UNITED NATIONS **E**

Economic and Social Council

Distr.
GENERAL

E/C.12/2000/12
3 October 2000

Original: ENGLISH

COMMITTEE ON ECONOMIC, SOCIAL
AND CULTURAL RIGHTS
Twenty-fourth session
Geneva, 13 November-1 December 2000
Item 3 of the provisional agenda

IMPLEMENTATION OF THE INTERNATIONAL COVENANT
ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS

Substantive issues arising in the implementation of the International Covenant on Economic, Social and Cultural Rights: Day of General Discussion "The right of everyone to benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author (article 15.1 (c) of the Covenant)" organized in cooperation with the World Intellectual Property Organization (WIPO)

Monday, 27 November 2000

"Approaching Intellectual Property as a Human Right: Obligations Related to Article 15 (1) (c)"

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GE.00-44783 (E)

1. Commentators frequently note that we are living in a global information society. Just as raw materials and labor were key resources in the first industrial revolution, intellectual "commodities" – knowledge, creative works, and scientific discoveries - are a central asset in an information or knowledge based economy. A recent book makes the claim, for example, that "intellectual property and its conceptual neighbors may bear the same relationship to the information society as the wage-labor nexus did to the industrial manufacturing society of the 1900s."[1] Another recent work identifies knowledge as a corporation's most valuable resource, as the ultimate substitute for raw materials, labor, capital, and inputs.[2] According to some estimates, more than a quarter of the exports of the United States, the world's largest producer of intellectual property, rely on intellectual property.[3] In the new global economy of ideas, ownership, control, and access to creative works and scientific knowledge have considerable economic import, giving rise to fierce competition over intellectual and creative works, or what one analyst describes as the "knowledge wars."[4]

2. The manner in which creative works, cultural heritage, and scientific knowledge are turned into property has significant human rights implications. Beginning with the provisions of the Universal Declaration of Human Rights (UDHR),[5] international human rights instruments have enumerated the right of an author, creator, and inventor to some form of recognition and benefit from their intellectual products. Article 27 of the UDHR states that "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." This right is linked to another provision of Article 27: "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."

3. Building on Article 27 of the UDHR, the International Covenant on Economic, Social and Cultural Rights (ICESCR or the Covenant) has similar provisions.[6] Article 15 (1) (c) requires States Parties, the countries which have ratified this instrument, to recognize the right of everyone "to benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author."[7] Also like the UDHR, other components of Article 15 link this obligation to the rights "to take part in cultural life"[8] and "to enjoy the benefits of scientific progress and its applications."[9] To achieve these goals, the Covenant mandates that States Parties undertake a series of steps. These include "those

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[1] James Boyle, *Shamans, Software & Spleens: Law and the Construction of the Information Society* (Cambridge, Massachusetts and London: Harvard University Press), 13.
[2] Seth Shulman, *Owning the Future* (Boston: Houghton Mifflin Company, 1999), p. 4.
[3] Ibid., p. 18.
[4] This is the term used by Shulman in *Owning the Future*.
[5] Universal Declaration of Human Rights, adopted 10 December 1948, G.A. Res217A (III), 3 U.N. GAOR (Resolutions, part 1) at 71, U.N. Doc. A/810 (1948).
[6] International Covenant on Economic, Social and Cultural Rights, adopted 16 December 1966, 993 U.N.T.S. 3 (entered into force 3 January 1976), G.A. Res. 2200 (XXI), 21 U.N. GAOR Supp. (No.16) at 49, U.N. Doc.A/6316 (1966).
[7] Ibid., Article 15 (1) (c).
[8] Ibid., Article 15 (1) (a).
[9] Ibid., Article 15 (1) (b).

necessary for the conservation, development, and diffusion of science and culture." States Parties are also directed to "undertake to respect the freedom indispensable for scientific research and creative activity."[10]

4. Legal regimes defining the nature of intellectual property and the types of protection that accrue to its creators very much shape the realization of this right. Moreover, the very centrality of intellectual property to almost every sphere of economic life means that international treaties, national legal codes, and judicial decisions about intellectual property can have significant ramifications for the protection and promotion of other human rights. This is particularly the case for the economic, social, and cultural rights enumerated in the Covenant.

5. The development of a global economy in which intellectual property plays a central role underscores the need for the human rights community to claim the rights of the author, creator and inventor, whether an individual, a group, or a community, as a human right. It is equally important for human rights advocates to protect the moral interests and rights of the community to securing access to this knowledge. A third human rights consideration is whether relevant laws identifying rights to creative works and scientific knowledge and determining the subject matter which can be claimed as intellectual property are consistent with respect for human dignity and the realization of other human rights.

6. Recent trends underscore the need for a human rights approach. As various economic actors rush to stake claims over creative works and forms of knowledge, human rights are being trampled: creators are sometimes losing control of their works, the free exchange of information so vital to scientific discovery is being constrained, and publicly held resources, including the cultural and biological heritage of groups, privatized. New technologies, such as computers and Internet communications, are raising issues about the relevance of traditional forms of intellectual property protection. The establishment of the World Trade Organization in 1994 and the coming into force of the international Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) in 1995 have strengthened the global character of intellectual property regimes. In the years ahead the provisions of TRIPS are likely to reshape intellectual property law and relationships within and across countries. Unless human rights advocates provide an effective intellectual and organizational counterweight to economic interests, the intellectual property landscape will be reshaped in the years ahead without adequate consideration of the impact on human rights.

7. Noting that actual or potential conflicts exist between the implementation of the TRIPS Agreement and the realization of economic, social and cultural rights, the Sub-Commission on the Promotion and Protection of Human Rights adopted a resolution addressing this topic at its August 2000 session.[11] The resolution affirms that the right to protection of the moral and material interests resulting from any scientific, literary or artistic production of which one is the author is a human right, subject to limitations in the public interest. It declares:

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[10] Ibid., Article 15 (3).

[11] "Intellectual Property Rights and Human Rights," Sub-Commission on the Promotion and Protection of Human Rights, Fifty-second session, agenda item 4, E/CN.4/Sub.2/2000/7, adopted August 17, 2000.

> that since the implementation of the TRIPS Agreement does not adequately reflect the fundamental nature and indivisibility of all human rights, including the right of everyone to enjoy the benefits of scientific progress and its applications, the right to health, the right to food, and the right to self-determination, there are apparent conflicts between the intellectual property rights regime embodied in the TRIPS Agreement, on the one hand, and international human rights law, on the other.[12]

8. It reminds all governments of the primacy of human rights obligations over economic policies and agreements. And it makes a number of recommendations, among them that the World Trade Organization and particularly its Council on TRIPS take existing state obligations under international human rights instruments fully into account during its ongoing review of the TRIPS Agreement. The resolution also requests governments to protect the social function of intellectual property in accordance with international human rights obligations when shaping national and local legislation.

Development of Intellectual Property Regimes

9. Intellectual property is a generic term that refers to intangible objects, such as literary works, artistic works, plans for inventions, and designs, which acquire their value primarily from creative efforts. Efforts to protect intellectual property have a long history. Some analysts date the origins of intellectual property as far back as the fourth century BCE to Aristotle;[13] others to ninth century China.[14] Still others trace laws dealing with intellectual property to the system of royal privilege giving that operated in medieval Europe. The Venetians are credited with instituting the first properly developed patent laws in 1474, and their model spread to many other European states in the next one hundred years. Modern copyright law began in England with the 1709 Statute of Anne. [15] The United States Constitution, drafted in 1787, vests the Congress with power "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respectful Writings and Discoveries." [16]

10. Historically, countries have adopted laws to protect intellectual property for several reasons. According to the World Intellectual Property Organization (WIPO), an independent specialized agency within the United Nations family of organizations,[17] intellectual property

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[12] Ibid.
[13] Geoff Tansey, "Trade, Intellectual Property, Food and Biodiversity: A Discussion Paper," London: Quaker Peace and Service, 1999, p.3.
[14] Robert L. Ostergard, Jr., "Intellectual Property: A Universal Human Right?" *Human Rights Quarterly* 21 (1999): 157.
[15] Peter Drahos, "The Universality of Intellectual Property Rights: Origins and Development," in World Intellectual Property Organization, *Intellectual Property and Human Rights*, WIPO Publication No. 762 (E), (Geneva, 1999), p.15.
[16] Art. 1, Par. 8, Section 8, *The Constitution of the United States*, adopted 1787, Washington D.C.: U.S. Government Printing Office, 1985.
[17] The World Intellectual Property Organization (WIPO) is responsible for the promotion of intellectual property worldwide. It acts as the secretariat for the negotiation of treaties that establish new norms in the field of intellectual property, and administers several treaties. It also conducts extensive programs for training and technical assistance for developing countries.

regimes give statutory expression to the moral and economic rights of creators in their creations and define the rights of the public to access to such creations. The second motivation WIPO identifies is to provide incentives and rewards to inventors and creators and thereby stimulate economic and social development. [18] Beyond these traditional rationales, governments use intellectual property laws as a means to improve the country's competitive economic advantage. This third concern has become an increasingly dominant motive in the global economy. Often these policies favor major economic interests, particularly large multinational firms, to the detriment of protecting public access and benefits in the home country and promoting development in countries in the South.[19]

11. Intellectual property has three customary legal domains: copyright (author's rights), patent, and trademark. Various legal regimes have evolved over time, each of which, to different degrees, recognizes rights of ownership in a particular form of intellectual subject matter under specific conditions for designated periods of time.

12. Copyright, which is called author's rights in most European languages other than English, is a branch of the law dealing with the rights of intellectual creators. The subject matter of copyright protection covers original works in the literary, scientific, and artistic domain, whatever the mode or form of expression. Copyright grants authors and other artistic creators of works of the mind (literature, music, art) rights to authorize or prohibit, for a specific limited time, often 99 years, use made of their works. In so doing, copyright awards limited monopolies to creators related to their creations so as to control the right to make copies of a given work. Generally copyright protects the expression of the author's ideas in tangible form rather than the ideas themselves.[20] Copyright protection is justified as an important means of encouraging authors and artists to create, thereby promoting, enriching and disseminating a nation's cultural heritage.

13. A patent is a document issued by a government office, upon application by an inventor, which describes an invention and creates a legal situation in which the patented invention requires authorization of the owner for any use, such as manufacture or sale. Simply put, a patent is a monopoly granted by the state to an inventor for a limited period, in return for the disclosure of the invention, in order to enable others to have the benefit of the invention. The effect of the grant of a patent is not that the owner is given a statutory right to exploit the invention; instead it gives the owner the legal authority to prevent others from exploiting his/her invention.[21] Generally laws require that, in order to be eligible for patent protection, an invention must meet several criteria:[22] (1) the invention must be new or novel; (2) it must be nonobvious (or involve an inventive step);[23]and (3) it must be useful or industrially applicable. Patenting regimes also generally exclude certain specific kinds of inventions from the possibility

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[18] World Intellectual Property Organization, *Intellectual Property Reading Material*, WIPO Publication No. 476 (E), Geneva, 1995, p.5.
[19] Shulman, *Owning the Future*, p.19.
[20] World Intellectual Property Organization, *Intellectual Property Reading Material*, pp. 4-8.
[21] Ibid., p.129.
[22] Ibid., pp. 130-133.
[23] In technical terms, the question is whether or not the invention "would have been obvious to a person having ordinary skill in the art."

of patenting, [24] either because certain types of objects are considered inappropriate for private ownership or for ethical reasons. TRIPS, building on the precedent of the European Patent Convention Agreement, for example, allows members to exclude subject matter from patenting on the grounds "to protect *ordre public* or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment." [25]

14. A trademark is a sign or name that individualizes the goods of a given enterprise so as to identify the source and thereby distinguish the items from the goods of competitors.[26] Like patents, a trademark can be registered with the competent government authority, which in most countries is the same as the authority that processes patent applications.[27]

15. Intellectual property law was developed on a national basis, with considerable diversity in the nature and stringency of protections. As international commerce increased during the nineteenth century, however, states became interested in developing some forms of international collaboration and harmonization. At first, countries concluded a series of bilateral agreements, but this was cumbersome and often ineffective. The next step was the formulation of two major agreements that provided international standards. These were the Paris Convention of 1883 for industrial property (patents and trademarks) and the Berne Convention of 1886 for the protection of literary and artistic works (copyright or author's rights), both of which subsequently were revised several times. Nevertheless, many countries chose not to abide by these agreements and suffered few ill consequences. The U.S., for example, never ratified the Berne Convention. Although international secretariats were established for both the Paris and the Berne conventions and then merged to form a United International Bureau for the Protection of Intellectual Property (currently superceded by the World Intellectual Property Organization), the enforcement mechanisms were very weak.

16. In recent years, industrialized countries, led by the United States, have pushed for increased global protection of intellectual property and the establishment of a global intellectual property regime. The TRIPS Agreement, which was a product of the Uruguay Round of trade talks, is binding in toto on all members of the World Trade Organization. It sets mandatory minimum standards for national protection of intellectual property that require states to implement a common and often expanded set of intellectual property protections. It also imposes enforcement measures, including potential trade sanctions against nations that do not comply with these standards. Provisions of the TRIPS Agreement make it far more difficult for countries to set intellectual property standards and policies to fit domestic economic conditions, as well as to protect human rights and the environment.

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[24] Ibid., p.9.
[25] Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) (1994), Section 5: Patents, Article 27 (2), published in a collection of documents compiled by the World Intellectual Property Organization, WIPO Publication No. 223 (E), Geneva 1997.
[26] World Intellectual Property Orgaanization, *Intellectual Property Reading Material*, pp. 191-2.
[27] *Bid., 202.*

17. Not only have intellectual property regimes become globalized, the scope of the subject matter considered to be eligible for intellectual property protection has also expanded. This has occurred in several ways. First, restrictions and limitations that previously excluded specific types of subject matter from patenting have been eliminated. The patenting of biological entities constitutes one example. Prior to 1980, some two hundred years of legal doctrine conceptualized life forms as "products of nature" rather than as a human invention and therefore unable to meet the three criteria for patents: novelty, utility, and non-obviousness. These standards were overturned by a landmark U.S. Supreme decision, *Diamond v. Chakrabarty*, which ruled that a genetically modified strain of bacteria capable of degrading components of crude oil was patentable as a new and useful manufacture or composition of matter.[28] Subsequently, the U.S. Patent and Trademarks Office, followed in many cases by the European and Japanese patent office, began to grant biotechnology patents on new plant varieties, nonnaturally occurring nonhuman multicellular living organisms, including animals, and discoveries of naturally occurring human gene sequences.[29] Other extensions have resulted from adapting legal instruments to fit new situations and technologies, as for instance, efforts to extend copyright print protections into the digital domain. A third trajectory is the expansion of private intellectual property claims into areas that formerly were part of the public domain, such as the privatization of works of cultural heritage and the biological and ecological knowledge of traditional peoples.

Drafting of the Intellectual Property Provisions of UDHR and ICESCR

18. The drafters of the UDHR and ICESCR decided to recognize the intellectual property claims of authors, creators, and inventors as a human right. Why did they decide to do so? And how did they conceptualize this right? And was it just accidental that drafters of both documents link the intellectual property claims of authors and creators with the rights to participate in cultural life and to enjoy the benefits of scientific progress and its applications, or did they understand these three to be intrinsically interconnected?

19. To address the first of these questions, a review of the *travaux preparatoire* of the drafting committee for the UDHR operating under the aegis of the United Nations Commission on Human Rights reveals that Mexican and Cuban members of the drafting committee, supported by the French delegate, played a major role. They introduced the language on author's rights so as to harmonize the Universal Declaration with the provision on intellectual property in The American Declaration on the Rights and Duties of Man (1948). Article 13 of the American Declaration states that:

> Every person has the right to take part in the cultural life of the community, to enjoy the arts, and to participate in the benefits that result from intellectual progress, especially scientific discoveries.

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[28] *Diamond v Chakrabarty* 477 U.S. 303 (1980).

[29] For a discussion of this development and its ethical implications see Audrey R. Chapman, "Background and Overview," in Audrey R. Chapman, ed., *Perspectives on Gene Patenting: Religion, Science, and Industry in Dialogue* (Washington, D.C.: American Association for the Advancement of Science, 1999): 13-17.

> He likewise has the right to the protection of his moral and material interests as regards his inventions or any literary, scientific or artistic works of which he is the author.[30]

20. The Mexican representative argued that the United Nations needed the moral authority to protect all forms of work, intellectual as well as manual to safeguard intellectual production on an equal basis with material property. (Provisions of the draft of the UDHR already recognized the right to work.) The proposed provision survived criticisms that intellectual property needed no special protection beyond that afforded generally by property rights (already in Article 17 of the Universal Declaration), as well as claims by other members of the drafting committee that special protection for intellectual property entailed an elitist perspective.[31]

21. The text of Article 15 of the ICESCR closely resembles Article 27 of the UDHR. Like the UDHR it has three components dealing with right to culture, scientific advancement, and intellectual property. However, this came about only after heated debate about whether to include the intellectual property provisions. The basic proposition that became Article 15 of the Covenant was first proposed by the U.S. representative, incorporated an amendment by Lebanon, was then adopted by the Commission on Human Rights. Interestingly, when the Third Committee initially received the draft Covenant from the Commission on Human Rights, it lacked the language of what was to become 15 (1) (c) recognizing the rights of authors and creators. This omission was pointed out by the Israeli delegation and was then discussed. Representatives of Costa Rica and Uruguay then moved to amend the Covenant to reinsert this provision of the UDHR. The USSR and the Eastern bloc, reflecting their socialist interests and the dynamics of the cold war, strongly objected to incorporating the provision on intellectual property. They argued that the people's right to benefit from science should not get intermixed with property rights. The socialist bloc's opposition to property rights had already played a major role in the decision of the Covenant's drafting committee to omit the text of Article 17 of the UDHR recognizing the right to tangible forms of property in the Covenant.[32]

22. There again was considerable controversy regarding author's rights when the General Assembly took up consideration of the article in 1957. Again, the Eastern bloc attempted to delete this provision. The representative of the Soviet Union claimed, for example, that author's rights were too complicated and varied to draw up a clause that would be valid for all states. A representative of the United Nations Educational, Scientific and Cultural Organization

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[30] American Declaration of the Rights and Duties of Man, Approved by the Ninth International Conference of American States, Bogota, Columbia, March 30 to May 2, 18, 19. Resolution XXX, Pan American Union, Final Act of the Ninth Conference, 38-45, Washington, D.C., 1948.

[31] *Official Records of the Third Session of the General Assembly*, Part I, "Social and Humanitarian and Cultural Questions," Third Committee, Summary of Records of Meetings, September 21- December 8, 1948, pp. 619-34.

[32] UN Commission on Human Rights, "Report of the 8th Session," April 14-June 14, 1952, ECOSOC Records, supplement No. 4; UN General Assembly, 12th Session, Third Committee, Agenda Item 33, "Article 16 of the Draft Covenant on Economic, Social and Cultural Rights" (E/2573, Annex IA), General Assembly Twelfth Session Official Records, A/C.3/SR.795, pp. 169-191. The numbering of articles at this point of time differed from the final text that was adopted.

(UNESCO) defended the need to retain language on author's rights.[33] The Uruguayan and Costa Rican delegates cosponsored an amendment to that effect arguing for it on three grounds: the UDHR already recognized this right; by incorporating the provision the work of UNESCO in this area would be given new impetus and prestige; the right of the author and the right of the public were complementary, not opposed; and respect for the right of the author would assure the public of the authenticity of works presented to it.[34] A statement by the Israeli delegate went further. He argued that "it would be impossible to give effective encouragement to the development of culture unless the rights of authors and scientists were protected."[35] In the end, of course, the arguments of those defending author's rights won the day.

23. This history underscores that the three provisions of Article 15 in the ICESCR were viewed by drafters as intrinsically interrelated to one another. Three major human rights instruments – the American Declaration, the UDHR, and the Covenant – enumerate these rights as components of a single article. The rights of authors and creators are not just good in themselves but were understood as essential preconditions for cultural freedom and participation and scientific progress.

24. Conversely, human rights considerations impose conditions on the manner in which author's rights are protected in intellectual property regimes. To be consistent with the provisions of Article 15, intellectual property law must assure that intellectual property protections complement, fully respect, and promote other components of Article 15. Put another way, the rights of authors and creators should facilitate rather than constrain cultural participation on the one side and scientific progress and access on the other.

A Human Rights Approach to Intellectual Property

25. Very little attention has been paid to the interpretation of intellectual property as a human right. The human rights community has neglected Article 27 of the UDHR and Article 15 of the Covenant. Indigenous rights advocates have constituted the major exception. There is very little literature conceptualizing the scope of Article 15 of the Covenant and the concomitant obligations of States Parties. The Committee on Economic, Social and Cultural Rights, the United Nations treaty monitoring body overseeing ICESCR, rarely deals with intellectual property issues. It has planned to hold its first review of intellectual property in a day of general discussion on this subject scheduled for November 2000. Although there is a considerable body of legal practitioners dealing with intellectual property, they tend to focus on commercial issues and rarely address the ethical and human rights dimensions of intellectual property regimes.

26. So what can be said about the difference between a human rights and a more narrowly legal or economic interpretation of intellectual property? Intellectual property conceptualized as a universal human right differs in fundamental ways from its treatment as an economic interest

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[33] Official Records, United Nations General Assembly Twelfth Session, Agenda item 33: Draft International Covenants on Human Rights, Article 16 of the draft Covenant on Economic, Social and Cultural Rights (E/2573, Annex 1), Third Committee, 796th meeting, 31 October, 1957.
[34] Official Records, United Nations General Assembly, Agenda item 33, 789th meeting, 1 November 1957, par. 32, p. 183.
[35] Ibid., par. 37, p.184.

under intellectual property law. I believe there are several considerations. The language of the Covenant underscores the importance of the obligation to respect the moral and material interests of the author, artist, inventor, or creator. In contrast with the individualism of intellectual property law, a human rights approach also recognizes that an author, artist, inventor, or creator can be a group or a community as well as an individual. A third characteristic is an acknowledgement that intellectual products have an intrinsic value as an expression of human dignity and creativity. Put another way, artistic and scientific works are not first and foremost economic commodities whose value is determined by their utility and economic price tag.

27. A human rights approach takes what is often an implicit balance between the rights of inventors and creators and the interests of the wider society within intellectual property paradigms and makes it far more explicit and exacting. A human rights approach is predicated on the centrality of protecting and nurturing human dignity and the common good. From a human rights perspective, therefore, the rights of the creator are not absolute but conditional on contributing to the common good and welfare of the society. The wording of Article 15 is noteworthy: States Parties are directed to ensure that everyone will be able "to benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author." This is far short of vesting creators, authors, and inventors with full and unrestricted monopoly property rights.

28. A human rights approach also establishes a different and often more exacting standard for evaluating the appropriateness of granting intellectual property protection to a specific artistic work, invention, or set of knowledge than those specified under intellectual property law. Intellectual property law generally emphasizes originality as a basis for determining eligibility for copyright protection; to be eligible for patent protection an invention or discovery must meet the criteria of novelty, utility, and non-obviousness. In order for intellectual property to fulfill the conditions necessary to be recognized as a universal human right, however, intellectual property regimes and the manner they are implemented first and foremost must be consistent with the realization of the other human rights, particularly those enumerated in the Covenant.

29. A human rights approach must be particularly sensitive to the interconnections between intellectual property and the rights "to take part in cultural life" and "to enjoy the benefits of scientific progress and its applications." To be consistent with the full provisions of Article 15, the type and level of protection afforded under any intellectual property regime must facilitate and promote cultural participation and scientific progress and do so in a manner that will broadly benefit members of society both on an individual and collective level. These considerations go well beyond a simple economic calculus often governing intellectual property law.

30. A human rights approach further establishes a requirement for the state to protect its citizens from the negative effects of intellectual property. To do so, governments need to undertake a very rigorous and disaggregated analysis of the likely impact of specific innovations, as well as an evaluation of proposed changes in intellectual property paradigms, and to utilize these data to assure nondiscrimination in the end result. When making choices and decisions, it calls for particular sensitivity to the effect on those groups whose welfare tends to be absent from the calculus of decision-making about intellectual property: the poor, the disadvantaged, racial, ethnic and linguistic minorities, women, rural residents.

31. The human rights principle of self-determination as enunciated in Article 1 (1) of the Covenant and reflected in the civil and political rights defined in the International Covenant on Civil and Political Rights emphasizes the right of all members of society to participate in a meaningful way in deciding on their governance and their economic, social and cultural development. This translates into a right to societal decision-making on setting priorities for and major decisions regarding the development of intellectual property regimes. To achieve in practice, it requires open and democratic political institutions that can adapt to technological change.

Proposed Obligations of States Parties

Minimum Core Obligation

32. The minimum core obligation refers to the obligations incumbent on all States Parties regardless of their level of resources, the nature of their culture, or the character of their political system. As noted above, to date intellectual property norms have rarely been dealt with from a human rights perspective. For that reason, this paper will propose a minimalist approach to a minimum core obligation.

33. The language in Article 15 (1) (c) of the Covenant imposes an obligation on States Parties to develop a mechanism through which to protect the moral and material interests of authors and inventors. While the Covenant requires all States Parties to provide some form of intellectual property protection, it offers wide latitude regarding the manner in which this is done. To be consistent with human rights norms, the paradigm that is adopted, as well as the subject matter considered to be appropriate for intellectual property protection, must meet the following criteria:

- Intellectual property regimes should have an explicit human rights and ethical orientation. This requires States Parties to restrict the subject matter eligible for intellectual property protection so as to eliminate inventions that are inconsistent with protecting human dignity. The European Union provides one potential model of an effort to reconcile patent law with principles of human dignity and the ethical norms of the society. Article 53 (a) of the European Patent Convention specifically stipulates that patents should not be granted for inventions "the publication or exploitation of which would be contrary to '*ordre public*' or morality." Several provisions of a recent Directive of the European Parliament and of the Council on the legal protection of biotechnological inventions reiterate this principle. The Directive also excludes inventions from patentability that offend against human dignity and ethical and moral principles recognized in member states.[36]

- Intellectual property law should incorporate explicit human rights and ethical provisions as criteria for the evaluation of applications for patents and trademarks and develop an institutional mechanism capable of making these determinations. In most cases patent and trademark offices are not competent to undertake such a review and are inclined to

[36] Paras. 37-40, "Directive 98/44/EC of the European Parliament and of the Council of 6 July 1998 on the legal protection of biotechnological inventions," *Official Journal of the European Communities*, 30.7.98, L 213/16.

subordinate human rights considerations to an economic calculus. Therefore a meaningful human rights input requires some the establishment of a body competent to review patent and trademark decisions on human rights grounds and/or the ability to appeal decisions to a court or tribunal able to make a determination of the human rights implications. This body should have the jurisdiction to invalidate an existing or pending patent by virtue of a ruling that it would infringe on human rights or be inconsistent with ethical principles or the cultural norms of major groups in the society.

- The nature of the intellectual property regimes adopted must reflect the country's development requirements and be consistent with the cultural orientations of major groups. Even the TRIPS Agreement offers some flexibility to countries bound by its provisions. Article 27.3(b), for example, allows members to exclude plants and animals from patentability. There is also a provision in TRIPS (Article 27.2), based on the European Patent Convention, which enables members to "exclude from patentability inventions, the prevention within their commercial exploitation of which is necessary to protect *order public* or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment."[37] TRIPS does not prohibit countries from the practice of parallel importing whereby products under patent or copyright protection in one country are imported from a second country where they are available at a lower price.[38] Compulsory licensing, whereby countries restrict the monopoly rights of patent holders, is another strategy permissible under some circumstances.

- To promote realization of the right to cultural participation, States Parties should develop intellectual property regimes that are consistent with the practice and revitalization of cultural traditions within their country. This includes the right to maintain, protect and develop both past and present manifestations of cultures, such as archaeological and historical sites, artifacts, designs, ceremonies, technologies, and the arts and literature. Paragraph 29 of the Draft Declaration on the Rights of Indigenous Peoples recognizes that "Indigenous peoples are entitled to the recognition of the full ownership, control and protection of their cultural and intellectual property. They have the right to special measures to control, develop and protect their sciences, technologies and cultural manifestations, including human and other genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral tradition, literatures, designs and visual and performing arts."[39]

  At present, traditional and indigenous knowledge and artistic works rarely qualify for intellectual property protection and for that reason are vulnerable to expropriation and inappropriate utilization by persons outside the group. It is difficult to use copyright laws because copyright laws recognize only a single owner; traditional motifs and folklore are not the sole property of individual artists to sell or withhold freely, but are subject to layers of

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[37] TRIPS Agreement (1994), Section 5, Article 27 (2), reprinted in WIPO Publication 223 (E), Geneva, 1997.

[38] The product may be available at a lower price as a result of price control or where a compulsory licensee is producing a product at a lower cost.

[39] Draft Declaration on the Rights of Indigenous Peoples, as agreed upon by the members of the Working Group on Indigenous Populations at its Eleventh Session, August 23, 1993, United Nations Document E/CN.4/Sub.2/1993/29.

group rights. Additionally, copyright protections are of limited duration while indigenous people regard cultural rights as perpetual.[40] A third limitation is that under copyright law fixation or reduction to material form is a condition and much of traditional knowledge is in the form of oral resources, like folklore. The practical consequence is that ideas, themes, styles, and techniques that are embodied in a work are not protectable.[41]

To be eligible for patenting, knowledge or an invention must be novel and innovative; while indigenous knowledge and art have innovative elements, they are based on continuity with a tradition. Moreover, patent rights are ordinarily granted to individuals or corporations, rather than to cultures or peoples, and have time limitations further limiting the usefulness of patents for the protection of cultural heritage.[42]

The development of appropriate protections therefore requires adapting existing intellectual property instruments and/or developing new types of intellectual property rights. There are several options. One alternative is to enact a *sui generis* system of intellectual property rights, possibly a hybrid between standard patent law and copyright protection.[43] A *sui generis* (of its own kind) system of protection means that countries can make their own rules provided that the protection is effective. Trademark protection could be used for handicrafts to facilitate the ability of indigenous' peoples to interpret and defend the integrity of their cultures; traditional artists could be encouraged to organize community cooperatives with distinct trademarks for their products.[44]

- Intellectual property rights related to science should promote scientific progress and broad access to its benefits.[45] To do so, these protections must respect the freedom indispensable for scientific research and creative activity. Intellectual property regimes must also encourage the development of international contacts and cooperation in the scientific field. Consistent with the 1975 Declaration on the Use of Scientific and Technological Progress in

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[40] See, Erica-Irene Daes, Special Rapporteur of the Sub-Commission on Prevention of Discrimination and Protection of Minorities and Chairperson of the Working Group on Indigenous Populations, "Discrimination against Indigenous People: Study on the protection of the cultural and intellectual property of indigenous peoples, " UN Doc. E/CN.4/Sub.2/1993/28, par 130.

[41] Joseph Wambugu Githaiga, "Intellectual Property Law and the Protection of Indigenous Folklore and Knowledge," Murdoch University Electronic Journal of Law, 5 (June 1998): http://www.murdoch.edu.au/elaw/issues/v5n2/githaiga52-body.html , par. 22.

[42] Ibid., par. 135.

[43] The suggestion to do so modeled on protections of computer software was made by the UNEP Executive Secretary in 1996 in a document on "Knowledge, Innovations and Practices of Indigenous and Local Communities: Implementation of Article 8(j)" written for the Third meeting of the Conference of the Parties to the Convention on Biological Diversity, UNEP/CBD/COP/3/19.

[44] This is recommended by Erica-Irene Daes, par. 58, "Discrimination Against Indigenous Peoples."

[45] See, Audrey R. Chapman, "A Human Rights Perspective on Intellectual Property, Scientific Progress, and Access to the Benefits of Science," in *Intellectual Property and Human Rights*, WIPO Publication No. 762 (E), (Geneva; World Intellectual Property Organization, 1999).

the Interests of Peace and for the Benefit of Mankind,[46] all states should also take appropriate measures to extend the benefits of science and technology to all strata of the population. Another requirement is that States Parties should protect their population from possible harmful effects of the misuse of scientific and technological developments.

34. Consistent with the requirements of Article 15 (4) and the increasingly globalized character of intellectual property regimes,

- States Parties should be supportive of efforts by other countries to develop international contacts and cooperation in the scientific and cultural fields.

- Governments of industrialized countries should be sensitive to the special needs of less developed countries and be supportive of proposed measures and interpretations of the TRIPS accord that would to provide them with greater flexibility for scientific and cultural development.

- States Parties should refrain from efforts to interfere with the policies of other countries.

Other Obligations of States Parties

- The human rights principle of self-determination enunciated in Article 1 (1) of the Covenant and the various civil and political rights defined in the International Covenant on Civil and Political Rights emphasize the right of all members of society (or their elected representatives) to participate in a meaningful way in deciding on their governance and their economic, social and cultural development. This translates into a right to societal decision-making on setting priorities for and major decisions regarding the nature of intellectual property regimes and the manner in which they affect the development of culture, science, and technology.

- States Parties should develop an adequate process of review to anticipate potential harmful effects resulting from the patenting of specific products and processes and to deny intellectual property protection to these items. Many technologies, such as the widespread production of toxic chemical substances and the genetic revolution, pose substantial risks as well as potential benefits. Technologies frequently bring an inequitable distribution of costs and benefits: one group benefits while other groups bear the brunt of the risks and indirect costs. Recognizing this problem, the 1975 United Nations Declaration on the Use of Scientific and Technological Progress in the Interests of Peace and for the Benefit of Mankind [47] recommended that “All States shall take appropriate measures to prevent the use of scientific and technological developments, particularly by the State organs, to limit or interfere with the enjoyment of the human rights and fundamental freedoms of the individual as enshrined in the Universal Declaration of Human Rights, the International Covenants on

[46] "Declaration on the Use of Scientific and Technological Progress in the Interests of Peace and for the Benefit of Mankind," General Assembly Resolution 3384 (XXX) of 10 November 1975.
[47] “Declaration on the Use of Scientific and Technological Progress in the Interests of Peace and for the Benefit of Mankind,” proclaimed by General Assembly Resolution 3384 (XXX) of 10 November 1975.

Human Rights and other relevant international instruments."[48] The Declaration also specified that "All States shall take measures to extend the benefits of science and technology to all strata of the population and to protect them, both socially and materially, from possible harmful effects of the misuse of scientific and technological developments, including their misuse to infringe upon the rights of the individual or of the group, particularly with regard to respect for privacy and the protection of the human personality and its physical and intellectual integrity."[49]

Related Obligations of States Parties under Article 15

35. Article 15 (2) mandates that the steps to be taken by States Parties "shall include those necessary for the conservation, the development and the diffusion of science and culture."

36. Article 15 (3) directs that States Parties "undertake to respect the freedom indispensable for scientific research and creative activity." Academic freedom is one critical component of the freedom indispensable for scientific research and creative activity. The Committee has outlined some of the requirements of academic freedom in "General Comment No. 13: The right to education (article 13 of the Covenant)." According to General Comment 13, "Academic freedom includes the liberty of individuals to express freely opinions about the institution or system in which they work, to fulfil their functions without discrimination or fear of repression by the State or any other actor, to participate in professional or representative academic bodies, and to enjoy all the internationally recognised human rights applicable to other individuals in the same jurisdiction."[50] It goes on to state that the enjoyment of academic freedom also requires the autonomy of institutions of higher learning.[51]

37. Adherence to basic human rights norms recognized in the Universal Declaration and the International Covenant on Civil and Political Rights is another component of respecting the freedom indispensable for scientific research and creative activity. These norms include effectively protecting the freedom to express and communicate ideas, to travel within and outside of one's country, to assemble and form professional associations. In addition, the pursuit of science requires an environment that supports the freedom to pursue scientific research in accordance with ethical and professional standards without undue interference. Conversely, the freedom to undertake scientific research and creative activity implies a need for scientific responsibility and self-regulation. Scientific societies in many developed countries have adopted codes of professional ethics in pursuit of these goals. Many of these codes, however, are primarily concerned with the ethics of individual conduct and do not place the scientific enterprise in a sufficiently broad social and ethical context.

38. Article 15 (4) of ICESCR mandates that States Parties "recognize the benefits to be derived from the encouragement and development of international contacts and cooperation in the scientific and cultural fields." This requirement should be interpreted in conjunction with other obligations enumerated in ICESCR, particularly the language of Article 2. This provision

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[48] Art. 2, Declaration on the Use of Scientific and Technological Progress.
[49] Art. 6, Declaration on the Use of Scientific and Technological Process.
[50] Ibid., para. 39.
[51] Ibid., para. 40.

directs each State Party to undertake "steps, individually and through international assistance and cooperation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized." Several instruments have tried to spell this out in somewhat greater detail. One section of the 1975 Declaration on the Use of Scientific and Technological Progress in the Interests of Peace and for the Benefit of Mankind states, for example, that "All states shall cooperate in the establishment, strengthening and development of the scientific and technological capacity of developing countries with a view to accelerating the realization of the social and economic rights of the peoples of those countries."[52]

General Issues and Problems

39. As noted above, current developments related to intellectual property are often inconsistent with a human rights approach. Yet the absence of accepted human rights standards for Article 15 suggests that they may more appropriately be characterized as problems than as violations. This section will outline some of these issues.

A. Inappropriate or Inadequate Protection of the Rights of the Author, Creator, or Inventor

40. Recognition of the claims of authors, creators, and inventors to moral and material benefit from their intellectual contributions is central to conceptualizing intellectual property as a human right and also serves as the major premise of intellectual property regimes. Therefore the manner in which intellectual property regimes determine eligibility for this entitlement is very significant. Current intellectual property law is problematic in a number of ways.

41. In many countries, the person filing the first intellectual property claim to a particular work is considered eligible for recognition as the owner. The first filer, however, may not be the true author of a work.

42. Intellectual property law is constructed around an eighteenth century paradigm of the author or creator as a single, solitary figure.[53] But this image often does not fit developments in the contemporary world. In science and technology, for example, researchers often work in large teams and collaborate across national boundaries. Scientific knowledge is additive; discoveries and inventions build on work by others conducted over a long period of time. This means that it is frequently difficult to separate out the relative contributions of various researchers. The many legal suits by members of research teams contesting ownership and control of patents reflect this dilemma.

43. Current intellectual property regimes, which were developed to suit the needs of an age of printing are often inadequate to deal with the challenges of new technologies. Intellectual property law generally assumes that there are practical limits on the ability to copy and distribute information or works of art. The advent of photocopying and audio and videotaping began to change the balance between the owners' and users' rights by facilitating the reproduction and

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[52] Art. 5, *Declaration on the Use of Scientific and Technological Progress in the Interests of Peace and for the Benefit of Mankind*.
[53] This is a major theme in Boyle's *Shamans, Software & Spleens*.

dissemination of publications outside of the control of the intellectual property owner. The development of computer technology and the Internet has further complicated the protection of intellectual property. Once information is available in electronic form is can be distributed to a worldwide audience at little additional cost. The legal controversy over whether Internet sites, such as Napster, which facilitate the trading of electronic copies of music, are engaging in copyright infringement[54] is but one indication of the need for rethinking approaches to intellectual property protection. Efforts to develop standards for electronic publications that will protect the interest of authors and the integrity of their works are another. On the other side of the issue, some corporate interests have sought new and stricter intellectual property protections that will reduce scientific and public access to resources. The European Union, for example has passed legislation creating a *sui generis* form of intellectual property to protect database rights and in 1996 proposed that WIPO adopt a treaty on intellectual property protection for databases. The U.S. scientific community vigorously opposed this draft treaty and efforts to legislate similar protections in their own country arguing that it would undermine the ability of researchers and educators to access and use scientific data.[55]

44. Because the current system of intellectual property is built around the idea of originality, traditional/ indigenous knowledge and art forms cannot meet the criteria for copyright or patenting.

B. Inadequate Protection of the Public Interest

45. Traditionally, intellectual property regimes sought to balance the rights of creators with the interests of the public to have access to artistic works and technology products. The very existence of intellectual property rights was originally justified on the grounds that incentives and rewards to artists and inventors result in benefits to society. However, current developments tend to weaken these balances and to skew the system in favor of a much narrower range of interests.

46. Commercialization has changed intellectual property from a means to provide incentives to researchers and inventors to a mechanism intended to encourage investment and protect the resources of investors. The privatization of the public domain reflects this transformation. Preserving the public domain is important because it serves as a resource for future creators and as raw material for the marketplace of ideas.[56]

C. Differential Impact on Developed and Developing States

47. The TRIPS Agreement requires all signatories to develop strong intellectual property protections. The year 2000 is the deadline for developing countries to comply; the least developed countries have an additional five years. It is claimed that such stronger intellectual property protection will contribute to increased investment in research and development, but

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[54] Amy Harmon, "For Many Online Music Fans, Court Ruling Is Call to Arms," *The New York Times*, July 28, 2000, pp. 1, C2.
[55] Chapman, " A Human Rights Perspective on Intellectual Property, Scientific Progress and Access to the Benefits of Science," pp. 153-162.
[56] Boyle, Shamans, *Software, & Spleens*, 168.

there is little empirical evidence, even in industrial countries, that this is necessarily the case. While the patent system appears to have stimulated the development of new products and technologies in a few sectors, such as pharmaceuticals, in other sectors patents are often considered to have anti-competitive effects and may even slow the pace of innovation.[57]

48. Moreover, strict intellectual property models appropriate for advanced market economies are likely to disadvantage less developed countries. Despite the large number of developing countries decided to accede to TRIPS so as to attract foreign investment and to be considered eligible for technology transfers, developing countries generally believe that it is not in their economic interests to implement stronger patent laws. This is because intellectual property protection usually increases the cost of development. In the global economy, industrial countries currently hold 97 percent of all patents worldwide. More than 80 percent of the patents granted in developing countries belong to residents of industrial countries, usually multinational corporations from the most advanced economies.[58] Indeed 70 percent of global royalty and licensing fee payments are between parent and affiliate in multinational corporations.[59] This means that under strict enforcement of intellectual property law that the patents awarded and resulting payments for the use of these technologies will primarily benefit foreign multi-national corporations and not stimulate local research and innovation.

49. Moreover, few countries in the South have the requisite infrastructure to uphold strong patent systems.[60] The lack of a strong regulatory infrastructure also puts these countries at a disadvantage in shaping their laws to benefit from the openings that the TRIPS Agreement offers for countries to shape their patent laws to fit their needs.

D. Lack of Democratic Controls and Participation

50. Today, however, technology is leading rather than being shaped by governmental policy. The concentration of power in transnational corporations and these corporations' ability to find a common interest with personnel in patent offices and other government departments that shape and administer intellectual property regimes weakens the democratic process. Pressures imposed by economic globalization are shifting the balance even further away from citizens' control. One study describes the situation with regard to the formulation of intellectual property law as follows:

> Intellectual property laws are defined through closed, secretive international negotiations dominated by industry – and are then brought to national legislatures as faits accomplis, without democratic deliberation. Combined with the technical, arcane nature of intellectual property legal specialty, this has helped corporate interests to avoid public scrutiny and

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[57] Tansey, "Trade, Intellectual Property, Food and Biodiversity," pp. 4-5.
[58] United Nations Development Programme, Human Development Report 1999 (New York: Oxford University Press, 1999), p.68.
[59] Ibid.
[60] Amy E. Carroll, "A Review of Recent Decisions of the United States Court of Appeals for the Federal Circuit: Comment: Not Always the Best Medicine: Biotechnology and the Global Impact of U.S. Patent Law," *The American University Law Review* (1995).

> expand their control over developments in applications such as electronic information, biotechnology or pharmaceuticals. Industrial country governments promote corporate interests in expanded intellectual property rights in the name of maximizing national competitiveness in a global marketplace.[61]

51. The World Trade Organization's role in standard setting, particularly in light of the closed nature of its proceedings and its lack of concern for democratic procedures or human rights principles, has been of particular concern to many nongovernmental organizations, human rights advocates, and environmental groups. The TRIPS Agreement not only sets minimum standards for national protection of intellectual property rights. It also imposes enforcement measures through an integrated dispute settlement system. A country that does not fulfil its intellectual property obligations faces the possibility of having trade sanctions applied against it. The power of the WTO has been described as "unprecedented in the field of intellectual property protection."[62]

E. Lack of Effective Incorporation of Ethical Concerns

52. A human rights approach conditions intellectual property regimes on their conformity with ethical and human rights principles. Some systems of patent law also explicitly require decision makers to consider moral standards as part of the process of evaluating applications. Nevertheless, morality has generally been given little import or ignored completely by those who have interpretive custody of the patent system. In part, this reflects the reluctance of patent officers to inject ethical considerations into their work. The patent community generally takes the position that morality has little to do with patent reviews, or, if it does, that the patent system is the wrong place to consider such issues. Patent officers are more likely to consider themselves as serving the business community with a mandate to issue as many patents as possible. Their goal is to encourage the development of science and technology and the competitive position of the country in a globalized economy. [63]

53. The patenting of life is a prime example. The landmark 1980 United States Supreme Court decision in *Diamond v. Chakrabarty* that extended patent eligibility to life forms, as long as they were altered or purified in some way, had significant ethical implications. Yet, the Court explicitly refused to take ethical factors into account in rendering a decision that has affected patent policy around the world. Instead, the Court assigned responsibility for such matters of "high policy" as the purview of political bodies, particularly in this case the U.S. Congress.[64] The dilemma is that political bodies generally prefer not to deal with patent policy. Thus the U.S. Congress has never debated the appropriateness of granting life patents, and the U.S. Patent and Trademark Office has been free to set policy without any meaningful ethical oversight by the courts or political representatives.

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[61] David Downes, "The 1999 WTO Review of Life Patenting Under TRIPS," Revised Discussion Paper, Center for International Environmental Law, Washington, D.C., September 1998, 1.
[62] Downes, "The 1999 WTO Review of Life Patenting Under TRIPS," 1.
[63] On this point see Peter Drahos, "Biotechnology Patents, Markets and Morality," *European Intellectual Property Review* 21 (September 1999): 441-449.
[64] Ibid.

54. Many groups within the religious, environmental, and traditional rights communities have expressed ethical concerns about the patenting of life forms. Rather than expressing an anti-technology position, this opposition often reflects a conviction that biological patents constitute a threat to the dignity and sanctity of life.[65] However, such groups have had little means of changing patent policies.

Negative Impact on Human Rights Enumerated in ICESCR

A. Detrimental Effects on Scientific Progress and Access to its Benefits

55. Until recently most developed countries provided extensive public funding for basic scientific research so as to assure widespread availability of and access to the findings.[66] Large government investments in basic research and development made it possible to argue that the conduct of scientific research, including the maintenance and distribution of scientific data, was a public good. Research scientists actively pursued dissemination of research results through publication and often seemed disinclined to patent their discoveries.[67]

56. An evolution of government policy, beginning in 1980 with the adoption of the Bayh-Dole Act in the U.S., has inclined many governments in advanced economies to encourage the private commercial development of publicly funded research. This development, in turn, has stimulated pressures for new and broader forms of intellectual property rights to protect economic investments. Commercialization has also changed intellectual property from a means to provide incentives to researchers and inventors to a mechanism to encourage investment and protect the resources of investors.

57. Increasing intellectual property protection has imposed constraints on science's tradition of open publication. In many scientific fields, particularly the life sciences, some scientists are delaying publication and withholding data so as to secure intellectual property rights.[68] There is widespread concern in the scientific community that privatization, accompanied by legal restrictions and high prices, will restrict scientists' access to data needed for their research.[69]

58. Rather than stimulating research and applications, intellectual property claims can have negative effects and significantly increase costs. Two well-known intellectual property lawyers argue, for example, that the proliferation of biotechnology patents will deter innovation. They

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[65] For an analysis of the history and bases of the religious opposition to life patents, see Audrey R. Chapman, *Unprecedented Choices: Religious Ethics at the Frontiers of Genetic Science* (Minneapolis: Fortress Press, 1999), chapter four.

[66] Committee on Issues in the Transborder Flow of Scientific Data of the National Research Council, *Bits of Power: Issues in Global Access to Scientific Data*, (Washington, D.C.: National Academy Press, 1997), pp. 17, 133.

[67] Amy E. Carroll, "A Review of Recent Decisions of the United States Court of Appeals for the Federal Circuit: Comment: Not Always the Best Medicine: Biotechnology and the Global Impact of U.S. Patent Law," *The American University Law Review* 44 (Summer, 1995): n.24.

[68] Eliot Marshall, "Secretiveness Found Widespread in Life Sciences," *Science* 276 (25 April 1997), p.525.

[69] Committee on Issues in the Transborder Flow of Scientific Data, *Bits of Power*, p. 111.

characterize this situation as "the tragedy of the anticommons." Their thesis is that the fragmentation of property rights among too many owners will result in a situation where each can block the other. They also warn that the development of new products will require the bundling of agreements, something that scientists may find overwhelming to do. Thus the result will be that more intellectual property rights will lead to fewer useful products.[70]

59. This thesis already has ample illustrations. In 1998, a working group convened by the U.S. National Institutes of Health reported that a "serious threat" to science was being posed by patent holders who were making onerous demands on those who wanted to use their tools for research.[71] Analysts are predicting that the promising new field of human embryonic stem cell research is likely to be stymied because a very broad patent currently covers these cells, and as a result researchers will be almost entirely at the mercy of the patent holders.[72]

B. Detrimental Impacts on Realizing the Right to Cultural Participation

60. As noted above, current intellectual property systems are not applicable to indigenous artistic creations and knowledge. Moreover, very few countries have developed *sui generis* laws to protect indigenous artifacts and knowledge. The resulting situation is described as follows in the UNDP's *Human Development Report 1999*:

> New patent laws pay scant attention to the knowledge of indigenous people, leaving it vulnerable to claim by others. These laws ignore cultural diversity in creating and sharing innovations – and diversity in views on what can and should be owned, from plant varieties to human life. The result is a silent theft of centuries of knowledge from developing to developed countries.[73]

C. Detrimental Impacts on Realizing the Right to Health

61. The right to health includes access to appropriate health care. The present intellectual property system reduces the availability of pharmaceuticals in a variety of ways. By increasing development costs, intellectual property protection may hinder research and development of new drugs and technologies appropriate to smaller markets, such as the needs of developing countries. Patented drugs are almost always far more expensive than their generic counterparts. Patent holders, which are almost always corporations, have the freedom to price their products at arbitrary, often high levels that make many essential drugs beyond the means of poor persons lacking health insurance, which includes the majority of residents in less developed countries. For example, most of the 100,000 people suffering from multi-drug resistant strains of tuberculosis are resident in developing countries and thus unable to afford the new standard

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[70] Michale A. Heller and Rebecca S. Eisenberg, "Can Patents Deter Innovation? The Anticommons in Biomedical Research," *Science* 280 (1 May 1998): 698-700.
[71] Kyla Dunn,"Must Researchers Pay So Research Pays Off?" *The Washington Post*, October 1, 2000, B3.
[72] Ibid.
[73] United Nations Development Programme, *Human Development Report 1999*, p. 68.

combination treatment priced at approximately $15,000 per course.[74] Nor can the 26 million people in sub-Saharan Africa infected with HIV manage to pay for the antiretrovirals now available. Ironically and tragically, prices for medicines are often highest in the poorest countries. One study showed, for example, that the prices for many medicines are much more expensive in African countries than in Europe or the U.S.[75] Yet the pharmaceutical corporations holding patents have generally been unwilling to make drugs available at reduced rates in the poorest countries.

62. Supported by their own governments, multinational corporations have also sought to block governments in poor countries from exercising their legal rights to undertake parallel importing of drugs from cheaper sources of origin or to engage in compulsory licensing so that their people can have access to modern essential treatments. For example, when Thailand sought to produce or import low cost AIDS drugs, the U.S. government threatened it with the imposition of trade sanctions.[76]

63. Countries that have been willing to produce generics despite existing patent protection or engage in compulsory licensing have sometimes made dramatic breakthroughs in health care policy. Brazil has become a model in the fight against AIDS because of the government's decision to produce generic AIDS medicines and distribute them to patients free of charge or at a subsidized rate. Today, governmental laboratories produce five generic U.S. antiviral AIDS medications. Brazil has countered opposition from the U.S. pharmaceutical industry, arguing that WTO rules permit it to manufacture generic medications in a "national emergency."[77] Similarly, the Indian government has produced the AIDS treatment AZT at a cost of $48 a month as compared with $239 in the U.S. and Lariam, a treatment for malaria, at a cost of $4 as compared with $37 in the U.S.[78]

D. Detrimental Impacts on Realizing the Right to Food

64. Intellectual property regimes have threatened food security in several ways. The extension of very broad patents for specific plant varieties has meant that a few agricultural corporations have virtual monopolies on the genome of important global crops. Monsanto, for example, has been awarded a patent in Europe for all transgenic soybeans.[79]

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[74] "AIDS and Essential Medicines and Compulsory Licensing," summary a March 25-27 meeting in Geneva on compulsory licensing of essential medical technologies, http://222/cptech.org/march99-cl/report1.html.
[75] Donald G. McNeil, Jr., "Prices for Medicine Are Exorbitant in Africa, Study Says," *The New York Times*, June 17, 2000.
[76] Ibid.
[77] "Brazil Becomes Model in Fight Against AIDS," *The Washington Post*, September 17, 2000, A1, 24.
[78] McNeil, Jr., "Prices for Medicine Are Exorbitant in Africa, Study Says."
[79] Shulman, Owning the Future," 100-104.

65. The patenting regime has also enabled a small group of companies to gain control over ever-growing shares of the global market. In 1998, the top ten corporations controlled 32 % of the commercial seed industry and 85 % of the pesticide industry.[80]

66. Some of the patents granted for plants in the U.S. and Europe have been expropriated from other countries. This raises the issue of biopiracy whereby plants long cultivated in other cultures are patented outside their countries of origin without any benefits going back to the groups that developed them. When this takes place it generally precludes further local development and may increase the costs of production. In May 1998, Bolivians successfully defeated a U.S. patent application from Colorado State University for quinoa, a valuable food grain native to the Andes.[81] Other traditional developers have been less successful in thwarting the patenting of plant varieties.

67. The patenting of life, as called for under Article 27.3b of TRIPS, is also problematic for the conservation of indigenous methods of production and biological resources. Traditional cultures often have highly developed ecological knowledge and balanced relationships with their environments. This knowledge, combined with continued access to and the availability of natural resources, is essential for the survival of many indigenous groups. Provisions of TRIPS conflict with the protections offered to indigenous and traditional innovation, knowledge, and practices in the 1992 Convention on Biological Diversity (Articles 8j, 10c, 17.2, and 18.4).[82] The Convention on Biological Diversity commits the signatory nations to respect, preserve, and maintain traditional knowledge; to promote wide application of traditional knowledge; and to encourage equitable sharing of benefits from traditional knowledge.

68. Critics claim that plant patents also contribute to a loss of biodiversity. Once commercially viable products are patented, companies undertake massive marketing campaigns, often with the assistance of governments, promoting their products through special loans and grants tied to designated seed and chemical packages. As a result, vast monocultures are planted with genetically identical seed. This then leads to the disappearance of local plant varieties. Transgenic crops are also vulnerable to diseases and blights. If thousands of acres are planted with identical seed, a whole crop can be lost.[83]

69. Traditionally, farmers have had the right to save or replant seed from a harvest or to sell that seed to other persons. Corporations selling patented high technology seeds like Monsanto, however, require farmers to relinquish these rights and use the seeds only for one season. Under the license contract between the farmer and the company the farmer becomes the equivalent of a renter of plant germplasm. This arrangement has been described as a new kind of “bioserfdom” in which the new feudal lords, the large agrochemical firms, gain their power and wealth by owning the information contained within the new high-tech seed varieties rather than the land.[84]

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[80] Kristin Dawkins, "Intellectual Property Rights and the Privatization of Life," *GeneWatch*, 12 (October 1999): p. 6.
[81] Ibid., p 4.
[82] Convention on Biological Diversity, United Nations Environment Programme, 5 June 1992, Na.92-7807, http://www.ciesin.org/docs/010-000/Comv-BioDiv.html.
[83] Dawkins, "Intellectual Property Rights and the Privatization of Life," p. 4.
[84] Shulman, *Owning the Future*, pp. 90-9.

The agreement all farmers must sign to purchase these seeds grants Monsanto, or its authorized agent, the right to inspect and test the grower's fields planted with these seeds and to monitor the fields for an additional three years for compliance with the terms of the agreement. This obviously increases the cost of food production.

70. "Terminator" technologies constitute a further extension of these threats to farmers' rights. This process for genetic seed sterilizing has been called the "neutron bomb of agriculture" because genetically altered terminator seed will not germinate if replanted a second time. Like other genetically altered seeds, there is always the possibility that those treated with the terminator technology can cross-pollinate other plants. The U.S. Department of Agriculture has recently announced its intentions to commercialize this technology.[85]

Violations

71. As noted above, the absence of international human rights standards in the intellectual property field makes it difficult to utilize violations language. Nevertheless, the following clearly constitute violations.

(1) Failure to develop intellectual property regimes that reflect ethical and human rights considerations:

Even when legally mandated to do so under existing law, patent offices rarely consider the ethical dimensions of patenting. On those occasions that patent offices consider ethical concerns, they tend to construe moral criteria so narrowly that few, if any, tests are likely to exclude patent applications. The European Patent Office, for example, interprets Article 53 (a) of the European Patent Convention, which prohibits the grant of patents which would be contrary to "*ordre public* or morality," as only excluding patents whose exploitation would be "abhorrent to the overwhelming majority of the public" or a contravention of the "totality of accepted norms."[86] The technical Board of Appeal in a European case relating to plant genetic systems rejected the probative value of public opinion surveys and opinion polls that objected to patenting. The grounds were that these did not "necessarily reflect order public concerns or moral norms" and that the results of such surveys and polls "can fluctuate in an unforeseeable manner."[87]

(2) Uncompensated expropriation of traditional knowledge:

It has been estimated that in 1995 the market value of pharmaceutical derivatives from indigenous peoples' traditional knowledge amounted to U.S. $43 billion.[88] In a few cases, such

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[85] Jocelyn Kaiser, "USDA to Commercialize 'Terminator' Technology," *Science* 289 (4 August 2000).
[86] Drahos, "Biotechnology Patents."
[87] Ibid.
[88] Michael Blakeney, "What Is Traditional Knowledge? Why Should It Be Protected? Who Should Protect It? For Whom?; Understanding the Value Chain," paper written from the Roundtable on Intellectual Property and Traditional Knowledge, World Intellectual Property Organization, Geneva, November 1 and 2, 1999, WIPO/IPTK/RT/99/3, p.9.

as the 1991 agreement between the Merck corporation and the Costan Rican Association Instituto Nacional de Biodiversidad, a non-profit organization, corporate developers have shared the benefits of commercial exploitation of traditional knowledge. In most, however, individual prospectors and corporate developers have expropriated the knowledge through filing patents in their own name without any form of remuneration.

Examples of this "biopiracy" include the following:

Ayahuasca: a small US company, the International Plant Medicine Corporation took out a US plant patent on a variety of ayahuasca native to the Amazonian rainforest. In 1999, a U.S. environmental organization filed a legal challenge on behalf of the Coordinating Body of Indigenous Organizations of the Amazon Basin (COICA) and the Coalition for Amazonian Peoples and Their Environment (Amazon Coalition). These groups objected to the patent because it appropriated a plant that is considered sacred to many indigenous peoples from this region. The patent was eventually voided on the ground that the claimed plant variety was not distinctive or novel, but the U.S. Patent and Trademark Office did not acknowledge the argument that the plant's religious value warranted an exception from patenting.[89]

Neem: Multinationals have filed dozens of patent claims on neem, a widely known and long-cultivated tree with medicinal and agricultural uses in Asia, especially in India. Monsanto, for example, has taken out patents on neem wax and oil and claimed broad fungicidal and insecticidal uses.[90]

Rosy periwinkle: Substances derived from Madagascar's rosy periwinkle flower have yielded the drugs vincristine and vinblastine, used respectively against Hodgkin's disease and juvenile leukemia, and have earned the patent holder, Eli Lilly & Company, some $160 million annually.[91]

Kava: Drug companies are racing to patent the many beneficial uses of this ceremonial beverage, which is grown in many of the Pacific island countries and Indonesia. The French cosmetic corporation L'Oreal, for example, has patented the use of kava to reduce hair loss.[92]

Mamala: the prostratin compound isolated from this Pacific medicinal plant belongs to the US Department of Health and Human Service, the US Army, and Brigham Young University.

(3) Interference in the intellectual property policies of other countries:

To further its foreign policy interests of promoting strict intellectual property regimes, the U.S. government has exercised considerable diplomatic pressure and threatened trade sanctions on a number of occasions. In 1997, for example, the U.S. government unilaterally imposed

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[89] http://ciel.org/ayahuascapatentcase.html.
[90] http://www.rafi.org.
[91] Shulman, *Owning the Future*, p. 131.
[92] Ibid.

import duties on $260 million of Argentine exports in retaliation for Argentina's refusal to revise its patent legislation to conform with U.S. standards. In April 1997, the U.S. State Department advised the Thai Government that draft legislation allowing Thai healers to register traditional medicines so as to retain them within the public domain would constitute a possible violation of TRIPS. The U.S. has also attempted to influence the development of patent laws and policies to suit U.S. interests in other countries, including Ecuador, India, Pakistan, South Africa, and Brazil.[93]

72. As more human rights advocates become involved with intellectual property issues, it is likely that many of the problems noted above will also be considered to be violations.

Recommendations

73. The recent Sub-Commission resolution on “Intellectual Property and Human Rights” makes a number of specific recommendations that pertain to governments and United Nations bodies that are important to implement.[94] These include the following:

(1) The resolution requests governments to protect the social functions of intellectual property in accordance with international human rights obligations and principles. One way to do so would be to have a mechanism for a human rights review/appeal of decisions by patent and copyright procedures.

(2) The resolution also requests inter-governmental organizations to integrate international human rights obligations and principles into their policies, practices, and operations.

(3) It further requests the WTO in general and the Council on TRIPS more specifically to take fully into account existing state obligations under international human rights instruments during its ongoing review of the TRIPS agreement. For this to happen in a meaningful way, however, it would first be necessary to gain recognition for the principle that human rights are fundamental and prior to free trade itself. Two experts have recently proposed that the interpretation of the primacy of human rights over trade liberalization is consistent with the trade regime on its own terms.[95]

(4) The resolution calls for a number of studies and reports. More specifically, it asks that the Special Rapporteurs on globalization an its impact on the full enjoyment of human rights to include consideration of the human rights impact of the implementation of the TRIPS Agreement in their next report. It requests that the United Nations High Commissioner for Human Rights to undertake an analysis of the human rights impacts of the TRIPS Agreement. The resolution also identifies a series of United Nations

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[93] Kristin Dawkins, "Intellectual Property Rights and the Privatization of Life," p.3.
[94] "Intellectual Property Rights and Human Rights," Sub-Commission on the Promotion and Protection of Human Rights, August 17, 2000.
[95] See Robert Howse and Makau Mutua, "Protecting Human Rights in a Global Economy: Challenges for the World Trade Organization," Montreal: Rights & Democracy, International Centre for Human Rights and Democratic Development, 2000.

Agencies, including the World Intellectual Property Organization, the World Health Organization, the United Nations Development Programme, and the United Nations Environment Programme, and points to the need for them to continue and deepen their analysis of the impacts of the TRIPS Agreement, including a consideration of its human rights implications. And it asks the Secretary-General to provide a report on this issue at its next session.

(5) Significantly, the Sub-Commission encourages the Committee on Economic, Social and Cultural Rights to clarify the relationship between intellectual property rights and human rights, including through the drafting of a general comment on this subject.
