when he helped Netscape design its source-release strategy and license. As he wrote a few days after his meeting with Netscape's executives and technical staff:

> Netscape is about to provide us with a large-scale, real-world test of the bazaar model in the commercial world. The open-source culture now faces a danger; *if Netscape's execution doesn't work, the open-source concept may be so discredited that the commercial world won't touch it again for another decade*.[67]

Fortunately, this switchover problem is greatly minimized in countries with limited computer usage and Internet connectivity. In these countries, old technologies do not present a major problem, and policymakers do not need to account for the sunken costs in these technologies. Users also do not have to be retrained or to "unlearn" skills applicable to existing systems and software.[68] Moreover, the ability of free and open source software to adapt freely to local languages and cultures may make the software more user-friendly and easier to learn. As Ghosh recounted:

> In the well-known case of Extremadura, a poor region of Spain, a local version of GNU/Linux was developed, called GNU/LinEx. Uniquely, all the usual icons for common applications were replaced by images more familiar to locals (and easier to pronounce) than 'Mozilla' and 'GIMP' and

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66 Most recently, the Vietnam government announced its plan to require all state-owned companies and government ministries to use open-source software. See "Vietnam: State ministries to use open source software" *New Straits Times* (23 April 2004) L13. Richard Epstein argued against such large-scale deployment. As he wrote: "[T]his novel form of business association should succeed or fail on its own merits. The do-or-die question is whether open source offers a low cost solution to particular problems. Ordinary companies will make just those calculations, but government agencies may be swayed to take a different tack, as has been suggested by a number of EU studies. That temptation should be avoided. Governments are bad at forcing technology by playing favourites. If open source is less effective than proprietary software, that gap should not be ignored by positing some positive network externalities that come from giving it a larger base. Proprietary systems also show positive network effects from increased users, as software designers are always attracted by a larger installed base. It's a tough world out there, in which no one should be exempted from the general competitive pressures of the marketplace. The fiduciary duties of government to all citizens demand no less." (Richard A. Epstein, "Why Open Source Is Unsustainable" *FT.com* (21 October 2004), online: Financial Times <http://news.ft.com/cms/s/78d9812a-2386-11d9-aee5-00000e2511c8.html>).
Compare James Boyle, "Give Me Liberty and Give Me Death?" *FT.com* (21 October 2004), online: Financial Times <http://news.ft.com/cms/s/78d9812a-2386-11d9-aee5-00000e2511c8.html#U101244209021g4> (contending that "[t]here are many benefits to society as a whole that governments could rationally factor into their decision in picking open software").

67 Eric S. Raymond, *The Cathedral & the Bazaar: Musings on Linux and Open Source by an Accidental Revolutionary*, rev. ed. (Sebastopol, Calif.: O'Reilly, 2001) at 62 [emphasis added].

68 Ghosh, *supra* note 60 at 11.

> 'Browser'. Instead, there were images of local painters and writers (to launch the paint and word-processing applications) and a bird known in local legend to travel far and wide to search (web browser). As a result, this free software environment has been used to train over 70 000 housewives, unemployed and retired persons the use of computers for the first time, making the interface more approachable than that of the standard Windows (or the standard Mac or GNU/Linux).[69]

Third, if policymakers in less developed countries hope to use free and open source software to establish a local software industry capable of catching up with developed countries, they might be disappointed. The industry one develops out of free and open source software is very different from the type of industry one develops out of proprietary software.[70] While it is understandable why commentators believe it is in the interest of less developed countries, especially consumers in those countries, not to have such dominant software conglomerates like Microsoft, it is equally understandable why some countries prefer to have such conglomerates to boost their national economic strength and, more importantly, to increase their leverage in international negotiations against intellectual property powerhouses like the European Union and the United States. Nevertheless, some countries need to realize that they might never be able to develop a substantial software export business no matter what they do, and free and open source software may give them hope to develop a software industry that suits their local needs.[71]

Finally, from the standpoint of international competition, less developed countries might not be better off if the technicians who perform the training and maintenance services are primarily based in developed countries. The proponents of free and open source software generally entertain optimism that each country will have the technical expertise to handle the software, or at least users in each country will be able to acquire such expertise by tinkering with the software. Many of them also assume that less developed countries will have the needed Internet connectivity to acquire information to deal with problems with their software, especially in the case of new and early versions of the software. However, these assumptions may not be valid in countries on the unfortunate side of the digital divide. If these countries ultimately have to rely on technology companies in developed countries to assist them, wealth might be transferred – not from developed to less developed countries, but rather from intellectual property rights holders in developed countries to technology companies in those countries. As a result, information technologies would remain unaffordable and inaccessible, and people in those countries would still lag behind in the information revolution. Thus, whether free and open source software will make a country more competitive will depend on whether there is sufficient local expertise to support the free and open source software community, which has been growing in many less developed countries.

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69 *Ibid*. at 7 [footnote omitted].Add footnote.

70 Thanks to Goh Seow Hiong for pointing this out.

71 Thanks to Richard Stallman for pointing this out.

In sum, although free and open source software is beneficial to less developed countries, many serious issues remain for policymakers to discuss. To make things more complicated, Microsoft has recently donated a large amount of software to countries like China, India, Russia, and South Africa.[72] In light of these donations, policymakers have to ponder further whether it might be more cost-effective to use the donated software first before making a transition to free and open source software, keeping in mind the transition costs and lost positive spillover effects involved.

To carefully evaluate many of these policy options, an open and balanced debate is in order. Thus, it is no surprise that the WSIS documents have called for the "development and use of open, interoperable, non-discriminatory and demand-driven standards that take into account needs of users and consumers."[73] Some commentators are disappointed by the wording of the documents and would prefer stronger language expressing a preference for free and open source software. However, the current wording is more preferable; it facilitates greater policy discussion and allows countries to draw their own conclusions.

C. Equal Dialogue

International cooperation is badly needed if we are to develop a well-functioning international intellectual property regime. To do so, policymakers in developed and less developed countries must work together to develop an effective and *equal* dialogue between the two groups of countries. By putting countries on an equal footing, this dialogue will alleviate the increasing mistrust of the international trading system among less developed countries and the growing tension between these countries and their developed counterparts.

As cognitive psychologists have taught us, decision makers tend to devalue proposals offered by their adversaries even though they will accept identical proposals from their allies or neutral parties.[74] Given the suspicion and frustration among less developed countries in the international trade and intellectual property arenas, it would be no surprise if these countries devalue proposals offered by developed countries, which they perceive as their adversaries.

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72 See *e.g.* Thomas Fuller "How Microsoft Warded Off Rival Software" *N.Y. Times* (15 May 2003) C1.

73 WSIS, *Declaration of Principles*, WSIS Doc. WSIS-03/GENEVA/DOC/0004, online: ITU <http://www.itu.int/dms_pub/itu-s/md/03/wsis/doc/S03-WSIS-DOC-0004!!PDF-E.pdf>, at para. 44 [*Declaration of Principles*]; see also Maskus, *supra* note 4 (noting that "because interoperability is critical to the growth of networks and the diffusion of their benefits, international variability in standards for protecting software and protocols could erect roadblocks to efficient cross-licensing" at 227).

74 *Reactive devaluation* refers to the tendency to "devalue a proposal received from someone perceived as an adversary, even if the identical offer would have been acceptable when suggested by a neutral or an ally." Robert H. Mnookin *et al.*, *Beyond Winning: Negotiating to Create Value in Deals and Disputes* (Cambridge: Belknap Press, 2000) at 165 (see *ibid*. at 165-66 for a discussion on reactive devaluation); Yu, "Toward a Nonzero-sum," *supra* note 25 at 594 & n. 155 (discussing cognitive barriers in negotiation).

Further exacerbating this mistrust is the belief among less developed countries that they had received a bad bargain in the Uruguay Round and were forced to adopt trade legislation that ignored their needs and interests.[75] Indeed, many less developed countries resent the WTO *Agreement on Trade-Related Aspects of Intellectual Property Rights* (*TRIPs Agreement*)[76] and claim that developed countries, in particular the United States and many European countries, reneged on their promises to reduce tariffs and subsidies in the textile and agricultural areas.[77] They are also concerned about the increasing use of bilateral and multilateral free trade agreements by the United States and members of the European Union to secure additional TRIPs-plus protection. As commentators have feared, these agreements may ultimately "roll back both substantive and strategic gains of the *TRIPS Agreement* for developing countries."[78]

D. Fair Regime

It is very important to have a balanced regime that includes protection for both the interests of intellectual property rights holders and those of the public. One of the biggest deficiencies of the *TRIPs Agreement* and the existing international intellectual property regime is the lack of affirmative rights in obtaining public access to protected materials.[79] If the international intellectual property regime is to be fair, it needs to include those rights. As Professor Rochelle Dreyfuss noted:

> User access did not need specific delineation when it was the background rule; only the exceptionalism of intellectual property rights required express definition. But if the new background is proprietary control, then the exceptionalism of user rights now needs to be embedded into positive law.[80]

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75 For background on the history of the TRIPs Agreement, see generally Daniel Gervais, *The TRIPS Agreement: Drafting History and Analysis*, 2d ed. (London: Sweet and Maxwell, 2003); Ryan, *supra* note 25; Frederick M. Abbott, "The WTO TRIPS Agreement and Global Economic Development" in Frederick M. Abbott & David J. Gerber, eds., *Public Policy and Global Technological Integration* (London: Kluwer Law International, 1997) at 39; A. Jane Bradley, "Intellectual Property Rights, Investment and Trade in Services in the Uruguay Round: Laying the Foundation" (1987) 23 Stan. J. Int'l L. 57.

76 See *TRIPs, supra* note 10.

77 Commission on Intellectual Property Rights, *supra* note 1 at 8.

78 Ruth L. Okediji, "Back to Bilateralism? Pendulum Swings in International Intellectual Property Protection" (2004) 1 U. Ottawa L. & Tech. J. 127 at 129.

79 See generally *supra* note 52 (arguing for the need to use the next Round of GATT negotiations to add explicit user rights to the TRIPs Agreement); see also Ruth Okediji, "Toward an International Fair Use Doctrine" (2000) 39 Colum. J. Transnat'l L. 75 (arguing that "an international fair use doctrine does not currently exist in the international law of copyright and that such a doctrine is vital for effectuating traditional copyright policy in a global market for copyrighted works as well as for capitalizing on the benefits of protecting intellectual property under the free trade system" at 87).

80 Dreyfuss, *supra* note 52 at 27.

Moreover, it is very important to recognize the impact of the intellectual property system on the fulfillment of human economic and social rights.[81] Access to information and knowledge is closely linked to intellectual property rights, and increased privatization of information has made information increasingly unaffordable and inaccessible. It is therefore essential that we recognize some form of "intellectual human rights" which affirm our fundamental need to have free, universal, sustainable, and quality access to protected information for future intellectual creations.

Article 27 of the *Universal Declaration of Human Rights* provides:

> (1) Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits;
>
> (2) Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.[82]

As the right enunciated in Article 27(1) will ultimately affect the right enunciated in Article 27(2) and vice versa, it is very important to read the two provisions together as satisfying two non-competing, rather than competing, objectives. Viewed from this perspective, each individual should have the right to "enjoy the arts and to share in scientific advancement and its benefits" so that he or she can attain "protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author."

To facilitate wide access to information and knowledge, commentators have proposed, for example, to abolish copyright ownership in government works, or the so-called crown copyrights. As Deborah Hurley, former director of the Harvard Information Infrastructure Project, maintained:

> The step that would make the biggest sea change tomorrow in intellectual property protection and access to information would be for governments to put the works that they produce into the public domain. […] There would be two immediate benefits. First, large quantities of information would become freely available, increasing access to information. Governments, by and large, produce political, social services, economic, and research information, in other words, the types of information that people need for carrying out their lives, helping others, and bettering their own situations. Secondly, governments, by placing their large thumbs firmly on the side of the scale tipped toward more access to information, would reframe the debate and send a strong signal to other content providers.[83]

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81 Cf. *supra* note 1 (maintaining that "an IP right is best viewed as one of the means by which nations and societies can help to promote the fulfilment of human economic and social rights" at 6).

82 UDHR, art. 27.

83 Deborah Hurley, *Pole Star: Human Rights in the Information Society* (Montreal: International Center for Human Rights and Democratic Development, 2003) at 37-38, online: International Center for Human Rights and Democratic Development <http://www.ichrdd.ca/english/commdoc/publications/

Indeed, the *United States Copyright Act* stipulated expressly that "[c]opyright protection under this title is not available for any work of the United States Government."[84] Nevertheless, under the statute, the government may receive or hold copyrights transferred to it by assignment, bequest, or other means. Many government-funded projects also remain protected by private copyright holders.

Ultimately, if the international intellectual property regime is to be fair and balanced for all the stakeholders in the global information society, it must pay special attention to those intellectual creations that do not fit well within the Western worldview and intellectual tradition, the capitalist philosophy, or the contemporary notion of individual authorship, all of which underlie the development of the existing regime. As the *Bellagio Declaration* reminded us:

> Contemporary intellectual property law is constructed around the notion of the author, the individual, solitary and original creator, and it is for this figure that its protections are reserved. Those who do not fit this model—custodians of tribal culture and medical knowledge, collectives practicing traditional artistic and music forms, or peasant cultivators of valuable seed varieties, for example—are denied intellectual property protection.[85]

E. Global Solidarity

Information society benefits both developed and less developed countries, and the global digital divide affects everybody. To build an inclusive global information society, the international community needs to develop "solidarity, partnership and cooperation" among developed and less developed countries as well as state and non-state actors, which include intergovernmental and non-governmental organizations and members of civil society.[86] As the WSIS *Plan of Action* stated concisely and carefully:

> All stakeholders have an important role to play in the Information Society, especially through partnerships:
>
> a) Governments have a leading role in developing and implementing comprehensive, forward looking and sustainable national e-strategies. The private sector and civil society, in dialogue with governments, have an important consultative role to play in devising national e-strategies;

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globalization/wsis/polestar.pdf>. As the WSIS *Plan of Action* stated: "Governments are encouraged to provide adequate access through various communication resources, notably the Internet, to public official information. Establishing legislation on access to information and the preservation of public data, notably in the area of the new technologies, is encouraged." WSIS, *Plan of Action*, WSIS Doc. WSIS-03/GENEVA/DOC/0005, online: International Telecommunication Union <http://www.itu.int/dms_pub/itu-s/md/03/wsis/doc/S03-WSIS-DOC-0005!!PDF-E.pdf>, at para. 10(b) [*Plan of Action*].

84 17 U.S.C. § 105 (2002).

85 *Bellagio Declaration*, reprinted in Boyle, *supra* note 30 at 193.

86 *Declaration of Principles*, *supra* note 73 (emphasizing "solidarity, partnership and cooperation among governments and other stakeholders, i.e. the private sector, civil society and international organizations" at para. 17).

> b) The commitment of the private sector is important in developing and diffusing information and communication technologies (ICTs), for infrastructure, content and applications. The private sector is not only a market player but also plays a role in a wider sustainable development context;
>
> c) The commitment and involvement of civil society is equally important in creating an equitable Information Society, and in implementing ICT-related initiatives for development;
>
> d) International and regional institutions, including international financial institutions, have a key role in integrating the use of ICTs in the development process and making available necessary resources for building the Information Society and for the evaluation of the progress made.[87]

Unfortunately, policymakers in developed countries often overlook the benefits of increased participation by less developed countries in the information society. Commentators and policymakers often describe efforts to bridge the global digital divide as a "moral imperative" or a matter of social justice.[88] However, there are many non-altruistic reasons why it would be in the developed countries' interest to bridge the divide.

First, like all communication technologies, such as telephone, television, cable, and fax machines, the Internet exhibits powerful network effects. The more computers are connected and the more information technology is deployed, the greater the value of the Internet connection will be. An increase in Internet penetration in less developed countries will therefore increase the benefits to Internet users and service providers in the developed world. Further improvement in the information infrastructure of these countries will also accelerate the Internet's practical speed, which can be drastically reduced by slow computer networks in less developed countries. Moreover, the inclusion of less developed countries in the global information society will allow businesses in the developed world to spread their user base across geographic areas. By taking advantage of the different rush hours in the various time zones, these businesses will therefore maximize the Internet's capacity while balancing their websites' access load.[89]

Second, greater international integration in the information society would facilitate the flow of information from less developed countries to developed ones, and vice versa. Efforts to bridge the global digital divide would also create a more

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87 *Plan of Action*, *supra* note 83 at para. 3.

88 See Arnold P. Djiwatampu, "Social Justice Through Communications Access: A Little LEO Proposal" *ITU News* Spec. Ed. (May 2000) at 42, online: International Telecommunication Union <http://www.itu.int/journal/200004/E/pdf/n0400e.pdf>, quoted in Jem M. Spectar, "Bridging the Global Digital Divide: Frameworks for Access and the World Wireless Web" (2000) 26 N.C. J. Int'l L. & Com. Reg. 57 at 86-87.

89 See Mark N. Cooper, "Inequality in the Digital Society: Why the Digital Divide Deserves All the Attention It Gets" (2002) 20 Cardozo Arts & Ent. L.J. 73 at 85.

informed citizenry, enabling it to make more informed decisions about matters concerning the global community. Such efforts would also allow those in the less developed world to attain a better understanding of the world trading system and the need for global economic integration.

Third, efforts to bridge the global digital divide would help promote culture abroad, thus assisting developed countries in exporting such valuable ideas as democracy, the rule of law, human rights, and individual freedom.[90] By providing alternative information sources in authoritarian and repressive countries, greater Internet connectivity would also enhance the cultural and information flows needed to promote human rights and civil liberties.[91]

Finally, attempts to bridge the global digital divide would alleviate the growing mistrust among less developed countries, as was evident in the breakdown of the recent WTO Ministerial Conference in Cancun. Such attempts would also help reduce the tension in the world trading system and the sense of isolation among people in less developed countries. If dissatisfaction among these countries continues to grow and the global digital divide persists, global stability and international security might suffer.[92] Ultimately, less developed countries might become so frustrated with the existing system that they will demand fundamental changes to the global economic system, seeking a redistribution of information resources and economic wealth.[93] Indeed, some commentators have suggested similarities between the New World Information and Communications Order and the World Summit of Information Society, as well as between the New International Economic Order and the WIPO Development Agenda.

IV. WSIS Declaration of Principles and Plan of Action

In the first phase of WSIS, the participants adopted a *Declaration of Principles* and a *Plan of Action*. This Part examines critically those portions of the

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90 See generally Joseph S. Nye, Jr., *Soft Power: The Means to Success in World Politics* (New York: Public Affairs, 2004) (discussing the importance of soft power).

91 G8, *Okinawa Charter on Global Information Society*, Kyushu-Okinawa Summit Meeting, 24 July 2000, online: G8 Information Centre (University of Toronto) <http://www.g8.utoronto.ca/summit/2000okinawa/gis.htm> (declaring that "we must [...] work to fully realise [the] potential [of information and communications technology] to strengthen democracy, increase transparency and accountability in governance, promote human rights, enhance cultural diversity, and to foster international peace and stability" art. 2).

92 Cf. Peter K. Yu, "Terrorism and the Global Digital Divide: Why Bridging the Divide Is Even More Important After September 11" *FindLaw's Writ: Legal Commentary* (11 February 2002), online: FindLaw <http://writ.news.findlaw.com/commentary/20020211_yu.html>.

93 These demands might be similar to the earlier demands by less developed countries to establish the New World Information and Communications Order (NWICO) under the auspices of UNESCO. NWICO was an extension of the New International Economic Order, which attempted to bring about fundamental changes in the international economic system by redistributing power, wealth, and resources from the developed North to the less developed South. *Supra* note 88 at 57 (contending "new order"-style restructuring schemes would be ineffective in and counterproductive to bridging the global digital divide).

documents that are related to intellectual property and traditional knowledge. It argues that the intellectual property-related portions of the documents are weak as they fail to include vitally needed affirmative public access rights, to strengthen the fair use/fair dealing privilege, and to provide concrete actions to facilitate technical assistance and transfer of technology from developed to less developed countries. This Part also criticizes the vagueness and open-endedness of the traditional knowledge-related portions of the documents, which allow policymakers to interpret the documents however they want.

A. Intellectual Property and the Public Domain

Paragraph 42 of the *Declaration of Principles* provides:

> Intellectual Property protection is important to encourage innovation and creativity in the Information Society; similarly, the wide dissemination, diffusion, and sharing of knowledge is important to encourage innovation and creativity. Facilitating meaningful participation by all in intellectual property issues and knowledge sharing through full awareness and capacity building is a fundamental part of an inclusive Information Society.

Paragraphs 25 to 28 further provide:

> 25. The sharing and strengthening of global knowledge for development can be enhanced by removing barriers to equitable access to information for economic, social, political, health, cultural, educational, and scientific activities and by facilitating access to public domain information, including by universal design and the use of assistive technologies.
>
> 26. A rich public domain is an essential element for the growth of the Information Society, creating multiple benefits such as an educated public, new jobs, innovation, business opportunities, and the advancement of sciences. Information in the public domain should be easily accessible to support the Information Society, and protected from misappropriation. Public institutions such as libraries and archives, museums, cultural collections and other community-based access points should be strengthened so as to promote the preservation of documentary records and free and equitable access to information.
>
> 27. Access to information and knowledge can be promoted by increasing awareness among all stakeholders of the possibilities offered by different software models, including proprietary, open-source and free software, in order to increase competition, access by users, diversity of choice, and to enable all users to develop solutions which best meet their requirements. Affordable access to software should be considered as an important component of a truly inclusive Information Society.
>
> 28. We strive to promote universal access with equal opportunities for all to scientific knowledge and the creation and dissemination of scientific and technical information, including open access initiatives for scientific publishing.

The first sentence of paragraph 42 of the *Declaration of Principles* affirms the two important principles laid down in Article 27 of the *Universal Declaration of Human Rights*. Although the sentence seeks to strike a balance between these two competing goals by noting the need for "wide dissemination, diffusion, and sharing of knowledge," it is unclear as to how the information can be disseminated, and more importantly *when* it will be disseminated. The timing issue is particularly important in light of the increased expansion of intellectual property rights and the continued extension of the duration of copyright. A call for greater dissemination, diffusion, and sharing of knowledge would be meaningless if such activities were to occur a century after the knowledge is created. Moreover, if those on the unfortunate side of the digital divide are to use the information revolution to catch up with those on the more fortunate side, they need information and knowledge *now* to leapfrog technological, industrial, and infrastructural development stages; they cannot wait for another century, or even another decade.

The second sentence of paragraph 42 calls for "meaningful participation by all in intellectual property issues and knowledge sharing." Such participation is particularly important in light of the fact that the public interest is always ignored in the political process—domestic or international—as far as intellectual property rights are concerned. As the Commission on Intellectual Property Rights explained:

> Too often the interests of the 'producer' dominate in the evolution of IP policy, and that of the ultimate consumer is neither heard nor heeded. So policy tends to be determined more by the interests of the commercial users of the system, than by an impartial conception of the greater public good. In IPR discussions between developed and developing countries, a similar imbalance exists. The trade ministries of developed nations are mainly influenced by producer interests who see the benefit to them of stronger IP protection in their export markets, while the consumer nations, mainly the developing countries, are less able to identify and represent their own interests against those of the developed nations.[94]

Although the *Declaration of Principles* has yet to define the word "meaningful," it suggests the need for reforms in designing the international intellectual property regime, in particular the introduction of measures that enhance full awareness of intellectual property rights and technical capacity building. As I have argued elsewhere:

> Policymakers must educate the nonstakeholders about the [intellectual property] system. They need to make the nonstakeholders understand what [intellectual property] is, how it is protected, and why they need to protect such property. Policymakers also need to show the nonstakeholders the benefits of [intellectual property] protection—how such protection can help them and how the lack thereof can hurt them.

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[94] Commission on Intellectual Property Rights, *supra* note 1 at 7.

> [...]
>
> Policymakers [also] need to help the nonstakeholders develop a stake in the system and understand how they can protect their products and receive royalties. For example, they need to help the nonstakeholders develop their own industry, such as a software industry […] a recording industry [or a pharmaceutical industry]. By doing so, they will be able to transform the nonstakeholders into stakeholders or potential stakeholders.[95]

After all, as Professor Keith Maskus pointed out,

> empirical claims that IPRs can generate more international economic activity and greater indigenous innovation are conditional. Other things being equal, such claims may be valid – but other things are not equal. Rather, the positive impacts of IPRs seem stronger in countries with complementary endowments and policies.[96]

Thus, full awareness and capacity building, which help generate complementary endowments and policies, play key roles in the development of a robust intellectual property regime.

What is disappointing is that the second sentence of paragraph 42 assumes, or at least suggests, that "full awareness and capacity building" are the *only* effective means for less developed countries to participate in the intellectual property debate. It ignores the fact that many less developed countries require legitimate alternatives when local people need but cannot afford the protected products.[97] The HIV/AIDS crisis and the recent *Doha Declaration* underscored such a need in the public health arena.[98]

Moreover, as described in Part III, an effective and equal dialogue is essential to the development of a fair, balanced, and robust international intellectual property regime. Today, developed and less developed countries are talking *past* each other, rather than talking *to* each other. Until a dialogue develops between the two groups, it is very unlikely that less developed countries will have meaningful participation in the legislative and negotiation processes.

Compared to the *Declaration of Principles*, the *Plan of Action* is more promising. Paragraph 10 of the *Plan of Action* focuses on access to information and knowledge and is particularly relevant. This paragraph provides, in part:

> ICTs allow people, anywhere in the world, to access information and knowledge almost instantaneously. Individuals, organizations and communities should benefit from access to knowledge and information.

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95 Peter K. Yu, "The Copyright Divide" (2003) 25 Cardozo L. Rev. 331 at 428, 431 [Yu, "Copyright Divide"].

96 Maskus, *supra* note 4 at 199.

97 Yu, "Copyright Divide," *supra* note 95 at 435-37.

98 WTO, *Declaration on the TRIPS Agreement and Public Health*, Ministerial Conference – 4Th Session, WTO Doc. WT/MIN(01)/DEC/2 (14 November 2001) [*Doha Declaration*].

> a) Develop policy guidelines for the development and promotion of public domain information as an important international instrument promoting public access to information;
>
> b) Governments are encouraged to provide adequate access through various communication resources, notably the Internet, to public official information. Establishing legislation on access to information and the preservation of public data, notably in the area of the new technologies, is encouraged;
>
> […]
>
> d) Governments, and other stakeholders, should establish sustainable multi-purpose community public access points, providing affordable or free-of-charge access for their citizens to the various communication resources, notably the Internet. These access points should, to the extent possible, have sufficient capacity to provide assistance to users, in libraries, educational institutions, public administrations, post offices or other public places, with special emphasis on rural and underserved areas, while respecting intellectual property rights (IPRs) and encouraging the use of information and sharing of knowledge;
>
> e) Encourage research and promote awareness among all stakeholders of the possibilities offered by different software models, and the means of their creation, including proprietary, open-source and free software, in order to increase competition, freedom of choice and affordability, and to enable all stakeholders to evaluate which solution best meets their requirements;
>
> […]
>
> h) Support the creation and development of a digital public library and archive services, adapted to the Information Society, including reviewing national library strategies and legislation, developing a global understanding of the need for 'hybrid libraries', and fostering worldwide cooperation between libraries;
>
> i) Encourage initiatives to facilitate access, including free and affordable access to open access journals and books, and open archives for scientific information;
>
> j) Support research and development of the design of useful instruments for all stakeholders to foster increased awareness, assessment, and evaluation of different software models and licences, so as to ensure an optimal choice of appropriate software that will best contribute to achieving development goals within local conditions.

Paragraph 13 of the *Plan of Action* also provides: "Governments, in cooperation with other stakeholders, should promote the development and use of open, interoperable, non-discriminatory and demand-driven standards." Notably, this paragraph focuses on open standards, rather than expressing a preference for a particular mode of protection, such as free and open source software. As paragraph 27

of the *Declaration of Principles* stated, it is essential to facilitate "diversity of choice" and to "enable all users to develop solutions which best meet their requirements. Affordable access to software should be considered as an important component of a truly inclusive Information Society."

In sum, the *Plan of Action* touches on a wide variety of issues in the intellectual property debate, including protection of the public domain, limited protection of public databases, facilitation of the development of free and open source software, and increased access to copyrighted works in libraries and archives.

What is troubling, however, is its failure to emphasize explicitly the importance of the fair use/fair dealing privilege within the intellectual property regime. It also fails to delineate affirmative public access rights that are needed to meet our fundamental need to have free, universal, sustainable, and quality access to protected information for future intellectual creations, which I termed "intellectual human rights."

The *Plan of Action* also fails to provide concrete actions to facilitate technical assistance[99] and transfer of technology from developed to less developed countries,[100] although the *Declaration of Principles* emphasized "partnerships […] in […] technology transfer," a "dynamic and enabling international environment […] supportive of […] transfer of technology," and "an environment conducive to technology transfer."[101] To facilitate technical assistance and technology transfer, governments need to carefully coordinate the various efforts and integrate them into their overall development strategies.[102] As intellectual property issues become

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[99] Commission on Intellectual Property Rights, *supra* note 1 at 149. *Technical assistance* generally includes "general and specialised training; legal advice and assistance with preparing draft laws; support for modernising IPR administration offices and collective management systems; access to patent information services (including search and examination); exchange of information among lawmakers and judges; and the promotion of local innovation and creativity".

[100] See *e.g. TRIPs*, *supra* note 10 art. 67 (requiring developed countries to provide technical and financial cooperation to less and least developed countries) (see *ibid*., art. 69 providing for cooperation among signatory countries regarding the elimination of international trade in pirated and counterfeit goods); Letter from Wu Yi, Minister of Foreign Trade and Economic Cooperation, People's Republic of China, to Mickey Kantor, United States Trade Representative (26 February 1995) in *Agreement Regarding Intellectual Property Rights*, P.R.C.-U.S., 26 February 1995, 34 I.L.M. 881 at 885-86 (delineating the mutual responsibilities of the Chinese and United States governments in training customs officers and bureaucrats, exchanging information and statistics, and undertaking future consultations).

[101] *Declaration of Principles*, *supra* note 73 at paras. 33, 40, 63.

[102] As the Commission on Intellectual Property Rights explained: "Too often, IP-related technical assistance appears to be planned and delivered in isolation from other development programmes. For example, new IP legislation may be prepared for countries by specialist agencies like WIPO, but the institutional infrastructure to administer the new regime is not put in place because larger, mainstream development agencies have not been involved. On the other hand, World Bank-funded projects in Brazil, Indonesia and Mexico have taken a more holistic approach to upgrading the national IP architecture. In these cases, modernisation of the IP regime was one component of much broader programmes of policy reform and capacity building aimed at stimulating R&D spending and improving competitiveness.

Activities have also not always been well co-ordinated by the multiple donors involved, or by the countries that are receiving such assistance. This has resulted in duplication of efforts or, at worst, conflicting advice. In Vietnam, for example, eight different donor agencies had provided assistance in

increasingly intertwined with other issue areas of the information society, these governments should adopt a holistic perspective and undertake joint needs assessment and programming as they plan their information society development strategies.

B. Traditional Knowledge and Indigenous Creations

With respect to traditional knowledge, paragraph 15 of the *Declaration of Principles* notes: "In the evolution of the Information Society, particular attention must be given to the special situation of indigenous peoples, as well as to the preservation of their heritage and their cultural legacy." Paragraph 52 also provides:

> Cultural diversity is the common heritage of humankind. The Information Society should be founded on and stimulate respect for cultural identity, cultural and linguistic diversity, traditions and religions, and foster dialogue among cultures and civilizations.

Emphasizing the importance of past cultural contributions, paragraph 54 further maintains: "The preservation of cultural heritage is a crucial component of identity and self-understanding of individuals that links a community to its past." These paragraphs are consistent with the demands of indigenous peoples in their quest for protection of folklore, traditional knowledge, and indigenous practices. However, they stopped short of emphasizing the need to conserve and protect indigenous knowledge and culture.

As mentioned in Part III, there is great tension between strong protection of traditional knowledge and free access to information and knowledge. To make things more complicated, the international community has yet to reach a consensus on what constitute traditional knowledge and indigenous materials, who can identify these materials and how to protect such materials, and how such protection is to interact with the existing forms of intellectual property rights. Indeed, one can even make an argument, based on the *Declaration of Principles*, that it is important to lower protection of such materials so that humankind can preserve the "heritage and […] cultural legacy" of indigenous peoples. After all, the *Convention for the Protection of Cultural Property in the Event of Armed Conflict* has defined cultural artefacts as the "cultural heritage of *all mankind*."[103]

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the country between 1996 and 2001. A large part of the problem is that the main IP donors (for example, WIPO and EPO) do not have any staff based in country, and co-ordination of planning and delivery of assistance is therefore somewhat hampered. In this respect, it might therefore be useful for donors to consider experimenting, on a pilot basis, with in-country or in-region field managers to improve co-ordination of their IP-related technical assistance programmes on the ground in developing countries."

Supra note 1 at 151 [footnote omitted].

[103] *Convention for the Protection of Cultural Property in the Event of Armed Conflict*, 14 May 1954, 249 U.N.T.S. 240 (entered into force 7 August 1956) [emphasis added]; see also Sarah Harding, "Justifying Repatriation of Native American Cultural Property" (1997) 73 Ind. L.J. 723 at 769 (arguing that cultural property connects different cultures and promotes a common heritage); John H. Merryman, "The Public Interest in Cultural Property" (1989) 77 Cal. L. Rev. 339 (arguing that cultural property promotes "participation in a common human enterprise" at 349).

Paragraph 23 of the *Plan of Action* does a better job in protecting the needs of indigenous peoples. This paragraph, which focuses on cultural diversity and identity, linguistic diversity, and local content, is quoted in full below:

> Cultural and linguistic diversity, while stimulating respect for cultural identity, traditions and religions, is essential to the development of an Information Society based on the dialogue among cultures and regional and international cooperation. It is an important factor for sustainable development.
>
> a) Create policies that support the respect, preservation, promotion and enhancement of cultural and linguistic diversity and cultural heritage within the Information Society, as reflected in relevant agreed United Nations documents, including UNESCO's Universal Declaration on Cultural Diversity. This includes encouraging governments to design cultural policies to promote the production of cultural, educational and scientific content and the development of local cultural industries suited to the linguistic and cultural context of the users;
>
> b) Develop national policies and laws to ensure that libraries, archives, museums and other cultural institutions can play their full role of content—including traditional knowledge—providers in the Information Society, more particularly by providing continued access to recorded information.
>
> c) Support efforts to develop and use ICTs for the preservation of natural and, cultural heritage, keeping it accessible as a living part of today's culture. This includes developing systems for ensuring continued access to archived digital information and multimedia content in digital repositories, and support archives, cultural collections and libraries as the memory of humankind;
>
> d) Develop and implement policies that preserve, affirm, respect and promote diversity of cultural expression and indigenous knowledge and traditions through the creation of varied information content and the use of different methods, including the digitization of the educational, scientific and cultural heritage;
>
> e) Support local content development, translation and adaptation, digital archives, and diverse forms of digital and traditional media by local authorities. These activities can also strengthen local and indigenous communities;
>
> f) Provide content that is relevant to the cultures and languages of individuals in the Information Society, through access to traditional and digital media services;
>
> g) Through public/private partnerships, foster the creation of varied local and national content, including that available in the language of users, and give recognition and support to ICT-based work in all artistic fields;
>
> h) Strengthen programmes focused on gender-sensitive curricula in formal and non-formal education for all and enhancing communication and media literacy for women with a view to building the capacity of girls and women to understand and to develop ICT content.

> i) Nurture the local capacity for the creation and distribution of software in local languages, as well as content that is relevant to different segments of population, including non-literate, persons with disabilities, disadvantaged and vulnerable groups especially in developing countries and countries with economies in transition;
>
> j) Give support to media based in local communities and support projects combining the use of traditional media and new technologies for their role in facilitating the use of local languages, for documenting and preserving local heritage, including landscape and biological diversity, and as a means to reach rural and isolated and nomadic communities;
>
> k) Enhance the capacity of indigenous peoples to develop content in their own languages;
>
> l) Cooperate with indigenous peoples and traditional communities to enable them to more effectively use and benefit from the use of their traditional knowledge in the Information Society;
>
> m) Exchange knowledge, experiences and best practices on policies and tools designed to promote cultural and linguistic diversity at regional and sub-regional levels. This can be achieved by establishing regional, and sub-regional working groups on specific issues of this Plan of Action to foster integration efforts;
>
> n) Assess at the regional level the contribution of ICT to cultural exchange and interaction, and based on the outcome of this assessment, design relevant programmes;
>
> o) Governments, through public/private partnerships, should promote technologies and R&D programmes in such areas as translation, iconographies, voice-assisted services and the development of necessary hardware and a variety of software models, including proprietary, open source software and free software, such as standard character sets, language codes, electronic dictionaries, terminology and thesauri, multilingual search engines, machine translation tools, internationalized domain names, content referencing as well as general and application software.

Although many of the actions listed in this paragraph are vague and open-ended, the long list in the paragraph strongly underscores the importance of cultural, linguistic, and gender-based diversity and the need to focus the digital divide debate on content access, in addition to connectivity. Content access has been one of the major issues in the digital divide debate. Lacking access to relevant and meaningful content, individuals will not be able to fully participate in the information society even if they have access to information technology.

Today, most of the content on the Internet is business-driven. To maximize profits, content providers have focused on the "right" customers based on their

disposable incomes and propensities to purchase products.[104] Many of these providers also have chosen to carry content provided by their affiliates and corporate partners, rather than competitors and unaffiliated providers.[105] As a result, low-income and underserved communities have great difficulty in obtaining access to information that is relevant to their lives and communities.

In fact, if the Internet contains more diverse and relevant information, more people, including those in minority and marginalized communities, might be attracted to the medium and participate in the information society. As Professor Henry Gates perceptively noted in a comparison between the different attitudes black and white families have toward the Internet today and their different attitudes toward phonograph records in the 1920s:

> Blacks began to respond to this new medium only when mainstream companies like Columbia Records introduced so-called race records, blues and jazz discs aimed at a nascent African-American market. Blacks who would never have dreamed of spending hard-earned funds for a record by Rudy Vallee or Kate Smith would stand in lines several blocks long to purchase the new Bessie Smith or Duke Ellington hit.[106]

* * *

Access to information and knowledge is closely linked to intellectual property rights, and a fair, balanced, and robust international intellectual property regime is needed to give everybody an equal opportunity to fully participate in the information revolution and to benefit from the new political, social, economic, cultural, educational, health, and career opportunities created by the revolution. To build this regime, the international community must have (1) a thorough understanding of the intellectual property system, (2) a balanced and well-reasoned public debate about intellectual property protection, (3) an effective and equal dialogue on intellectual property rights between developed and less developed countries, (4) a fair regime that will benefit all the stakeholders of the information

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[104] See The Children's Partnership, *Online Content for Low-income and Underserved Americans: The Digital Divide's New Frontier* (Santa Monica, Calif.: The Children's Partnership, 2000), online: The Children's Partnership <http://www.childrenspartnership.org/pub/low_income/low_income.pdf> (noting that "online content has been primarily designed for Internet users who have discretionary money to spend" at 17). As Robert McChesney noted in his research on commercial news media: "In recent years, the increased focus by the commercial news media on the more affluent part of the population has reinforced and extended the class bias in the selection and tenor of material. Stories of great importance to tens of millions of Americans will fall through the cracks because those are not the 'right' Americans, according to the standards of the corporate news media".
Robert W. McChesney, *Rich Media, Poor Democracy: Communication Politics in Dubious Times* (New York: New Press, 1999) at xix.

[105] See Frank Rich "Two 21st Century Foxes Elope" *N.Y. Times* (15 January 2000) (noting that public interest groups "worry that AOL Time Warner and its kin will run their fast Internet wires like private toll roads, banning other Internet providers or diverting them to slow and bumpy traffic lanes" at A17).

[106] Henry Louis Gates, Jr. "One Internet, Two Nations" *N.Y. Times* (31 October 1999), s. 4 at 15.

society, and (5) solidarity among developed and less developed countries as well as state and non-state actors. Until we do so, it will be very difficult to develop an inclusive global information society.

Some might argue that many of the intellectual property issues discussed in this article may be "of limited immediate importance in many developing countries, given these nations' limited Internet connectivity."[107] This argument is valid; however, it misses the forest for the trees. As the Internet becomes increasingly important and as Internet connectivity increases in less developed countries, intellectual property issues will become significant and ultimately might have a substantial influence on the development of an inclusive information society. A fair, balanced, and robust intellectual property regime also might raise the Internet's economic potential, thus providing a stronger justification for policymakers to invest in, or create business-driven incentives for, the deployment of information technology.

Intellectual property issues are no longer arcane, obscure, complex, and highly technical; they are of global significance and affect all of us in our daily lives. Ultimately, a fair, balanced, and robust international intellectual property regime is needed to

> build a people-centred, inclusive and development-oriented Information Society, where everyone can create, access, utilize and share information and knowledge, enabling individuals, communities and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life.[108]

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[107] Commission on Intellectual Property Rights, *supra* note 1 at 107.
[108] *Declaration of Principles*, *supra* note 73 at para. 1.