

8

Traditional Knowledge (TK) and Folklore¹

As stated earlier in this paper, indigenous peoples and advocacy groups have condemned the way the IPRs system has dealt with traditional knowledge.

Chapter 8 examines the evidence relating to the economic value of traditional knowledge and folklore, the issues of ownership and the modalities for protecting traditional knowledge and folklore through the IPRs system.

The economic value of TK and folklore

Attempts have been made to estimate the contribution of TK to modern industry and agriculture. For the pharmaceuticals industry, the estimated market value of plant-based medicines sold in 1990 was \$61 billion.² That many of these would have used TK in their product development is borne out by Farnsworth's estimate that of the 119 plant-based compounds used in medicines worldwide, 74 per cent had the same or related uses as the medicinal plants from which they were derived.³

There are no reliable estimates of the total contribution of traditional crop varieties (landraces) to the global economy. However, a study on the use and value of landraces for rice breeding in India

calculated that rice landraces acquired from India and overseas contributed 5.6 per cent, or \$75 million, to India's rice yields.⁴ Assuming that landraces contribute to the same extent in other countries where rice is cultivated, the global value added to rice yields by use of landraces can be estimated at \$400 million per year.

However, accurately estimating the full value of TK in monetary terms is difficult,⁵ first because TK is often an essential component in the development of other products, and secondly because most TK-derived products never enter modern markets anyway.⁶ In any case, a great deal of TK is likely to have cultural or spiritual value that cannot be quantified in any monetary sense.⁷

Estimating the full value of TK in monetary terms is difficult

Who owns TK and folklore?

The fact that TK is being widely disseminated and commercially exploited, with only a small proportion of the benefits flowing back to provider peoples and communities, raises the question of ownership. Who owns TK, according to traditional peoples and communities? And who owns TK, according to most national legal systems and the international IPR regime?

Many commentators argue that traditional peoples and communities are often characterized by a strong sharing ethos with respect to their knowledge and

resources. There is a great deal of truth in this, but this does not mean that *everything* is shared with *everybody*. The anthropological literature reveals that such concepts as ownership and property rights - or at least close equivalents to them - also exist in most, if not all, traditional societies.⁸ But to assume that there is a generic form of collective intellectual property rights ignores the intricacies and sheer diversity of traditional proprietary systems. According to a Canadian indigenous peoples' organization, the Four Directions Council: "Indigenous peoples possess their own locally-specific systems of juris-

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prudence with respect to the classification of different types of knowledge, proper procedures for acquiring and sharing knowledge, and the rights and responsibilities which attach to possessing knowledge, all of which are embedded uniquely in each culture and its language.”⁹

Nonetheless, IPR regulators and courts dealing with IPR disputes have hardly heeded customary law, nor seen any reason why they should do so.¹⁰ In most countries, all TK anywhere in the world that has not been kept secret is generally treated as being the intellectual property of nobody. Therefore it can be used freely by anybody who acquires it.

However, the generalization that public domain TK cannot be the subject of IP protection should be qualified. This is because different jurisdictions vary as to whether and how far foreign prior art may be used to determine the state of the art against which the novelty of the invention should be measured. In some countries, inventions cannot be patented, for example, if prior knowledge, use or publication exists anywhere in the world. In a few countries, only domestically held knowledge use or knowledge manufacture is accepted. Elsewhere, only unpublished foreign use or knowledge cannot be taken into account in prior art searches. These different conceptions of novelty may helpfully be referred to as

absolute novelty, local novelty and mixed novelty.¹¹ According to Ozawa, local novelty operates in Egypt, Fiji, New Zealand and Panama. Mixed novelty operates in Australia, China, India, the Republic of Korea, and the United States.¹² In the latter country¹³, although an applicant is not allowed to receive a patent if “he did not himself invent the subject matter sought to be patented”,¹⁴ there are concerns that this loophole sometimes allows people to copy such undocumented foreign knowledge and claim they have come up with a new invention. The notorious patent on the use of turmeric powder for wound healing granted to the University of Mississippi Medical Center may be an example of this.¹⁵ The patent provoked considerable anger in India because such use of turmeric was common knowledge there. Yet the Indian Government agency that challenged the patent had to do more than persuade the United States Patent and Trademark Office that this was true. It had to provide published documentation. Because it was able to do so, the patent was revoked.¹⁶ Yet the patent should never have been granted in the first place.

It could be argued that many such erroneously granted patents do little harm beyond wasting the time of patent examiners. But some may well be harmful. A good example appears to be a United States patent on a field bean cultivar called “Enola”.

Box 8.1: The “Enola” bean patent

In 1999, the United States Patent and Trademark Office granted a patent on a field bean cultivar dubbed “Enola” by the “inventor”, an entrepreneur called Larry Proctor. Controversially, Proctor’s Colorado-based company Pod-Ners has been using the patent to block the sale of imported beans with the same colour as the ones described in the patent. This would include various traditional bean varieties. The patent claims not only a certain yellow-coloured *Phaseolus vulgaris* bean seed, plants produced by growing the seed as well as all other plants with the same physiological and morphological characteristics but also the breeding methods employed. Two aspects are extraordinary about this patent. The first is that many bean cultivars exist, and the specification provides no evidence that none of these cultivars possess the same characteristics falling within the patent’s rather broad claims.¹⁷ The second is that Mr Proctor employed conventional crossing and selective breeding methods that are in no way novel. This prevents others from using the bean and other beans with similar characteristics in their own breeding programmes. None of this would necessarily matter if the owner had not decided to assert the patent aggressively. Soon after receiving the patent, Proctor sued a company called Tutuli that had been importing Mexican yellow bean cultivars called mayocoba and peruano from that country since 1994, and with customs inspectors disrupting supplies Tutuli began to suffer financially, as did Mexican farmers who had been selling their beans to this firm. Proctor’s company has since filed lawsuits against various other small bean companies and farmers.¹⁸ The patent is being challenged by the International Center for Tropical Agriculture (CIAT), with headquarters in Colombia, which holds the largest collection of bean varieties, and claims that 6 of its 260 yellow bean accessions very closely resemble enola and may well fall within its claims. CIAT’s Director, Dr Joachim Voss, reportedly called the patent “both legally and morally wrong” and claimed to have “solid scientific evidence that Andean peasant farmers developed this bean first, together with Mexico.”¹⁹ The Mexican Government has also condemned the patent.

However strictly patent offices seek to apply the novelty and non-obviousness criteria, their staff in some jurisdictions are known to have insufficient time or resources to conduct thorough, prior art searches and examinations. It is noteworthy, that

the World Intellectual Property Organization (WIPO) is seeking ways to deal with this problem by improving accessibility of published TK through databases.

Protecting TK and folklore through the IPR system

The question arises as to whether IPRs such as copyright, patents and trade secrets should be used for the protection of TK, and, if so, how can this be

done? The following examines possible means of protection. (For geographical indications see discussion in chapter 7).²⁰

Copyright and performers' rights

At the international level, the idea of applying copyright law to protect unfixed cultural expressions, including those of traditional peoples and communities, dates back to the 1960s. The term commonly applied to such manifestations of culture was not TK but "folklore", or "expressions of folklore".²¹

The possibility of protecting folklore by means of copyright was raised in 1967 at the Diplomatic Conference of Stockholm for the revision of the Berne Convention. Although the issue was not fully resolved, the following provisions were included in the Stockholm Act of the Convention, and retained in the revision adopted in Paris in 1971:

In the case of unpublished works where the identity of the author is unknown, but where there is every ground to presume that he is a national of a country of the Union, it shall be a matter for legislation in that country to designate the competent authority which shall represent the author and shall be entitled to protect and enforce his rights in the countries of the Union (Article 15.4[a]).

Countries of the Union which make such designation under the terms of this provision shall notify the Director General [of WIPO] by means of a written declaration giving full information concerning the authority thus designated. The Director General shall at once communicate this declaration to all other countries of the Union. (15.4[b]).

Over the years, many traditional peoples and communities have condemned the unauthorized

reproduction of their fixed and unfixed cultural expressions such as artistic works, handicrafts, designs, dances, and musical and dramatic performances. Not only do outsiders frequently neglect to ask permission to do so, but also fail to acknowledge the source of the creativity, and even pass off productions and works as authentic expressions or products when they are not. Yet it is difficult to prevent such practices. Could the copyright provisions of TRIPS provide a solution?

In Australia, Aboriginal artists have, on a few occasions, successfully sued on the basis of copyright infringement.²² Copyright law is also being used by the Dene of Canada, as well as several other indigenous groups worldwide, to control use by others of compilations of their TK. In theory, then, more and more peoples and communities will be able to avail themselves of copyright protection as countries increase their compliance with the levels of enforcement required by TRIPS.

Despite these successes, copyright law has some fundamental limitations in the folklore context. First, whereas copyright requires an identifiable author, the notion of authorship is a problematic concept in many traditional societies. Second, copyright has a time limit: for folkloric expressions that are important elements of people's cultural identity, it would be more appropriate to have permanent protection. Third, copyright normally requires works to be fixed. However, among some traditional groups, folkloric expressions are not fixed, but are passed on orally from generation to generation. This

Copyright law has some fundamental limitations in the folklore context

normally excludes such expressions from eligibility for copyright protection.

Taking the first limitation - identifiable author - it is sometimes argued that IPRs, and especially copyright law, unduly emphasize the role of individuals in knowledge creation, and consequently fail to reward those knowledgeable communities and collaborators that provided the intellectual raw material that formed the true basis for the copyrighted work or patented invention.²³ In other words, creative expressions and collective innovations such as those of traditional communities are ineligible for protection, and can legally be treated as free inputs for industrial R&D and the copyright industries. According to this view, then, copyright law is more likely to be used to undermine the interests of traditional peoples and communities than to promote them. This is probably true. But this is not a reason to discount copyright completely, since it is not essential to name an author to acquire copyright protection.

Turning to the second limitation - time limits - copyrights have time limits and most people would probably agree that it is a good thing they do. But for many traditional peoples and groups, certain expressions and works are central to their cultural identity and should therefore never be fully released into the public domain, at least not to the extent that others would be free to do whatever they like with them. This is not to say that copyright protection should therefore be permanent for culturally significant expressions and works, but that copyright law should not be seen as the appropriate approach for each and every kind of cultural work.

Regarding the third limitation, copyright normally

protects fixed works. Since communities often do not have the means of recording their cultural expressions, they cannot acquire copyright protection. However, this bar to protection can be removed given the will to do so. Several countries have incorporated protection of folkloric expressions into their national copyright laws (e.g. Tunisia, 1967; Bolivia, 1968; and Kenya, 1975). Given the way copyright has been transformed to, for example, treat computer programs as literary works, it hardly seems radical to extend copyrightable subject matter to unfixed cultural expressions, or even to create a new IPR based on copyright for this purpose.²⁴ But the most powerful actors in international IPR negotiations still resist the idea of modifying international copyright rules to more effectively protect folklore.²⁵ And to date, proposals to reform TRIPS to protect TK have paid little attention to copyright.

Unfixed cultural expressions can, to a limited extent, also be protected under performers' rights in cases where performances have been fixed without the authorization of the original performers. TRIPS partially incorporates the 1961 Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, allowing performers to prevent the recording and reproduction of their performance on a phonogram, and the broadcast and public communication of a live performance.²⁶ But neither the Rome Convention nor TRIPS makes any reference to folklore. However, the 1996 WIPO Performances and Phonograms Treaty defines "performers" as "actors, singers, musicians, dancers, and other persons who act, sing, deliver, declaim, play in, interpret, or otherwise perform literary or artistic works or *expressions of folklore*".²⁷

Patents

Michael Blakeney notes that "the expression 'Traditional Knowledge' ... accommodates the concerns of those observers who criticize the narrowness of 'folklore'. However, it significantly changes the discourse. Folklore was typically discussed in copyright, or copyright-plus terms. Traditional knowledge would be broad enough to embrace traditional knowledge of plants and animals in medical treatment and as food, for example. In this circumstance

the discourse would shift from the environs of copyright to those of patent law and biodiversity rights."²⁸

But can patent law actually provide promising solutions? This question may be addressed by considering the most commonly expressed objections to the patent approach and assessing their validity. The main objections are as follows: (i) TK is collectively

held and generated, while patent law treats inventiveness as an achievement of individuals; (ii) patent applicants must supply evidence of a single act of discovery; (iii) patent specifications must be written in a technical way that examiners can understand; and (iv) applying for patents and enforcing them once they have been awarded is prohibitively expensive.

Taking the first objection, it is often asserted that because TK is collectively held and generated, patent law is fundamentally incompatible. This is because patents require that an individual inventor be identifiable. Yet while TK is merely part of the public domain, a new and non-obvious modification to this knowledge achieved by an individual or identifiable group can be the subject of a patentable invention.

This particular argument against the compatibility of IPRs is persuasive in the copyright context, but does not fit the patent situation so easily. In the late nineteenth century, large research-based corporations were already finding the heroic-inventor paradigm to be rather inconvenient. They much preferred to treat invention as a collective and organized corporate endeavour in which individual flashes of genius were unnecessary. Through their lobbying efforts, patent law and doctrine began to accommodate the collective notion of invention from as early as the 1880s, first in Germany and then elsewhere. This suggests that the collective nature of TK production and ownership need not be a bar to the acquisition of a patent. It certainly has not been for corporations.

As to the second objection - evidence of single act of discovery - while there need be no demonstrable "flash of genius", patent specifications must, nonetheless, provide evidence of an inventive step or an act that would not be obvious to one skilled in the art. Applying the same criteria to TK would exclude much, but by no means all, of it from patentability. This is not only because it is difficult to identify a specific act of creation in the area of TK, but also because such acts may have taken place in the distant past. This point should not be over-stated. Many anthropologists have demonstrated that TK in many societies is evolutionary, dynamic and adaptive.

Turning to the third objection - written specifications - it would be extremely difficult for a shaman

or indigenous group to translate their knowledge into technical language for patentability purposes. While a useful characteristic of a plant or animal may be well-known to such an individual or group, the inability to describe the phenomenon in the language of chemistry or molecular biology would make it almost impossible for them to apply for a patent even if the fees could be afforded, which is unlikely.²⁹ Here there is a role for qualified attorneys in developing countries to assist translating a shamans knowledge in a patent application.

This is a situation that a company could exploit. Patent rules in most countries require a company to do more than describe the mode of action or the active compound to acquire a patent. Minimally, it would probably need to come up with a synthetic version of the compound or a purified extract. But in the absence of a contract or specific regulation, the company would have no requirement to compensate the communities concerned.

Finally, the lack of economic self-sufficiency of many traditional communities, the unequal power relations between them and the corporate world, and the high cost of litigation, would make it very difficult for them to protect their knowledge through the patent system. The costs of preparing and prosecuting a patent application, and of periodically renewing the patent after it has been granted, are well beyond the financial means of most communities. Even though patent fees in some jurisdictions may be reduced for small and medium-sized enterprises, using the patent system is still likely to be prohibitively expensive for them.

On the face of it, the use of patent law has some genuine possibilities. Among the options that might be considered are: (a) for traditional peoples, communities or their representative organizations to apply for patents; (b) for them to share ownership with companies who would apply on their behalf; or (c) for companies to file patents, but with community members named as inventors, with contractual rights, to be compensated.

Nevertheless, most traditional peoples and communities seem to be fundamentally opposed to patents, and few if any are rushing to patent offices to submit their applications, or are likely to in the future. The main practical difficulty that deters

Traditional peoples are sceptical that patent law could be utilized to further their interests

them is the expense involved, which includes payments to the patent attorney hired to complete the application, and the filing, prosecution and renewal fees. Legally enforcing the patent against infringers is likely to be even more expensive. Moreover, patents with overly broad claims encompassing non-original products or processes are sometimes mistakenly awarded. Due to poverty, few if any indigenous groups could mount legal challenges to patents on the grounds that their knowledge or, say, landraces, have been fraudulently or erroneously claimed.

In addition, patent law tends to be formulated in ways that tend to be highly supportive of corporate interests, and the demands of traditional peoples and communities are rarely if ever taken into account when patent regulations are reformed.³⁰ Traditional peoples and communities view this as unjust. Thus they are sceptical that patent law could be utilized to further their interests. It can be argued that a democratic IP system should take into account a wider set of interests including those of TK holders.

A considerable amount of TK could be protected under trade secrecy law

Undisclosed information (trade secrets)

While the sharing of knowledge is common in many traditional societies, healers and other specialist knowledge-holders as well as clans and lineage groups are likely to have knowledge that they will not wish to share with anybody. Conceivably, a considerable amount of TK could be protected under trade secrecy law. (See also the discussion on the opportunities and challenges of protection through trade secrets in chapter 3).

whether other communities have the same knowledge. If an entry is not in the public domain, the community or communities with the knowledge are deemed to have a trade secret. The trade secret can then be disclosed to companies with benefit-sharing guaranteed by a standardized contract. These benefits would then be distributed among the trade-secret-holding communities and the Ecuadorian Government. So far the database contains 8,000 entries provided by six participating indigenous groups. So far, 60 per cent of the uses appear not to have been disclosed through publications, and already three companies have expressed interest in accessing the database.³²

An experimental project based in Ecuador and supported by the Inter-American Development Bank is currently trying to protect TK as trade secrets. The project, Transforming Traditional Knowledge into Trade Secrets, aims to enable traditional peoples and communities to benefit from bioprospecting through effective trade-secret protection of their knowledge.³¹ The NGO, Ecociencia, is documenting the botanical knowledge of the participating indigenous groups, and registering it in closed-access databases. Checks are made to see whether each entry is not already in the public domain and

Thus, as developing countries implement the TRIPS section on undisclosed information, the possibility exists for trade secrecy to be deployed as a means of protecting TK and of realizing its commercial potential for the benefit of the knowledge holders and their communities.

The protection of TK and/or folklore has become part of the work of several inter-governmental organizations

International negotiations on protection of TK and folklore

The protection of TK and/or folklore has become an integral part of the work of several inter-governmental organizations.

Since 1999, traditional knowledge has become an especially important concern for many developing countries in their negotiations on TRIPS. For example, in October 1999, a proposal for a legal framework on TK was submitted to the WTO General Council by the Governments of Bolivia, Colombia,

Ecuador, Nicaragua and Peru.³³ The document proposed that the WTO establish a mandate in a future trade round with three purposes: (a) to carry out studies, in collaboration with other relevant international organizations, in order to make recommendations on the most appropriate means of recognizing and protecting traditional knowledge as the subject matter of intellectual property rights; (b) on the basis of those recommendations, initiate negotiations with a view to establishing a multilateral legal

framework that will grant effective protection to the expressions and manifestations of traditional knowledge; (c) to complete the legal framework envisaged in paragraph (b) above in time for it to be included as part of the results of the Doha round of negotiations.

The continued interest in this issue among many developing countries is borne out by the fact that WTO Members agreed at the 2001 Doha Ministerial Conference “to examine the relationship between TRIPS and the CBD, and the protection of traditional knowledge and folklore” (see below).

In 2000, the WIPO General Assembly agreed to establish an Intergovernmental Committee (IGC) on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. At the second meeting, held in December 2001, several developing countries proposed, without objections from other participating countries, that WIPO should produce a document providing elements for model *sui generis* protection for traditional knowledge.³⁴ The General Assembly meeting in the second half of 2003 will consider future directions for the organization's work in the area of TK, folklore and genetic resources. According to the WIPO secretariat, there is strong support for the idea that the IGC should move towards concrete outcomes within the next two years, and focus on the international aspects of protection of TK.³⁵

As mentioned earlier (chapter 2), the CBD explicitly acknowledges the role of traditional knowledge, innovations and practices in biodiversity conservation and sustainable development, as well as the need to guarantee their protection, whether through IPRs or other means. Article 8(j) requires the parties to “respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote the wider application with the approval and involvement of the holders of such knowledge, innovations and practices, and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices.”

In terms of implementation, in May 1998, the Conference of the Parties to the CBD agreed to establish

an “ad hoc open-ended inter-sessional working group” to address the implementation of Article 8(j) and related provisions, to be composed of Parties and observers including, in particular, representatives of indigenous peoples and local communities. The Working Group had its first meeting in March 2000. Based upon its recommendations, COP-5, which took place two months later, extended the mandate of the working group and adopted a programme of work. The second meeting took place in February 2002. One specific area of difference was that of TK databases. Some governments believe they can prevent patents from being improperly awarded for “inventions” that are essentially identical to TK. Databases could help patent examiners - who must screen applications to allow only those describing novel and inventive discoveries to receive legal protection - to filter out spurious inventions. Indigenous groups in attendance proposed that databases be maintained locally and under the control of indigenous and local communities. They and other groups also opposed the registration of TK without the holders' consent.

Another controversial issue is that of harmonizing CBD provisions on TK protection with patent law. NGOs, indigenous groups and some developing-country governments have been proposing that patent applicants be required - where applicable - to disclose the source of biological material forming the subject matter of their inventions. Some proposals have gone further than this by suggesting: (a) that applicants be required to provide evidence that national authorities regulating access to genetic resources had consented to the use of the relevant resources, and (b) that traditional community members whose knowledge was used in the development of an invention had also given their prior informed consent to the application and been guaranteed a share of any benefits arising from the patent. The Commission on Intellectual Property Rights (see box 1.2) was, in this respect, of the view that “all countries should provide in their legislation for the obligatory disclosure of information in the patent application of the geographical source of genetic resources from which the invention is derived.”

The FAO International Treaty also refers to measures that governments should take for the protection of TK relevant to plant genetic resources for food and agriculture (see box 7.3).

A controversial issue is that of harmonizing CBD provisions on TK protection with patent law

In 2000, UNCTAD began its work on TK by holding an Expert Meeting on National Experiences and Systems for the Protection of Traditional Knowledge, Innovations and Practices. The Meeting resulted in a Report that seeks to reflect the diversity of views of the experts.³⁶

The World Health Organization's involvement in TK relates to its work on traditional medicine. It also

endeavours to respond to requests from its Members to cooperate with WIPO, UNCTAD and other international organizations to support countries in improving their awareness and capacity to protect knowledge of traditional medicine and medicinal plants, and securing fair and equitable sharing of benefits derived from them.³⁷

CHAPTER 8: END NOTES

- ¹ For a more detailed treatment of this topic, see Dutfield, G, "Protecting traditional knowledge and folklore: a review of progress in diplomacy and policy formulation". UNCTAD-ICTSD Capacity Building Project on IPRs and Sustainable Development, Geneva, 2003.
- ² Principe, P, "Economics and medicinal plants", in Tomlinson TR and Akerele OO (eds), *Medicinal Plants: Their Role in Health and Biodiversity*, Philadelphia: University of Pennsylvania Press, 1998.
- ³ Farnsworth, N, "Screening plants for new medicines", in Wilson, EO (ed.), *BioDiversity*, Washington DC: National Academy Press, 1988.
- ⁴ Evenson, RE, "Economic valuation of biodiversity for agriculture", in Pan American Health Organization (ed.), *Biodiversity, Biotechnology, and Sustainable Development in Health and Agriculture: Emerging Connections*, Washington DC: PAHO 1996.
- ⁵ WHO estimates the world market for alternative medicinal therapies at \$70 bn a year, with India being among the largest primary sources for plants used for alternative medicines. An Indian official is reported to have considered India a potential world leader in the alternative medicines sector, with a target in export sales of \$2 bn by 2003 and \$4 bn by 2004. See Financial Times, "Ancient cures in a global market", 30 April 2002: 11.
- ⁶ UNCTAD, "Systems and national experiences for protecting traditional knowledge, innovations and practices". Background note by the UNCTAD secretariat, Geneva: UNCTAD, 2000: 6.
- ⁷ See Posey, DA (ed.), "Cultural and Spiritual Values of Biodiversity", Nairobi and London: United Nations Environment Programme and Intermediate Technology Publications, 1999.
- ⁸ See Cleveland, DA and Murray, SC, "The world's crop genetic resources and the rights of indigenous farmers", *Current Anthropology* 38(4) 1997: 477-496; Griffiths, T, "Indigenous knowledge and intellectual property: a preliminary review of the anthropological literature". Unpublished paper commissioned by Working Group on Traditional Resource Rights, Oxford, 1993.
- ⁹ Four Directions Council, "Forests, indigenous peoples and biodiversity". Contribution of the Four Directions Council to the Secretariat of the Convention on Biological Diversity, Lethbridge: FDC, 1996.
- ¹⁰ A rare exception is a 1995 copyright case in Australia (*Milpururu versus Indofurn Pty. Ltd.*). This case involved the unauthorized importation and sale by an Australian firm of carpets manufactured in Viet Nam, on which had been reproduced the designs of three living and five deceased Aboriginal artists. According to Blakeney this case "establishe[d] the principle that where the unauthorized reproduction of such works involved a breach of copyright, customary Aboriginal laws on the subject may be taken into account in quantifying the damage which had been suffered". (Blakeney, M, "Communal intellectual property rights of indigenous peoples in cultural expressions", *Journal of World Intellectual Property* 1 (6), 1998: 985-1002).
- ¹¹ See Grubb, PW, "Patents for Chemicals, Pharmaceuticals and Biotechnology", Oxford: Clarendon Press, 1999: 54.
- ¹² Ozawa, M, "Study on Protection of Traditional Knowledge and Intellectual Property: From an Era of Preservation to the Utilization of Genetic Resources and Traditional Knowledge", Tokyo: Institute of Intellectual Property, 2002: 46, Appendix A, <http://www19.u-page.so-net.ne.jp/qc5/michelle/eMaikoOZAWA.PDF>; <http://www19.u-page.so-net.ne.jp/qc5/michelle/AppendixA.PDF>; and <http://www19.u-page.so-net.ne.jp/qc5/michelle/AppendixB.PDF>.
- ¹³ A person shall be entitled to a patent unless:
 (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or
 (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States . . .
 35 USC §102.
- ¹⁴ See 35 USC §102(f).

- ¹⁵ It is worth emphasizing the words “may be”. Many patents are granted that should not be and the problem seems largely due to the failure of the system to more efficiently enable examiners to identify novelty-destroying prior art published also in the United States (see www.bustpatents.com).
- ¹⁶ Ganguli, P, “Intellectual Property Rights: Unleashing the Knowledge Economy”, New Delhi: Tata McGraw Hill, 2001: 156.
- ¹⁷ In fact, Proctor indicated in his application for a Plant Variety Protection certificate on Enola (that was subsequently granted) that “the yellow bean, Enola variety, is most likely a landrace from the [Mexican] azufrado-type varieties”. ETC Group, ‘Proctor’s gamble’, News Release: 17 December 2001.
- ¹⁸ ETC Group “Proctor’s gamble”, News Release: 17 December 2001.
- ¹⁹ In Pratt, T, “Small yellow bean sets off international patent dispute”, *New York Times*, 20 March 2001.
- ²⁰ See also discussion in South Centre, “Protection and Promotion of Traditional Medicines: Implication for Public Health in Developing Countries”, Geneva, 2002; and OUNO, “Traditional Knowledge and Intellectual Property”, Geneva, Quaker United Nations Office, 2002.
- ²¹ For example, in 1982 the Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and Other Prejudicial Actions were adopted by a committee of governmental experts jointly convened by UNESCO and WIPO.
- ²² See Blakeney, *op cit*.
- ²³ See Boyle, J, “Shamans, Software, and Spleens: Law and the Construction of the Information Society”, Cambridge and London: Harvard University Press, 1996; Jaszi, P and Woodmansee, M, “The ethical reaches of authorship”, *The South Atlantic Quarterly* 95 (4), 1996: 947-977.
- ²⁴ This is not to suggest that computer programs are unworthy of protection, but that they are hardly works of literature in the strict sense.
- ²⁵ See Reichman, JH, “The TRIPS Agreement comes of age: conflict or cooperation with the developing countries?” *Case Western Reserve Journal of International Law* 32 (3), 2000: 441-470. It may actually be quite difficult even for sympathetic Western trade negotiators to understand why folklore is so important for people in developing countries. This is because folklore in western societies is no longer an integral part of most people’s lives, and is generally considered as archaic or quaint.
- ²⁶ TRIPS Article 14.1.
- ²⁷ Article 2 [emphasis added].
- ²⁸ See Blakeney, M, “What is traditional knowledge? Why should it be protected? Who should protect it? For whom? Understanding the value chain”, WIPO Doc. WIPO/IPTK/RT/99/3, Geneva, 1999.
- ²⁹ Though it may be able to if it could describe a specific formulation, even in fairly non-technical terminology.
- ³⁰ A good example is the unwillingness of government policy makers to take seriously proposals that patent applications, where appropriate, should provide evidence of prior informed consent of indigenous peoples whose knowledge has been used by the applicants for their inventions. The EU rejected such a proposal when drawing up the 1998 Directive on the Legal Protection of Biotechnological Inventions.
- ³¹ See Vogel, JH, “Bioprospecting and the justification for a cartel”, *Bulletin of the Working Group on Traditional Resource Rights* (4), 1997: 16-17.
- ³² Information provided by Dr Rocio Alarcon of Ecociencia at a seminar at Oxford University, 7 Feb. 2001.
- ³³ WTO, WT/GC/W/362, 1999.
- ³⁴ This was presented and discussed at IGC-3 in June 2002. Deliberations on this matter and related ones continued at IGC-4 in December 2002 (see WIPO, *Elements of a sui generis system for the protection of traditional knowledge*, document prepared by the Secretariat, WIPO/GRTKF/IC/3/8, Geneva, 2002).
- ³⁵ See WIPO Public Information Update (201/2003) of 21 July 2003.

³⁶ UNCTAD, "Report of the Expert Meeting on National Experiences and Systems for the Protection of Traditional Knowledge, Innovations and Practices", Geneva: UNCTAD (TD/B/COM.1/33; TD/B/COM.1/EM.13/3) 2000.

³⁷ See also South Centre, 2002, op.cit.

