TRIPS, Cultural Politics and Law Reform*

JOHANNA SUTHERLAND

ABSTRACT *This article examines the intensification of inter-'national' and international cultural contestations over intellectual property rights (IPRs). Examples are given of disputes over biological materials and their commercial use in biotechnology and natural products, and concepts of culture, property and fair return. These disputes are also about culture and political liberalism. Corporate stakeholders, governments, indigenous peoples' organisations (IPOs) and non-governmental organisations (NGOs) are involved in democratic, and with some exceptions, lawful political activity to secure law reform.*

Keywords: access and benefit sharing, cultural politics, genetic resources, intellectual property, liberalism

Introduction

Inter-'national' and international cultural contestations over intellectual property rights (IPRs) are becoming more intense. Some contestations involve biological materials and their commercial use in biotechnology and natural products, and concepts of culture, property, and fair return. These are the focus of this article. But these contests can also be viewed as performances about culture and liberalism. Corporate stakeholders, governments, indigenous peoples' organisations (IPOs) and non-governmental organisations (NGOs) are involved in democratic, and with some exceptions, lawful political activity to secure law reform. The turf is intellectual property, and the cultural contestations involved are premised on assumptions about equality in diversity, property rights and the value of diverse forms of knowledge. Many international human rights standards are also important, as is political networking and coalition-building for stakeholders. Most of these are core issues within the discourse of political liberalism, despite the variations and permutations within that discourse.[1]

Aspects of these liberal political activities will be demonstrated in this article as a selection of recent cultural disputations in the IPR field. The story of the considerable success in the General Agreements on Tariffs and Trade (GATT) of industries' IPR agenda; despite slightly differing inclinations by governments in Europe and the United States, will be retold. A short case study from Andean Pact countries of a regional agreement which recognises the value of traditional knowledge and genetic resources will also be provided. That agreement evolved largely in response to an IPO and NGO agenda. But the obvious difference in impact between global IPR regimes and regional commitments to equity will not be dwelt upon further.

*This article was presented at the National Intellectual Property Teachers' Workshop, ANU, Canberra, 5–6 February 1998.

0810-9028/98/030291-13

The cultural politics involved in intellectual property disputes are becoming increasingly global. We have seen the passage of a broad-ranging multilateral agreement on IPRs which expands their reach in an unprecedented way: the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).[2] That Agreement was included within the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) after vigorous lobbying by corporate stakeholders in the United States, Japan and Europe. Many NGOs are now asking that its provisions be interpreted so as to underpin better IPR protection for the cultural knowledge of indigenous peoples and traditional farmers. The TRIPS Agreement has also become one of the targets of a 'no patents on life' campaign. But we are also seeing regional and domestic law reform activity which is responding to a globalising assertion of the value of indigenous peoples' and local communities' knowledge, innovations and practices.

But while these cultural contestations over intellectual property are becoming more intense, they are not new. The United Nations' Commission on Genetic Resources in the UN's Food and Agriculture Organisation (FAO)[3] has attempted to resolve the so-called 'seed wars' since the mid-1980s. Those 'wars' erupted in response to the spread of IPRs over plants and their components within industrialised economies. Critics convinced several G77 governments that under intellectual property regimes those who are the primary managers, users and conservers of plant genetic resources[4] do not sufficiently appropriate the benefits generated by those resources when they are used in plant breeding programmes or within biotechnology products which become subject to intellectual property protection.[5] Ethnopharmacological knowledge can also aid in pharmaceutical research and in the targeting of samples for bioassay screening, but in the past those who provide such knowledge were rarely guaranteed a share in the products' commercial returns.

Recognition of this issue in international law is evident in many of the instruments finalised for or at the Rio Earth Summit in 1992, and negotiated since. They recognise the interlinkages between biological and cultural diversity and the value of indigenous and local communities' knowledge, innovations and practices. One of the most important is the Convention on Biological Diversity (CBD) and discussions on the best means for implementing its benefit-sharing provisions are continuing.[6] Multilateral negotiations are also continuing within the FAO Commission over mechanisms for recognising 'Farmers Rights' which arise from farmers' contributions to plant genetic resource conservation, improvement and use [7]

Other examples of heightened cultural politics in relation to cultural and biological diversity and IPRs, only one of which exceeded the bounds of liberal politics, include the following:[8]

- in July 1996, members of *Accion Ecologica*, an environmental NGO, blocked the ratification of a bilateral IPR agreement between Ecuador and the United States by occupying the Congressional Chamber in Ecuador. The IPR treaty went further than the TRIPS Agreement by requiring that plant varieties be protected either by patents or a system comparable with that of the International Union for the Protection of New Varieties of Plants (UPOV). The TRIPS Agreement merely says that plant varieties must be protected by patents or an effective *sui generis* system.[9] Some stakeholders argue that *sui generis* systems can differ from UPOV. The TRIPS Agreement also provides for a review of some of its permitted exclusions from patents by 1999, but this was not available in the bilateral agreement. NGO protest had been ignited by news of a 1986 US plant patent on a variety of *ayahuasca* (Banisteriospsis caapi), a plant of religious significance to some indigenous peoples in the Amazon Basin;[10]

- in August 1997 the US Patents and Trademark Office cancelled a 1995 patent issued to the University of Mississippi on the basis that customary knowledge of the use of tumeric as a healing agent was 'prior art'. The challenge issued from the Council of Scientific and Industrial Research in New Delhi, India,[11]
- in October and March 1993, 500,000 and 200,000 Indian farmers respectively, demonstrated against proposals for the GATT TRIPS Agreement, asserting that their right to save, reproduce and modify saved seeds could be eroded under implementing legislation. The campaign against 'biopiracy' has been particularly active in India;[12]
- policy development and law reform is advocated by IPOs and NGOs in many jurisdictions concerning traditional knowledge, cultural practices and intellectual property rights. But effective reform has not been a common response by governments.

But one might ask whether these examples really involve *cultural* politics and rights? In response I would suggest that they do, if one agrees with Raymond Williams that intellectual, spiritual and aesthetic development, ways of life, works and practices of intellectual and artistic activity, philosophy, scholarship and history, can all be embraced within the complex term 'culture'.[13] These contestations involve ways of life, whether industrialised or subsistence, intellectual activities, philosophies, and various works and practices—many of which are informed by beliefs in rights and other social discourses.

But my primary aim in this article is not to pursue further these examples of cultural politics. Rather I will examine the liberal cultural politics inherent in the process by which corporate stakeholders exercising their participatory rights persuaded governments to agree to their desired reforms to the GATT. Secondly, I will examine aspects of the IPO and NGO campaign against IPRs over biological materials, and examine a significant regional agreement which recognises the value of traditional knowledge largely outside an IPR framework—both in a procedural and substantive sense. This case study suggests that contracts, and particularly material transfer agreements, are an important mechanism for regulating access and benefit-sharing concerning traditional knowledge and genetic resources.[14]

Liberal Cultural Politics and the TRIPS Agreement

The GATT is a post-Second World War multilateral agreement[15] intended to promote international economic cooperation, and prevent the continuation of the economic mercantalism which exacerbated international tensions in the interwar period. The GATT, and the more recent World Trade Organisation Agreement, promote export-oriented trade and tariff reduction by and amongst States. The economic discourse by which the GATT operates represents liberal cultural values in favour of open markets and private property rights.[16] Issues arising under the GATT are negotiated in rounds.

The parameters of the Uruguay round of the GATT negotiations were set by the Ministerial Punta del Este Declaration in 1986. They were particularly important for integrating intellectual property, trade-related investment measures, and trade in services, with the broader international trade agenda of trade liberalisation and trade in goods. For implementing the TRIPS Agreement economies in transition have up to 5 years; developing countries have between 5 and 10, and the least developed countries have up to 10. As such, the TRIPS Agreement is likely to effect significant global legal change.

The TRIPS Agreement has as its objective that IPRs should contribute to the promotion of technological innovation, and technology transfer and dissemination, so that both producers and users of technological knowledge benefit in a way which is

conducive to social and economic welfare, and rights and obligations are balanced. IPR violations are denounced as 'trade distortions' leaving producers unable to recover research development and production costs, resulting in lower output, less trade and higher prices for consumers.[17]

Coalitions of industry stakeholders from Europe, Japan and the US had been effective catalysts for international action on IPR issues. The US government may have been particularly receptive to complaints of IPR violations because of increasing concern in the 1980s that the US was a hegemonic economy in decline, irrespective of the strength of the empirical evidence on the indicators.[18] IPR violations were estimated by the US International Trade Commission to cost US$61 billion in 1986.[19]

This inclusion of IPR issues within the Uruguay Round was largely attributable to the lobbying strength of various coalitions of corporations involved in knowledge-based industries (including chemical, pharmaceutical, information technology, luxury goods and entertainment),[20] and the US Chamber of Commerce. Several of these had senior representation on the Advisory Committee for Trade Negotiations (ACTN), whose Task Force on Intellectual Property recommended a broad-ranging IPR strategy to bring intellectual property protections within the GATT.[21] One of the key transnational coalitions of trade associations was the Intellectual Property Committee (IPC) which pushed for strengthening industrial patents. The US-based IPC worked with the Japanese Federation of Economic Organisations (Keidanren) and the European Union of Industrial and Employers' Confederations (UNICE) to develop a consensus position on the reforms sought. The IPC included representatives of more than ten leading multinational corporations. Keidanren was a private, non-profit organisation representing many Japanese corporations, while UNICE represented 33 industrial and employer federations from 22 countries.[22] Peter Drahos has described this process as 'a consensus building exercise of Herculean proportions', which was achieved within 6 months in 1986.[23] The G77, although critical of the move to bring IPRs within the GATT, did not mount sufficiently strong opposition to prevent it, which is hardly surprising since many negotiators, facing a packed GATT agenda, lacked both expertise and time.[24]

Corporate stakeholders sought a multilateral GATT code with effective deterrents to international trade in goods which violated IPRs, and the adoption and implementation of adequate and effective, but not necessarily harmonised, IPR rules. They also sought patents for all biotechnology inventions, including micro-organisms, parts of micro-organisms (plasmids and other vectors) and plants.[25] But on patents they were not completely successful, since the exemptions which were included within Article 27 of TRIPS, as quoted below, were largely consistent with the 1973 European Patent Convention.

But corporate and government stakeholders also had a cultural preference for rigorous and effective dispute resolution processes, and these preferences were effectively met. The US chose the GATT forum to complement its bilateral and domestic IPR reform agenda,[26] because of the remedy of sanctions and denial of market access which the GATT provides.[27] The enforcement mechanisms under TRIPS are now potentially more effective than those available under instruments administered by the World Intellectual Property Organisation (WIPO).[28]

Many of the Articles in the TRIPS Agreement may be relevant to the knowledge, innovations and practices of indigenous peoples and local communities, including those concerning copyright, trademarks, geographical indications and appellations of origin, industrial designs, patents and the protection of undisclosed information. The TRIPS patent provisions have been particularly contentious. They require that patents be available for any inventions, whether products or processes, in all fields of technology,

provided they are new, involve an inventive step and are capable of industrial application: Article 27(1). But Article 27 provides further:

> 1. [... subject to various Articles] patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced.
>
> 2. Members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect *ordre public* or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law.
>
> 3. Members may also exclude from patentability:
>
> ...
>
> (b) plants and animals other than micro-organisms, and essentially biological processes[29] for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof. The provisions of this subparagraph shall be reviewed four years after the date of entry into force of the WTO Agreement.

So although plants and animals (other than micro-organisms) and essentially biological processes for the production of plants or animals (other than non-biological and microbiological processes), can be excluded from patentability, members are required to provide for the protection of plant varieties either by patents or by 'an effective *sui generis* system'.

But there are scant records of the drafting history of Article 27 to aid in its interpretation, and none on the intended meaning of '*sui generis*'.[30] Leskien and Flitner, however, suggest that the TRIPS has several minimum requirements. These are that:

- the same standard of IPR protection apply to own-country and overseas nationals so that any advantage, favour, privilege or immunity which is provided by a member to its own national is also available to other members' nationals (national treatment);
- IPRs apply to the nationals of all other members equally (most-favoured nation treatment);
- an effective remedy must also be available in the event of a breach of any *sui generis* right which is created consistent with TRIPS; and
- the *sui generis* system must include an IPR component, within the meaning of Article 1(2) of the TRIPS Agreement.[31]

These minimum requirements indicate that recognition of the value of indigenous and local communities' traditional knowledge, innovations and practices are not guaranteed recognition under TRIPS, especially where they are inconsistent with private property rights over biological material, although they may fall within the scope of *sui generis* rights.

Cultural Politics and Plant Genetic Resources

At least since the pre-Rio Earth Summit conferences, many IPOs, NGOs and academics have been actively promoting domestic legal recognition and compensatory mechanisms for traditional knowledge. This campaign involves a politics of rights which is universalist rather than relativist. These resolutions tend to use the language international law and liberal human rights discourse, in part suggesting the constitution of IPOs' political

identity and subjectivity within the boundaries of the current international order, and consistent with a movement towards the constitutional accommodation of politicised cultural diversity.[32] Even though the rights being asserted are sometimes *sui generis*, often they are already embodied in a number of international instruments which are awaiting state ratification or accession, or domestic implementation and compliance.

Many IPOs' conference resolutions have emphasised rights to self-determination, economic social, cultural and political rights, gender equality, and rights to territories and intellectual and cultural property. NGOs particularly promoting human rights and the environment include WWF (World Wide Fund for Nature), IUCN (World Conservation Union), Indigenous Peoples' Biodiversity Network, International Alliance of Indigenous Tribal Peoples of the Tropical Forests, and Cultural Survival. Some of these organisations are working within the Global Coalition for Bio-cultural Diversity.

Rights-oriented resolutions from this campaign include the Kari-Oca Declaration and the Indigenous Peoples' Earth Charter (1992, Kari-Oca), Recommendations from the Voices of the Earth Conference (1993, Amsterdam), the Charter of the Indigenous-Tribal Peoples of the Tropical Forests (1992, Penang), and the Julayinbul Statement of Principles and Declaration Reaffirming the Self Determination and Intellectual Property Rights of the Indigenous Nations and Peoples of the Wet Tropics Rainforest Area (1993, Jingarrba).

There are also several academic authorities who use rights-based language and international instruments to encourage the recognition of indigenous and local communities' rights. The term 'traditional resource rights' is most closely associated with Darrell Posey and Graham Dutfield of the Working Group on Traditional Resource Rights based at Oxford University. Posey and Dutfield draw on international legal instruments to justify the development of *sui generis* legal and policy instruments and processes to conserve and protect cultural and biological diversity, to ensure benefit-sharing where traditional resources are used commercially, and to ensure that marginalised indigenous, traditional and local communities have favourable conditions to influence all levels and aspects of policy planning and implementation.[33] Other academics and activists also draw on international human rights law to further the implementation of international environmental law and to better the lives of indigenous peoples.[34]

Many non-indigenous academics and NGOs have been supporting the IPO's and INGOs' rights-based campaign. A range of professional NGOs have been particularly concerned with codes of ethics for research, biodiversity prospecting and intellectual property rights, and many of these organisations have been supportive of IPOs' activities and aspirations—particularly ethnobotanists, biologists and biochemists. There is an expanding academic literature on agro-biodiversity, agro-ecology, ethnobiology and ethnobotany, traditional ecological knowledge and sustainable development.

But there are also disagreements within and among organisations over issues such as moratoria, and the benefits or otherwise of donor-funded biotechnology projects. For example, some declarations and resolutions use less human rights terminology and more strongly denounce all intellectual property rights over life forms. Several call for a moratorium on biotechnology research involving indigenous peoples, and seek to prioritise the equity aspirations of the CBD over its facilitation requirements concerning sustainable use of biological diversity and use of indigenous and traditional technologies.[35] These resolutions include the Thammasat Resolution (1997, Thailand) which reaffirmed participants' opposition to the application of IPRs to lifeforms, including humans, animals, plants, micro-organisms, or their genes, cells and other parts. Other resolutions and declarations were issued following the 1995 UNDP Consultation on Indigenous Peoples' Knowledge and Intellectual Property Rights in Fiji; the 1994

COICA/UNDP Regional Meeting on Intellectual Property Rights and Biodiversity in Bolivia, and the 1993 Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples, from Aotearoa/New Zealand.

RAFI is one of the most active NGOs campaigning against IPRs sought by those involved in biotechnology research and development. RAFI denounces 'biopiracy', emphasising particularly the 'unjust enrichment' reaped by multinational corporations when IPRs are claimed over products or processes to which indigenous peoples' informal innovation, knowledge or customary practices have contributed.[36] Other active NGOs which are critical of IPRs include the Genetic Resources Action International (GRAIN), Searice, the Third World Network, the Research Foundation for Science, Technology and Natural Resource Policy, the Institute for Agriculture and Trade Policy, Friends of the Earth International (FoE), the Dag Hammerskjold Foundation, and others.

This NGOs' 'no patents on life' campaign represents IPRs over life forms as the epitome of 'western' alienation from nature and commodified production, often with indigenous peoples at the other end of the cultural spectrum. Less activist commentators also query the desirability of extending IPRs over biological materials.[37] On the other hand, many IPOs are entering into bioprospecting contracts which commercialise aspects of their intellectual and cultural property.

Other concerns which G77 governments, NGOs and IPOs have about the application of the TRIPS rules are that:

- most countries which are rich in cultural and biological diversity do not have sufficient capacity in the biotechnology sector to maximise that comparative advantage, and that the aggressive strategy pursued by the US to strengthen IPR regimes enhances the US relative advantage in that sector. Moreover the US has not yet ratified the CBD which has as its objectives the conservation of biological diversity and the fair and equitable sharing of the benefits deriving from its use;
- the IPR laws likely to be introduced to comply with TRIPS recognise novelty and newness and private invention rather than collective, accumulated knowledge. New, inventive, non-obvious applications which are reproduceable and have potential industrial application can be protected, while the original valuable knowledge rarely is;[38]
- the most likely *sui generis* system permissable under Article 27 is that created by the UPOV. Traditional farmers rarely meet its requirements of precise recognition and description, uniformity or homogeneity, and stability in essential characteristics. Farmers who engage in mixed multicrop farming and maintain high levels of genetic diversity with cultivated adaptations are unlikely to meet these UPOV requirements which better suit agribusiness seed producers;[39]
- IPRs over biological material will lead to a further decline in biodiversity and the cultural practices which maintain it, since selective breeding for commercial purposes will lead to increased planting of those varieties and declining maintenance of varieties which produce lower yields;
- increasing commercialisation of the seed industry and genetically engineered resistances or amenabilities to particular agrochemicals and other inputs will worsen the vertical integration of the sector with adverse consequences for prices and farmers' access to reproductive material; and that
- strengthening IPR protection will encourage more agressive marketing of protected varieties, increasing mono-crop, industrial production and its associated relations of production, and exacerbate declining levels of biological and cultural diversity.

Commentators have identified diverse law reform options which governments have available to meet some of the aspirations which are being articulated by the G77, IPOs and NGOs in relation to implementing TRIPS Article 27. These include the following:

- comprehensive new legislation on sustainable development, and biological and cultural diversity;
- new disclosure and deposit rules for applicants for patents or other IPRs, including declarations of origin and prior informed consent;
- variations on the definition of a protectable 'variety' of plant;
- new requirements for labelling of genebank accessions or the creation of new registers;
- the creation of an IPR ombudsperson or other public defender;
- establishment of a community gene fund financed by taxes or royalties, so that traditional germplasm conservation and development, or traditional use of medicinal plants can be supported or commercialised;
- new IPR dispute resolution processes such as a tribunal hearing process;
- inventors' certificates, and seals or certificates for seeds;
- implementation of the WIPO model law on folklore;
- bilateral or multiparty contracts including material transfer agreements; and/or
- new rights-based legislation for recognition of communal intellectual activities, traditional resource rights, or sectoral community rights.[40]

These options are being discussed in several multilateral, regional and domestic fora but few have yet been implemented in domestic law or policy. The most favoured option seems to be the promotion of contracts and particularly material transfer agreements where potentially usefully bioactive materials, and knowledge, are traded.

Democratic Cultural Politics and NGO Law Reform Activity: A Short Case Study

The Andean Pact

The development of the Andean Community's[41] subregional agreement concerning access to genetic resources, protection for traditional knowledge, and benefit-sharing, is attributable to a range of contextual factors. The most important include member states' improving responses to the international (including Pan-American) indigenous peoples' human rights movement,[42] NGO activities,[43] increasing bioprospecting activity in the region,[44] and criticisms of earlier subregional intellectual property decisions which did not include protection for traditional knowledge. Other conducive circumstances included the restoration of democratic governance within Andean Pact States, since this is more tolerant of lobbying by NGOs and of partnerships with NGOs. But the Andean Pact's adoption of intellectual property rights for plant breeders in 1993, and the strengthening of broader intellectual property rights[45] without recognition of the value of traditional knowledge, innovations and practices, was one of the most immediate catalysts for heightened NGO lobbying activity for reform. In 1993 the Pact agreed that by December 1994 a 'Common Regime on Access to Biogenetic Resources and Guarantee of Biosafety' would be adopted, implementing the provisions of the CBD.

Since at least 1991 the Peruvian Environmental Law Society (SPDA)[46] has been an active participant in the cultural politics of knowledge.[47] The SPDA lobbied the Andean Pact for regional implementation of the CBD's provisions on access and benefit-sharing and for IPR reform, and liaised with the IUCN's Environmental Law Centre on the possibilities of assistance. The Colombian government was also a particularly outspoken

proponent of stronger CBD provisions on equitable benefit-sharing with indigenous peoples during CBD negotiations and at subsequent conferences of the parties, and it garnered Andean Pact support for the project to improve the Andean Pact's intellectual property laws.

In January 1994 the Andean Pact formally requested technical assistance from the IUCN's Environmental Law Centre, and the IUCN secured funding from the German Ministry for Technical Cooperation for a 4-year project. The IUCN contracted SPDA to be the local liaison organisation with its regional office in Quito, Ecuador and with its national committees.

In 1994 the IUCN released a paper to the Andean Pact secretariat and widely in the region, seeking comment, and a final version following comments was sent to the Andean Pact for discussion.[48] This document did not include a model law but rather provided a set of principles and elements from which a possible regulatory structure could be elaborated. There had been some criticism during the process from other NGOs such as the Third World Network, which questioned the involvement of the IUCN in the process, and the Colombian government unsuccessfully attempted to have IUCN information documents replaced with their own for discussion purposes.[49] Decision 391 on a common Andean Pact regime on access to genetic resources emerged 2 years later, in July 1996.[50]

Decision 391 essentially creates a process which must be followed by parties wishing to collect genetic resources or derivatives, within the countries to the agreement.[51] Access applicants are required to apply for access through competent national authorities, and to provide specified information. The decision also recognises national sovereignty over genetic resources. The access process involves registration of proposed projects on the public record, and negotiations over the access contract and any ancillary contracts, including those involving the transfer of knowledge of an intangible nature (such as traditional knowledge held by indigenous, Afroamerican or local communities).[52] The Andean Pact regime also promotes training, research, development and technology transfer concerning the sustainable use of biological diversity and genetic resources, and subregional cooperation concerning such matters. Access applications are also required to address these issues in accessory contracts of relevance and benefit to nationals and domestic institutions. The agreement also deals with precautionary matters, subregional transit of biological resources, and it recognises that member countries may restrict access to genetic resources and derivatives in specified cases, including on environmental, human health, cultural identity, biosafety or strategic grounds.

Although this agreement was binding on member countries in July 1996 national implementing legislation is also required within each State. In September 1996 Ecuador passed framework legislation on biodiversity protection and requirements to be followed when genetic resources are accessed for commercial purposes. Law reform is also underway in Bolivia and Colombia.[53]

Conclusions

This article has suggested that cultural politics pervade the globalisation of the formal, intellectual property rights regime which applies to biological materials. The values involved are inherently liberal. Recognition of customary intellectual property rights was not a dominant issue for the TRIPS Agreement during its negotiation, but it is still early days on the issue of *sui generis* regimes. There were differences between European and US governments' positions on the patents issue, despite the corporate coalition, and although Article 27 reflects a compromise, it is probable that differences between the jurisdictions

will lessen over time. Current wide disparities between IPR laws in G77 and 'developed' countries will also have to reduce over time given the obligatory requirements of the TRIPS Agreement. But the emergence of the TRIPS Agreement demonstrates one of the constitutive outcomes of liberal discourses which empower non-State actors such as private sector corporations and civil society within liberal democracies and international politics.

Ironically, however, the liberal political culture which has encouraged the expansion of civil society and NGOs, and which has developed a discourse of rights for indigenous peoples, is also responsible for many of the current pleas that globalising IPR laws should meet higher equitable standards. NGOs have been integral to law reform activities in the Andean Pact. But whether the preferred reform option of private contracts is the most beneficial to the maintenance of cultural and biological diversity and to meeting the commercial aspirations of many indigenous peoples and local communities remains to be seen. It is fairly clear that issues such as gender, equity amongst diverse property-holders within bioregions sustaining similar resources and practices, and minimum detailed terms for commercial negotiations are not central issues within such reforms. Prior informed consent is considered particularly important, as are privately negotiated royalties and other benefit-sharing arrangements. Again the resonances of liberal political culture are quite clear. It can also be concluded that given the requirements of the TRIPS Agreement and the likelihood that corporate stakeholders will continue to pursue remedies against those who violate their IPRs, that IPRs will continue to be a basis for political conflict inter-'nationally' and internationally.

Notes and References

1. J. L. Richardson, 'Contending liberalisms: past and present', *European Journal of International Relations*, 3, 1, pp. 5–33.
2. General Agreement on Tariffs and Trade—multilateral trade negotiations (the Uruguay Round): final act embodying the results of the Uruguay Round of trade negotiations, December 15, 1993' with introduction by A. Porges, *International Legal Materials*, 33, 1, 1994, pp. 1–152. The Uruguay Round Agreements came into force from 1 January 1995. See also: 'The Agreement establishing the Multilateral Trade Organization [World Trade Organization]', *International Legal Materials*, 33, 1, 1994, pp. 13–27; 'Agreement on trade-related aspects of intellectual property rights, including trade in counterfeit goods', *International Legal Materials*, 33, 1, 1994, pp. 81–111; 'Understanding on rules and procedures governing the settlement of disputes', *International Legal Materials*, 33, 1, 1994, pp. 112–135.
3. In 1995 the FAO Conference endorsed a broadening of the mandate of the Commission on Plant Genetic Resources to cover all components of biodiversity of relevance for food and agriculture, and agreed that the Commission should become known officially as the Commission on Genetic Resources for Food and Agriculture. This broadened mandate brings within the Commission's aegis domesticated animals and marine and aquatic resources.
4. Plant genetic resources are plant components which contain functional units of heredity of actual or potential value and which determine the range of genetic variability which is available to a plant population. Plant genes, which are found in all plant cells or seed, are sequences of DNA (deoxyribonucleic acid) which provide a code for one or more traits or functions for the cells expressing the gene(s). A 'plant' includes any part of the flowers, seeds, or genetic or reproductive material of a flowering plant, cycad, conifer, fern or fern ally, moss, liverwort, alga, fungus, or lichen.
5. See generally: Pat Roy Mooney, *Seeds of the Earth: A Private or Public Resource*, rev. edn, Inter Pares, Ottawa, for the Canadian Council for International Co-operation and the International Coalition for Development Action (London), 1980; Pat Roy Mooney, 'The law of the seed: another development and plant genetic resources', *Development Dialogue*, 1–2, 1983, pp. 3–172; Jack Ralph

Kloppenburg Jr., *First the Seed: The Political Economy of Plant Biotechnology, 1492–2000*, Cambridge University Press, Cambridge, 1988; Jack R. Kloppenburg Jr. (ed), *Seeds and Sovereignty: The Use and Control of Plant Genetic Resources*, Duke University Press, Durham, NC, 1988; Cary Fowler, *Unnatural Selection: Technology, Politics, and Plant Evolution*, International Studies in Global Change 6, Gordon and Breach, Yverdon, 1994; Darrell A. Posey & Graham Dutfield, *Beyond Intellectual Property: Toward Traditional Resource Rights for Indigenous Peoples and Local Communities*, International Development Research Centre, Ottawa, 1996; Rural Advancement Foundation International, *Conserving Indigenous Knowledge. Integrating Two Systems of Innovation*, United Nations Development Programme, New York, 1995; Vandana Shiva, Afsar H. Jafri, Gitanjali Bedi, Radha Holla-Bhar, *The Enclosure and Recovery of the Commons: Biodiversity, Indigenous Knowledge and Intellectual Property Rights*, Research Foundation for Science, Technology and Ecology, New Delhi, 1997.

6. Especially Articles 1, 8(j), 15(4), 15(5), 16, 17, 18, 19(1) and (2), 20 and 21. See generally: United Nations, Convention on Biological Diversity, *Addressing the Fair and Equitable Sharing of the Benefits Arising out of Genetic Resources: Options for Assistance to Developing Country Parties to the Convention on Biological Diversity: Note by the Executive Secretary*, Conference of the Parties to the Convention on Biological Diversity, Fourth Meeting, Bratislava, 4–15 May 1998, 9 February 1998, UNEP/CBD/COP/4/22.
7. Farmers' Rights and Plant Breeders' Rights were recognised in FAO Resolutions 4/89, 5/89 and 3/91. See generally: United Nations, Food and Agriculture Organisation, Commission on Plant Genetic Resources, *Revision of the International Undertaking on Plant Genetic Resources: Analysis of Some Technical, Economic and Legal Aspects for Consideration in Stage II: Access to Plant Genetic Resources and Farmers' Rights*, CPGR-6/95/8 Suppl. (CPGR-EX1/94/5 Suppl.) E, 1995; United Nations, Food and Agriculture Organisation, *Report of the Fourth Extraordinary Session of the Commission on Genetic Resources for Food and Agriculture, Rome, 1–5 December 1997*, CGRFA-Ex4/97/REPORT.
8. For numerous earlier examples of alleged biopiracy, see N. Roht-Arriaza, 'Of seeds and shamans: the appropriation of the scientific and technical knowledge of indigenous and local communities', *Michigan Journal of International Law*, 17, 1996, pp. 919–965 at pp. 921–926.
9. *Sui generis* means new and unique or as yet unrecognised in the international order.
10. S. van de Wateringen, 'USA pushes Ecuador to sign IPR agreement', *Biotechnology and Development Monitor*, 33, December, 1997, pp. 20–22.
11. 'India bio-piracy campaign successfully challenges US turmeric patent', *Intellectual Property and Biodiversity News*, 6, 13, 1997, <env.biotech@conf.igc.apc.org>
12. K. Lehman, 'Pirates of diversity: the global threat to the earth's seeds', *Information About Intellectual Property Rights, 3*, 1994, <ipr-info3@iatp.org>
13. Raymond Williams, Keywords: *A Vocabulary of Culture and Society*, rev. edn, Flamingo Paperbacks, London, 1983, pp. 90–91.
14. For a case study of the Philippines' experience see: United Nations, Convention on Biological Diversity, *Manual on Regulating Access to Biological and Genetic Resources in the Philippines*, Conference of the Parties to the Convention on Biological Diversity, Third Meeting, Buenos Aires Argentina, 4–15 November 1996, 6 November 1996, UNEP/CBD/COP/3/Inf.47.
    C. V. Barber & A. L. Vina, 'Regulating access to genetic resources: the Philippines experience', in, J. Mugabe, C. V. Barber, G. Henne, L. Glowka and A. La Viña (eds), *Access to Genetic Resources: Strategies for Sharing Benefits*, ACTS Press, Nairobi, 1997, pp. 115–141.
15. The original General Agreement on Tariffs and Trade was agreed to on 30 October 1947, and came into effect in 1948.
16. K. Burch, 'Intellectual property rights and the culture of global liberalism', *Science Communication*, 17, 2, 1995, pp. 214–232.
17. M. A. Leaffer, 'Protecting United States intellectual property abroad: toward a new multilateralism', *Iowa Law Review*, 76, 1991, pp. 273–308 at p. 277.
18. Robert Gilpin, *US Power and the Multinational Corporation: The Political Economy of Foreign Direct Investment*, Basic Books, New York, 1975; Robert O. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy*, Princeton University Press, Princeton, NJ, 1984; Robert Gilpin, *The Political Economy of International Relations*, Princeton University Press, Princeton, NJ, 1987; Paul Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000*,

Random House, New York, 1980; Peter Drahos, 'Global property rights in information: the story of TRIPS at the GATT', *Prometheus*, 13, 1, at pp. 6–19.

19. Fowler, *op. cit.*, Ref. 5, p. 177.
20. See D. Purdue, 'Hegemonic trips: world trade, intellectual property and biodiversity', *Environmental Politics*, 4, 1, 1995, pp. 88–107 at p. 96. Most of the 164 companies in the US which responded to a Conference Board survey in the late 1980s said that IPR reform was high on their lobbying agenda: Fowler, *op. cit.*, Ref. 5, p. 176.
21. Drahos, *op. cit.*, Ref. 18 at p. 8.
22. Intellectual Property Committee (USA), Keidanren (Japan), UNICE (Europe), *'Basic framework of GATT provisions on intellectual property: statement of views of the European, Japanese and United States Business Communities'*, IPC/Keidanren/UNICE, 1988 , typescript copy.
23. Drahos, *op. cit.*, Ref. 18 at pp. 12–13.
24. J. van Wijk, 'Intellectual property protection for plants: possible impact on developing countries', *Biotechnology and Development Monitor*, 4, September, 1990, pp. 3–7 at p.6.
25. Intellectual Property Committee (USA), Keidanren (Japan), UNICE (Europe), *op. cit.*, Ref. 22, pp. 17, 35–36.
26. On US domestic and bilateral law, see Leaffer, *op. cit.*, Ref. 17 at pp. 288–297.
27. R. Kaplinksy, 'Industrial and intellectual property rights in the Uruguay round and beyond', *Journal of Development Studies*, 25, 3, 1989, pp. 373–400 at p. 391.
28. Acharya, 'Patenting of biotechnology: GATT and the erosion of the world's biodiversity', *Journal of World Trade*, 25, 6, pp. 71–87.
29. See for example, *Harvard College's Onco-mouse Application* [1989] OJ EPO 451.
30. United Nations, World Trade Organisation, Committee on Trade and Environment, *Environment and TRIPS*, 8 June 1995, WT/CTE/W/8, pp. 23–28.
31. Dan Leskien & Michael Flitner, *Intellectual Property Rights and Plant Genetic Resources: Options for a Sui Generis System*, Issues in Genetic Resources 6, International Plant Genetic Resources Institute, Rome, 1997, pp. 28, 30–32
32. James Tully, *Strange Multiplicity: Constitutionalism in an Age of Diversity*, Cambridge University Press, New York, 1995.
33. Darrell Posey, *Traditional Resource Rights: International Instruments for Protection and Compensation for Indigenous Peoples and Local Communities*, IUCN, Gland, 1996; Posey & Dutfield, *op. cit.*, Ref. 5.
34. A. R. Chapman, 'Human rights implications of indigenous peoples' intellectual property rights', in T. Greaves (ed.), *Intellectual Property Rights for Indigenous Peoples, A Sourcebook*, Society for Applied Anthropology, Oklahoma City, 1994, pp. 209–222; D. B. Suagee, 'Human rights and cultural heritage, developments in the United Nations Working Group on Indigenous Populations', in T. Greaves (ed.), Society for Applied Anthropology Oklahoma City 1994, *Intellectual Property Rights for Indigenous Peoples: A Sourcebook*, pp. 191–208; D. Shelton, *Fair Play, Fair Pay: Laws to Preserve Traditional Knowledge and Biological Resources*, WWF, Gland, 1995.
35. Article 8(j) over Articles 17, 18.
36. See R. Pistorius, 'RAFI after 15 years', *Biotechnology and Development Monitor*, 17, December, 1993, p. 22; H. Shand, '1993: a landmark year for biodiversity or bio-piracy?', *Biotechnology and Development Monitor*, 17, December, 1993, p. 24.
37. B. Hoffmaster, 'The ethics of patenting higher life forms', *Intellectual Property Journal*, 4, 1988, pp. 1–24.
38. Roht-Arriaza, *op. cit.*, Ref. 8 at pp. 935–940.
39. Roht-Arriaza, *op. cit.*, Ref. 8 at pp. 940–942.
40. See generally: Rural Advancement Foundation International, *op. cit.*, Ref. 5; Leskier & Flitner, *op. cit.*, Ref. 31.
41. Formally the Commission of the Cartagena Accord, established by the 1969 Cartagena Agreement as a mechanism for social and economic integration amongst member countries. Before March 1996 it was known as the Andean Pact. Member States are Bolivia, Colombia, Ecuador, Peru and Venezuela, but Peru announced its intention to withdraw from the agreement in April 1997: K. ten Kate, 'The common regime on access to genetic resources in the Andean Pact', *Biopolicy Online Journal*, 2, 6, 1997, File PY97006, <http://www.bdt.org.br/bioline/py>.
42. See generally: M. Benavides, 'Amazon Indigenous peoples: new challenges for political partici-

pation and sustainable development', *Cultural Survival Quarterly*, 20, 3, pp. 50–53; K. Sikkink, 'Human rights, principled issue-networks, and sovereignty in Latin America', *International Organisation*, 47, 3, 1993, pp. 411–441; James Anaya, *Indigenous Peoples in International Law*, Oxford University Press, New York, 1996; D. Lee van Cott, 'Prospects for self-determination of indigenous peoples in Latin America: questions of law and practice', *Global Governance*, 2, 1996, pp. 43–64. R. L. Barsh, 'Indigenous peoples in the 1990s: from object to subject of international law?', *Harvard Human Rights Journal*, 7, Spring, 1994, pp. 33–86 at pp. 70–72. Many States in the region have ratified ILO Convention 169 which obliges States to take special measures to safeguard the property, cultures and environment of indigenous and tribal peoples.

43. E. C. Peralta, 'A call for intellectual property rights to recognise indigenous peoples' knowledge of genetic and cultural resources' in A. F. Krattiger, J. A. McNeely, W. H. Lesser, K. R. Miller, Y. St Hill and R. Senagake, (eds), *Widening Perspectives on Biodiversity*, IUCN, Gland, and International Academy of the Environment, Geneva, 1994, pp. 287–289.
44. The US government was funding bioprospecting under the International Cooperative Biodiversity Group (ICBG) programme, and Shaman Pharmaceuticals was also actively bioprospecting in the region. See generally: Edward H. Hammond III, A Business of Development? Bioprospectors, Indigenous People, and the Pharmaceutical Industry in Northeastern Peru, thesis submitted in partial fulfillment of the requirements for the Degrees of Master of Science in Community and Regional Planning and Master of Arts in Latin American Studies, Faculty of the Graduate School, University of Texas, Austin, 1995.
45. The Common Regime for the Protection of Plant Breeders' Rights in Member States, Decision 345, established a regional plant breeders' rights regime consistent with the International Union for the Protection of New Plant Varieties (UPOV) 1991. Decision 344 on industrial property provided enhanced protection for biotechnologies, microorganisms and plants not found in nature and related processes for the development of such 'inventions'. See generally: C. M. Correa, 'Implementation of the TRIPS Agreement in Latin America and the Caribbean', *European Intellectual Property Review*, 8, 1997, pp. 435–443.
46. Society Sociedad Peruana de Derecho Ambiental (SPDA), an NGO founded in 1986.
47. B. Tobin, 'Putting the commercial cart before the cultural horse: a study of the International Cooperative Biodiversity Group (ICBG) Program in Peru', n.d., typescript copy.
48. IUCN Environmental Law Centre with the assistance of the Peruvian Environmental Law Society, 'Toward a legal framework to regulate access to genetic resources in the Andean Pact: report for the Board of the Cartagena Accord', Bonn, 1994, typescript copy.
49. Personal comment by IUCN Environmental Law Centre staff, Patricia Moore & Lyle Glowa, 18 October, 1996.
50. The Comission del Acuerdo Cartagena: 1996, Decision 391: Regimen Comun sobre Acceso a los Recursos Geneticos, Gaceta Oficial, Ano XII, Numero 213, Lima, 17 de Julio 1996: K. ten Kate, 'The common regime on access to genetic resources in the Andean Pact', note 1.
51. Human genetic resources and customary exchange of genetic resources by indigenous, Afroamerican or local communities are excluded from the scope of the decision: Article 4.
52. Article 2, 'Andean Pact Decision 391, common regime on access to genetic resources', unofficial translation by the IUCN Environmental Law Centre, typescript copy. CGRFA-Ex4/97/Report, Appendix E3.