Vampires round the campfire

Stephen Gray

Indigenous intellectual property rights and patent laws.

The Human Genome Diversity Project (HGDP) is an attempt by geneticists worldwide to 'map the human genome' by describing the chemical composition of each gene inherited by human beings anywhere in the world. There have been protests over this project raised by a number of community groups, including those concerned at the possible discriminatory uses to which new scientific information of this type might be put. For Aboriginal people, including those in the Northern Territory, the project is especially worrying. This is because scientists from the Human Genome Organisation (HUGO), the body which administers the HGDP, are particularly interested in the genes of indigenous people, which may have scientific or medicinal uses of great economic value. Despite agreement by HUGO that it would not seek patent protection for any applications of genetic material derived from the Project, 'three patent claims by the US government on cell lines from indigenous people in Panama, Papua New Guinea and the Solomon Islands were unearthed in late 1993, and sparked outrage and protest among indigenous people around the world'.[1]

The HGDP is only one example of increased scientific and commercial interest in the genetic resources of indigenous people and their land, and their traditional knowledge of such resources. The Western Australian Government has signed an agreement with Amrad, a Victorian pharmaceutical company, ensuring Amrad's access to a plant known as smokebush, which may be used in developing an anti-AIDS drug. There is no provision in this agreement for benefits to Aboriginal communities living on or owning land in the areas in which smokebush is found.[2] This is so despite the fact that smokebush is known to have medicinal uses by the Aboriginal peoples concerned — although it was not traditionally known, of course, as a cure for AIDS. The same pharmaceutical company has signed a confidential agreement with the Northern Land Council and the Tiwi Land Council to enable research into the medicinal properties of plants found on Aboriginal lands. Another example is the 'bush tucker' industry, which is currently 'worth an estimated $15 million per year, with the ANBIC [Australian Native Bushfood Industry Committee] hoping to accelerate its growth to $100 million within three years'.[3] This industry is at least partly founded on the traditional knowledge of indigenous people.

Under traditional Aboriginal laws the genetic resources of the people and their land, and their knowledge about these resources, are seen as the 'property' of the relevant Aboriginal people. In addition, Aboriginal intellectual property is communally, and not individually, owned: 'knowledge and innovation are not seen as commodities, but as community creations handed on from past to future generations'.[4] In the Julayinbul Statement, a declaration of indigenous intellectual property rights signed in 1993, Aboriginal people asserted their 'indigenous intellectual property rights as common law rights in accordance with customary laws, which should be recognised and respected as common law traditions the equal of any other'.

Stephen Gray teaches law at the Northern Territory University.

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Although there is a possibility that such rights may be recognised by other common law doctrines, Australian patent law does not at present recognise rights of this broad scope. The *Patents Act 1990* (Cth) reflects the primarily economic focus of Australian intellectual property law, refusing to protect mere knowledge or 'discoveries' until they are turned into economically valuable 'inventions'. The practical consequence of this for Aboriginal people is that non-Aboriginal scientific or commercial interests are frequently able to exploit Aboriginal genetic resources, or knowledge gained from those resources, with the protection of Australian patent law. This is something of which Aboriginal people should be aware when negotiating agreements of the type referred to above.

The first part of this article considers the extent to which Aboriginal people may be able to object to an attempt by a non-Aboriginal commercial or scientific interest to patent an invention which exploits their genetic resources or traditional knowledge of such resources. It argues that the answer to this will depend on factors which are of marginal importance in Aboriginal laws, particularly the question of whether the scientific or commercial 'use' of the resource which is being patented is known to the relevant Aboriginal people. Even where a genetic resource is used traditionally for broadly similar purposes, such as the general medicinal uses of the smokebush plant, this will not be sufficient for a valid objection to a patent application. The second part of the article considers whether other avenues exist, particularly under international law or as part of native title recognised in the *Mabo* decision (*Mabo and Others v The State of Queensland (No. 2)* (1992) 175 CLR 1), for greater recognition of this aspect of Aboriginal customary law.

Protection under Australian patent law

Section 18 of the *Patents Act 1990* sets out the following requirements for a patentable invention:

> 18. (1) Subject to sub-section (2), a patentable invention is an invention that, so far as claimed in any claim:
>
> (a) is a manner of manufacture within the meaning of section 6 of the Statute of Monopolies; and
>
> (b) when compared with the prior art base as it existed before the priority date of that claim:
>
> (i) is novel; and
>
> (ii) involves an inventive step; and
>
> (c) is useful; and
>
> (d) was not secretly used in the patent area before the priority date of that claim by, or on behalf of, or with the authority of, the patentee or nominated person or the patentee's or nominated person's predecessor in title to the invention.
>
> (2) Human beings, and the biological processes for their generation, are not patentable inventions.

Of these, the relevant requirements for the purposes of the present discussion are that a patentable invention be a *manner of manufacture*, that it be *novel*, and that it involve an *inventive step*.

Manner of manufacture

A 'good idea' in itself is not patentable. It is patentable only if translated into a 'manner of manufacture'. These words:

> have been interpreted to require either a *product* which can be produced by following the instructions in the specification; or a *process* or result, which, similarly, can be achieved by following the specification. Discoveries, mental processes or information itself cannot be patented, and nor can material protected by copyright law, for none of these come within the conception of manner of new manufacture'.[5]

The courts will not, therefore, accept a patent application over what is considered to be a mere 'discovery': although in the leading Australian patents case, *National Research Development Corporation v Commissioner of Patents* (1959) 102 CLR 252 (the *NRDC* case), the High Court noted that 'the distinction between discovery and invention is not precise' (at 264). The 'discovery of an existing naturally occurring substance cannot be patented'.[6] Only when that discovery is translated into something new and useful can a patent application succeed. In the NRDC case, the plaintiff had not discovered any new chemicals: rather it had discovered that previously known chemicals could be put to new uses. This was sufficient for a successful patent application, since the new use produced a useful result with commercial significance.

On this analysis, it is clear that the mere existence of genetic resources on land owned or formerly owned by indigenous people will not give the indigenous people any intellectual property rights in those resources, should they turn out to have some scientific or commercial value. In order to gain patent protection or to prevent others from gaining it, the indigenous people would have to 'discover' the resources, and put them to a new use with commercial significance. A scientific or commercial interest need not therefore reach any agreement with the indigenous people concerning intellectual property rights. Such an interest could gain patent rights over a use for genetic material found on indigenous peoples' land by finding a novel commercial use for that material.

It is possible for a patent application to be refused on public policy grounds. At common law an application could be refused on the grounds that it was 'generally inconvenient', an exception which arguably still exists under the *Patents Act* today.[7] Under s.51(1)(a) *Patents Act* the Commissioner for Patents has a discretion to refuse to accept a patent request or to grant a patent for an invention 'the use of which would be contrary to law'. In the past, patents were refused on the grounds that they were immoral according to the standards of the day (for example a patent for contraceptives: see *Riddlesbarger's Application* (1936) 53 RPC 57). It is possible that a patent application over indigenous genetic resources, or which exploited indigenous knowledge without otherwise being unpatentable, might be considered 'contrary to law'. It could be argued that 'law' in this context includes international law, and that Aboriginal intellectual property rights are recognised under international laws such as Article 27 of the International Covenant on Civil and Political Rights (ICCPR). In addition, 'law' in this context would appear to include common law native title. If common law native title includes Aboriginal intellectual property rights (as will be suggested below), then traditional Aboriginal knowledge might also be grounds for objecting to a patent application as 'contrary to law'.

On the other hand, it should be noted that the current Patent Office practice is to accept patent applications over genetic resources including life forms. The practice of granting such applications even over parts of human beings is particularly advanced in the United States.[8] In Australia, s.18(2) of the *Patents Act* states that '(h)uman beings, and the biological processes for their generation, are not patent-

able inventions'. This exception, however, will not preclude patent applications over parts of human beings.

Novelty

Aboriginal people may object to a patent application over an invention which makes use of their traditional medicinal or other knowledge on the grounds that they have already taken the researchers 'half-way'. Aboriginal traditional knowledge, for example, may have pointed non-Aboriginal researchers in the direction of the smokebush plant, and suggested to them the general medicinal uses which it might have. This type of exploitation has often happened in the past. Duboisia, a leaf growing in northern NSW and southern Queensland which has numerous pharmaceutical uses, was originally developed in the 1870s and 1880s using traditional Aboriginal knowledge. The export of the leaf is now worth over $1 million a year.[9] In this situation Aboriginal people objecting to a patent application might argue that their prior use of the genetic resource meant that the invention was no longer 'novel' under the *Patents Act*.

Under s.7(1) *Patents Act* there is a presumption of novelty:

> 7. (1) For the purposes of this Act, an invention is taken to be novel when compared with the prior art base unless it is not novel in the light of any one of the following kinds of information, each of which must be considered separately:
>
> (a) prior art information (other than that mentioned in paragraph (c) made publicly available in a single document or through doing a single act;
>
> (b) prior art information (other than that mentioned in paragraph (c) made publicly available in 2 or more related documents, or through doing 2 or more related acts, if the relationship between the documents or acts is such that a person skilled in the relevant art in the patent area would treat them as a single source of that information;
>
> (c) prior art information contained in a single specification of the kind mentioned in subparagraph (b)(ii) of the definition of 'prior art base' in Schedule One.

An indigenous individual or group wishing to challenge a use of their genetic resources on the basis of lack of novelty would have the onus of showing that their own knowledge of that use formed part of the 'prior art base' for the purpose of s.7(1) *Patents Act*. In many cases this knowledge would not be contained in a document or documents made publicly available. It would be necessary, therefore, for them to show that their knowledge constituted prior art information made publicly available through doing an act or acts, under ss.7(1)(a) and (b). The crucial question would therefore be whether the dissemination of the traditional knowledge to authorised members of the clan or group constituted making the information 'publicly available'.

The *Patents Act* does not contain any guidance on the meaning of the term 'publicly available'. Cases interpreting the phrase have, however, said that making information publicly available means making it available to the public: *see Sunbeam Corp v Morphy-Richards (Australia) Pty Ltd* (1961) 35 ALJR 212. In this regard '(c)ommunication to even one person, in the absence of any accompanying restriction of confidentiality, may here constitute a "making available"' (*Griffin v Isaacs* (1938) 12 AOJP 739).

The question for an Aboriginal group resisting a patent application would therefore be whether members of their group are members of 'the public' for the purposes of s.7. It would appear that not every person in Australia is a member of 'the public' for this purpose. According to Bowen LJ in *Humpherson v Syer* [1887] 4 RPC 407, a 'member of the public was "a person to whom (this) communication had been made in a manner which left him free both in law and equity to do what he liked with the information"'. Thus, if the people to whom the information had been communicated were under an obligation to keep the information secret or restricted (as would normally be the case under Aboriginal law) then they would not be considered 'members of the public' and the information would not be considered to have been made 'publicly available'.

A further, even more difficult problem would confront an Aboriginal group seeking to resist a patent application on the basis of lack of novelty. This problem arises from the fact that not every piece of relevant 'prior art information' will defeat novelty. Only a disclosure of a use which is considered sufficiently close to the actual invention for which novelty is claimed will be considered to have 'anticipated' that invention. The test for 'anticipation' is generally known as the 'reverse infringement test'. This is:

> the same as that for infringement, and generally one can properly ask oneself whether the alleged anticipation would, if the patent were valid, constitute an infringement... Thus, for example, the fact that the invention as claimed contains variations from an earlier publication will not preclude anticipation being found unless those variations show ingenuity and inventiveness. [*Meyers Taylor Pty Ltd v Vicarr Industries Ltd* (1977) 137 CLR 228 at 235]

It is very likely that a patent specification contained in an application drafted by lawyers acting for a scientific or commercial interest would be considered by a court to contain 'variations' from an earlier, traditional use of that information. In general, at the very least, the patent applicant would have isolated the active chemical from the original genetic resource and would have given it a scientific name. Where variation occurs, the court would need to consider whether 'those variations show ingenuity and inventiveness'. The onus of proof would be on the Aboriginal traditional owners of the genetic resources to show that the variations did *not* have those qualities. In this regard, it must be remembered that on the authority of the *NRDC* case a 'new use for an old substance' is patentable. If, as in the smokebush example, researchers discover that a traditional Aboriginal medicine used for treating one ailment is also suitable for treating others, then this 'invention' will be patentable.

Inventive step

Under s.7(2) *Patents Act:*

> For the purposes of this Act, an invention is to be taken to involve an inventive step when compared to the prior art base unless the invention would have been obvious to a person skilled in the relevant art in the light of the common general knowledge as it existed in the patent area before the priority date of the relevant claim, whether that knowledge is considered separately or together with either of the kinds of information mentioned in subsection (3), each of which must be considered separately.

Once again, this test contains a presumption of inventiveness. A traditional Aboriginal owner of genetic resources would therefore be seeking to show that, because of the existence of the traditional knowledge, the scientific or commercial appropriation of their knowledge was 'obvious' or uninventive. This would need to be on the basis that, because of the traditional knowledge, the invention was 'obvious to a person skilled in the relevant art in the light of the common general knowledge as it existed in the patent area before the priority date'.

The legal question is therefore whether the relevant art is the field of traditional Aboriginal knowledge, or the field in which the invention is to be employed. Clearly, the answer under Australian patent law would be the 'art' in which the company or business is engaged. Traditional Aboriginal knowledge is unlikely to form part of the 'common general knowledge' of inventors or researchers in this field: see *Minnesota Mining and Manufacturing Co v Beiersdorf (Australia) Pty Ltd* (1980) 144 CLR 253. This would be true at least where the traditional Aboriginal knowledge had never been previously published in biological or anthropological journals. Where it had been previously published, the question would be whether that publication formed part of the 'common general knowledge' in the field. The Aboriginal people would be forced, somewhat paradoxically, to object to a later act of appropriation of their knowledge by reference to an earlier act.

Other avenues for protection of Aboriginal genetic resources

Copyright law

Some critics have suggested that copyright may be an appropriate means of 'protecting' DNA sequences, since these can arguably be expressed as 'literary works' representing their underlying meaning, just as computer programs can currently receive copyright protection. However, unlike computer programs, DNA sequences have no 'literary' qualities. A DNA sequence is 'not a literary creation, but a material, inanimate one, that can be literally described.[10] In addition, unlike a computer program a DNA sequence is a 'factual phenomenon', and under Australian law copyright protection does not exist for mere facts: see *Victoria Park Racing and Recreation Grounds Pty Ltd v Taylor* (1937) 58 CLR 479. Admittedly the *description* of the DNA sequence may be subject to copyright, but this would not prevent a person from copying the sequence itself.

Equally, design law also does not appear to offer a means of protecting genetic codes. Under s.4 of the *Designs Act 1906* (Cth) a 'design' must represent 'features of shape, configuration, pattern or ornamentation applicable to an article'. A set of letters representing a genetic configuration arguably represents a 'mould' of matter, not any 'aspect' of shape or configuration. The written 'description does not refer to any internal or external material appearance of the molecule.[11]

International agreements

Some international agreements or conventions appear designed to decrease, rather than increase, the control of indigenous people over their own genetic resources. The Rio Convention on Biological Diversity of 1992, for example, requires that countries 'agree to share in a fair and equitable way the results of research and development and the benefits arising from the results of commercial and other utilisation of genetic resources'.[12] Thus biodiversity prospectors could contract with governments to allow them to carry out research projects involving indigenous genetic resources or knowledge. Intellectual property rights could then be sought for 'innovations' arising from the prospecting. While the Convention does require 'fair and equitable' sharing of the benefits of exploitation of indigenous genetic resources, it does not specify what 'fair and equitable' means, and, more importantly, does not specify with whom the benefits are to be shared.

On the other hand, a number of international conventions, interpreted broadly, protect indigenous genetic resources or traditional knowledge. The International Convention on the Elimination of All Forms of Racial Discrimination contains articles protecting the right to own property, the right to inherit, and the right to equal participation in cultural activities. From an indigenous point of view genetic resources are a type of 'property', the communal ownership of which is protected under this Convention. The Draft Declaration on the Rights of Indigenous Peoples provides that such people have the right to full ownership, control and protection of their cultural and indigenous property, as well as the right to restitution of such property where it was taken without their free and informed consent. The right of 'peoples' to self-determination is affirmed in Part 1 of the ICCPR, although the question of whether indigenous people are 'peoples' at international law has been one of much debate. Article 27 of this Covenant protects the right of minorities to enjoy their own culture. The interpretation of this by the Human Rights Committee is arguably broad enough to encompass collective indigenous rights to land or intellectual property.[13]

As was suggested above, international law on this subject is arguably incorporated into Australian patent law by virtue of the 'contrary to law' exception in s.51(1)(a) *Patents Act 1990.*

Intellectual property rights and native title

The decision in *Mabo v Queensland*, provides the strongest recognition hitherto in Australian law that Aboriginal peoples' interests in land are to be protected in a manner consistent with Aboriginal law:

> Native title has its origin in and is given its content by the traditional laws acknowledged by and the traditional customs observed by the indigenous inhabitants of a territory...The nature and incidents of native title must be ascertained as a matter of fact by reference to those laws and customs.
> [Brennan J at 58]

This statement is reflected in the *Native Title Act 1993* (Cth), which defines native title rights and interests as 'the rights and interests ...possessed under the traditional laws acknowledged by, and the traditional customs observed, by the Aboriginal peoples or Torres Strait Islanders' (s.223(1)(a)). Section 211 *Native Title Act* also protects native title rights or interests where they consist of or include 'carrying on a particular class of activity'. Section 211(3) defines 'class of activity' to include a cultural and spiritual activity.

Arguably, therefore, the recognition that the nature of Aboriginal interests in land is to be determined with reference to Aboriginal laws and customs means that native title holders also hold intellectual property rights in their own genetic resources in a manner consistent with Aboriginal law and custom. Effectively, genetic resources and traditional knowledge are a 'nature or incident' of Aboriginal native title to land. Alternatively, native title to genetic resources may be considered to exist independently of native title to land, although its survival rests upon similar principles to those enunciated in the *Mabo* decision.

If this argument is accepted, several novel questions must be addressed. First, the issue would arise of whether Aboriginal groups which were unable to establish native title to land could establish native title to traditional knowledge or genetic resources. Native title would be of little use to traditional owners of knowledge relating to the smokebush plant,

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Conclusions

It is submitted that the correct approach is that taken by the Northern Territory Government and KARU. If the Aboriginal child placement policy and the reasons for its creation are not carefully considered by the Family Court, the Court may be in danger of promoting a 'Stolen Generation' of the 1990s.

The child placement principle and the Northern Territory Government's response to it, in particular by the establishment of an Aboriginal Child placement protocol with KARU and the operation of Part IX of the Northern Territory *Community Welfare Act 1993*, have gone a considerable way towards the implementation of Article 30 of the Convention on the Rights of the Child to which Australia is a signatory.

Article 30 states:

> In those states in which ethnic, religious or linguistic minorities or persons of indigenous origin exist, a child belonging to such a minority or who is indigenous shall not be denied the right, in community with other members of his or her own culture, to profess his or her own religion, or use his or her own language.

The child the subject of the Full Court proceedings may as a result of the Orders made by the trial judge in the first instance have been deprived of knowing his language, culture, values and traditions intimately. A non-Tiwi person who was not a biological parent of the child was granted full parental responsibility: the right to exclusively make all decisions about the child and his upbringing. These Orders were made by the judge even though numerous mothers of the Tiwi child expressed their willingness to the court to 'grow the child up'.

The Full Court of the Family Court recognised the inadequacy of the *Family Law Act* insofar as it fails to make provision for the Tiwi family when it acknowledged that:

> for formal legal purposes, the many non-biological mothers of a Tiwi child are invisible to the law. [at 33]

When determining residence issues involving Aboriginal children the Court must now, as a result of the Full Court decision, consider the specific ancestry and culture of an Indigenous child.

The Court held that:

> It appears to us that the legislative recognition of indigenous culture and heritage in section 68F may need to be complemented by provisions which take account of the kinship care systems of Aboriginal and Torres Strait Islander peoples. [at 34]

In the absence of such provisions, it is for judges to work out, as best they can, how to deal with these issues. Legislative amendments should be introduced to prevent the issues being dealt with differently by different judges 'working out as best they can, how to deal with these issues'.

The Aboriginal Child Placement Principle has been given legislative effect in jurisdictions throughout Australia where Indigenous Aboriginal and Torres Strait Islander peoples continue to live within their traditional communities speaking their own language and practising their cultures. The Principle is in place to ensure that the disastrous practices of the past which resulted in what is now referred to as the 'Stolen Generation' never occur again.

The recent legislative amendments to the *Family Law Act* resulting in the introduction of s.68F(2)(f) have now been confirmed by the Full Court of the Family Court as failing to give adequate recognition to the cultural and kinship interrelationship, and child rearing practices of Indigenous Australians.

The current law is clearly inadequate and the Aboriginal Child Placement Principle should be given legislative recognition with in the *Family Law Act.*

References

1. Pye, John, *The Tiwi Islands,* Colemans Printing, Darwin, 1997.
2. This information was conveyed to the writers during discussions with Dr G. Robinson, sociologist, NTU.
3. Dr G. Robinson.
4. Dr G. Robinson.

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for example, if such rights were held to have been extinguished along with native title to land. It is arguable, however, that extinguishment of native title to land does not necessarily lead to extinguishment of native title to genetic resources. The question of whether native title to genetic resources was extinguished in a particular case must depend upon whether a 'clear and plain intention' to extinguish existed. Even where such an intention existed in relation to land, it might not necessarily exist in relation to genetic resources or traditional knowledge.

If native title to land and genetic resources exists, the question would arise of how it is to co-exist with the general law. In many cases traditional knowledge would not be restricted to one Aboriginal community or group. Non-Aboriginal scientific or commercial interests might have to negotiate with a number of different groups, each perhaps with different entitlements under traditional law. The question would arise whether the law should differentiate, as patent law currently does, between an Aboriginal group which merely 'owns' a particular plant, and those which also know of the use to which that plant might be put. It is suggested, however, that difficulties of this kind are not unresolvable. To recognise Aboriginal rights to their genetic resources, and to tackle the negotiations which would necessarily follow, is preferable to the present course of almost unrestricted, and legally sanctioned, exploitation.

References

1. Christie, J., Biodiversity and Intellectual Property Rights: Implications for Indigenous Peoples', from 'Perspectives on Indigenous Peoples' Management of Environment Resources', papers delievered at Ecopolitics IX, Darwin, 1-3 September 1995, p.73.
2. Fourmile, H., 'Protecting Indigenous Intellectual Property Rights in Biodiversity' from 'Perspectives on Indigenous Peoples' Management of Environment Resources', above, p.39.
3. Fourmile, above, p.38.
4. Christie, above, p.66.
5. McKeough and Stewart, *Intellectual Property in Australia,* Butterworths, Sydney, 1991, p.219.
6. McKeough and Stewart, above, p.221.
7. Ricketson, S., *Intellectual Property Law: Cases, Materials and Commentary,* Butterworths, 1994, pp.638-9.
8. Christie, above, p.73.
9. Fourmile, above, p.39.
10. Karnell, Gunnar W.G., 'Protection of Results of Genetic Research by Copyright or Design Rights?', (1995) 8 *EIPR* 355 at 357.
11. Karnell, Gunnar W.G., above at 357.
12. Robertson, J. and Calhoun, D., 'Treaty on Biological Diversity: Ownership Issues and Access to Genetic Materials in New Zealand', (1995) *EIPR* 219, 222.
13. *Laws of Australia,* 'Aborigines and Torres Strait Islanders', Law Book Company, Chapter 1.7, International Law, 44-49.