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KNOWLEDGE AS PROPERTY: PROTECTION OF TRADITIONAL MAORI KNOWLEDGE OF INDIGENOUS PLANTS

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CONTENTS

ABSTRACT

This paper will explore the area of property rights regarding traditional Maori knowledge and indigenous flora. Firstly the paper will provide an overview of New Seelands intellectual property laws, examining the uncertain nature of the protection and focusing on the effects this has on traditional knowledge.

Perceptions of knowledge and cultural property underlie the definitions which have been adopted at national and international levels. The paper looks at underlying conventions and problems of definition in order to provide an outline of the issues involved.

Finally the paper will examine possible mechanisms to reflect the nature of Maori interests in indigenous flora and recognise and protect the value of traditional knowledge.

The text of this paper (excluding contents page, footnotes and bibliography) comprises approximately 13,500 words.

I INTRODUCTION

In spite of the assimilation of native cultures into western society, medicinal knowledge has been retained and passed from generation to generation. It is a largely undocumented knowledge base stored in the memories of elders, healers, midwives, farmers and fishers in the estimated 15000 cultures remaining on earth. It is this knowledge that drug companies are now seeking in their search for new remedies. The use of traditional knowledge as a valuable resource base for drugs is not a new concept. A number of contemporary commonly used drugs such as aspirin, originated from european folk medicine. Other drugs such as quinine were "discovered" after the colonisation of the "new world".[0] Currently, more than half of modern drugs used by western society are derived from plant extracts.[1]

To date, the prevailing attitude of western science, with its powerful analytical tools, has been that it has little to learn from traditional knowledge. However, some scientists are now realising that the world is losing a substantial information resource as indigenous people lose their culture and traditions. Accelerating demand for biogenetic materials, indigenous knowledge and tribal wisdom, all useful in the development of new pharmaceutical and agricultural products, seriously threatens indigenous plant resources as well as traditional knowledge and spiritual and cultural values. Traditional knowledge has been used inappropriately and expropriated. Many indigenous communities are developing mechanisms to protect and control plant resources and associated knowledge. Many are also seeking recognition of and compensation for the commercial value their knowledge has.

This paper will consider intangible property rights relating to traditional Maori knowledge and indigenous flora, rights commonly known in western legal tradition as intellectual property rights.[2] It will firstly focus

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0 King S R, The Source of Our Cures, Cultural Survival Quarterly, Summer 1991, page 19.

1 Snider R, Patents and Profits, New Internationalist, August 1993, page 20 .

2 Intellectual property law is that area of law which concerns the creation of legal property rights in relation to specific types of property including creative effort. The law deters people from copying or taking unfair advantage of the work or reputation of another. It also provides remedies should this happen.

on individual examples of intellectual property law and the effects the laws have on the protection of traditional Maori knowledge. Analysis of current legislation demonstrates how difficult it is to classify material, innovations, practices and indigenous knowledge into categories of intellectual property developed for use in industrialised countries. The paper suggests that the requirements of New Zealand intellectual property law are essentially foreign to the concerns and perspective's of Maori.

Secondly, the paper outlines the nature of traditional knowledge and modern definitions of knowledge as property. The paper questions the ability and desirability of existing intellectual property laws to become the main mechanism to address and redress matters as comprehensive as indigenous knowledge. Finally the paper examines mechanisms which could protect traditional knowledge from inappropriate use and expropriation and reflect the nature of Maori interests in indigenous flora.

II EFFECTS OF INTELLECTUAL PROPERTY LAW ON TRADITIONAL MAORI KNOWLEDGE

Intellectual property regimes deal with the allocation of property rights. Owners of rights are able to exercise a measure of control over their property. New Zealand intellectual property law is currently being reformed in part as a result of the signing of the General Agreement on Tariffs and Trade (GATT) agreement on the Trade Related Aspects of Intellectual Property Rights (TRIPS). These reforms have brought into focus concerns about the protection of traditional Maori knowledge and cultural property.

The legislation has difficulty protecting intellectual property that does not have an identifiable individual owner. Currently the legal status of tribes or groups not having the structure of an organisation is not recognised. There is no mechanism by which Maori tribes groups can claim ownership or control of customary knowledge. As a result, the value of traditional knowledge is not recognised or protected and individuals and communities often do not receive compensation for their ideas. The following analysis focuses on the nature of protection existing intellectual

property laws provide.

A. The Patents Act 1953

Patents are the most common form of property right used for the protection of ideas and products relating to plants. The patenting system enables a creator to receive a return on an invention. In New Zealand, the Patents Act 1953 provides a system of protection through registration for inventions. Under this Act, inventions are defined as: "any manner of new manufacture...and any new method of process of testing applicable to the improvement or control of manufacture..."[3]. In general terms, an invention must be novel and relate to a commercially useful product or process.

A patent may be granted in respect of a new invention capable of industrial application and gives a monopoly right for a limited period to make, use, exercise and sell an invention. The basic term of a patent is 16 years from the date on which the patent application is filed[4]. Because it gives its owner a monopoly, a patent is in the form of intellectual property par excellence. This very strong form of protection is reserved for inventions which satisfy comparatively rigorous standards such as "novelty", "inventiveness" and "utility".[5] Both internationally and in New Zealand, pharmaceutical companies successfully patent compounds extracted from indigenous flora based on traditional pharmaceutical knowledge of plants. Customary knowledge, until it has exchanged hands, is generally not regarded as an invention. Traditional healers and/or users, who show western researchers the value of a given medicinal species, do not receive patents. It is not clear at what point the knowledge changes, becomes an invention or novel and becomes patentable. In New Zealand there are thirteen varieties of indigenous plants which have been patented by overseas companies, including a species of seaweed which is a customary food source for coastal Maori.

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3 Patent Act 1953, section 2(1).

4 Above n.3, section 30.

5 Once accepted, the patent application is advertised in the Patent Office Journal. At this stage the patent specification is open for public inspection and there is an opposition period of three months. The grounds of opposition are wide, (section 21) and can include: Not an invention; Invention not novel; Invention is obvious; and Invention lacks utility; Above n.3, section 21

The owner of a patent is the person who is registered as the proprietor. With out an identifiable author a patent can not be issued.[6] Traditional Maori knowledge of medicinal or other properties of plants is however, not generally attributable to an individual 'author'. Often an individual simply can not be identified and often the basis of the knowledge is tribal preventing an individual from asserting a better right to it. At present tribes are not recognised as having legal status under the Patent Act, and Iwi for example are not able to lodge an application for a patent. Similarly, other statutes such as the Copyright Act 1982, do not recognise communally owned work or the legal personality of a tribe.

B. THE COPYRIGHT ACT 1982

Copyright is a right which subsists in specified types of works as provided for by the Copyright Act 1982. This Act provides that copyright shall subsist in every original, literary, dramatic, musical or artistic work.[7] The Act also extends protection to other subject matter including: every sound recording, cinematograph, television and sound broadcast and, every published edition of any literary, dramatic or musical work.[8] The author of the work, the person who creates it or makes the necessary arrangements for the work to be undertaken, is given the right to do certain things in relation to the work, including making a copy. A common example is where the owner of a copyright in a literary work permits a publishing company to print and sell the work in a book form in return for royalty payments. Certain specified activities such as copying an extract for the purposes of private study and criticism are allowed without the permission of the owner.[9] Anyone carrying out an act known to be restricted by copyright, without the permission of the owner, however, infringes copyright.

1 Originality

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6 Above n.3, section 7.
7 Copyright Act 1982, section 7.
8 Above n.7, Part II, Copyright in Other Subject Matter.
9 Above n.7, Part III, Fair Dealing With Copyright Material.

Section 7 of the Copyright Act states that a work must be "original" in order that a copyright exist. The World Intellectual Property Organisation (WIPO) Committee of Experts on Model Provisions for Legislation in the Field of Copyright[10] considered whether the law of copyright should apply to protect expressions of Folklore. It concluded that: "Copyright law... is not the right kind of law for protecting expressions of folklore."[11]. The nature and characteristics of folklore are very similar to traditional knowledge relating to plants. This knowledge comprises a part of folklore. The Committee went on to categorise expressions of folklore as the product of an: "impersonal, continuous and slow process of creative activity...exercised by continuous imitation".[12]

According to case law, originality requirements may not be so rigorous. For example, in *University of London Press v University Tutorial Press Ltd*[13], Peterson J stated that:

> "The Act does not require that the expression must be in an original or novel form, but that the work must not be copied from another work - that it should originate from the author."[14]

In *Ladbroke (Football) Ltd v William Hill (Football) Ltd*[15] Lord Pearce held that the word original requires: "...only that the work should not be copied but should originate from the author." .[16] A more recent case, *Hemingway v Mercer* [17] held that the design of a wall planner comprising 16 rectangles around the calendar was capable of protection as an original work. Accordingly it is permissible for any person to produce a work which is similar to a pre-existing work as long as the latter was not taken from the first but was produced independently and by their own efforts.

The majority of Maori knowledge of indigenous plants is part of an oral tradition, rarely in written form. Like folklore, ethnobiological knowledge

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10 Third Session, Geneva, 2-13 July 1990.
11 Above n.10, paragraph 55.
12 Above n.11.
13 (1916) 2 Ch 602.
14 Above n.13, page 608.
15 (1964) 1 Weekly Law Reports, 273.
16 Above n.15, page 291.
17 (1980) 1 NZIPR 280.

is not static but evolves, often by imitating works already in existence and developing them further. Despite the dynamic nature of ethnobiological knowledge, it is not considered to be new but ancient in origin. Much of the knowledge is in the public domain, is not considered to be unique and is thus deemed to lack "originality". If originality is concerned with the manner in which the work was created and is taken to require that the work in question originated from the author and that it was not copied from another work, even if a work is in the public domain, copyright could be found to subsist. To refuse to copyright some traditional Maori knowledge because it is often created by imitating works already in existence is inconsistent with the test for originality.

2 *Fixed Works, Exclusivity and Communal Ownership*

Traditional knowledge does not have a stable form which can be stored but evolves as part of an oral tradition as the need arises or discoveries are made. Copyright extends protection to works fixed in a material form but does not extend protection to intangible cultural property. It protects the expression of an idea, that is, its tangible form. It is arguable that Copyright is not concerned with the creation of an idea but whether it is manifested in a tangible or intangible form. Yet it is the creation of a work, now how it is manifest that the law of copyright should protect.

If the act were extended to intangible property including traditional knowledge, problems of proof of authorship and infringement would seem inevitable. If the fixed works limitation was maintained but in conjunction with a proviso that copyright could not subsist in unauthorised copies of an unfixed work, this would be similar to breach of confidence law. Breach of confidence is discussed in part E of this section.

An additional problem inherent in the Copyright legislation is the duration of exclusivity. Under the Copyright Act a creator is given protection for a limited period of time, the life of the author plus fifty years[18]. Such a time frame provides no incentive for the sharing of indigenous knowledge. Time frames for the protection of traditional Maori knowledge require longer periods, maybe even indefinite. Any new legislation or any amendments will need to consider an appropriate length

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18 Above n.7, section 8.

of the term of exclusivity. The Copyright Act also has a similar focus to the Patents Act in that it provides for individuals and corporations but does not recognise that a work may be communally owned or the legal personality of a tribe. The definition of a work of joint authorship under the Act is narrow. Section 2(1) defines a "work of joint authorship" as meaning a work produced by the collaboration of two or more authors, in which the contribution of each author is not separate from the contribution of the other. A person claiming authorship must have taken part in the express matter that is the subject of copyright. A critic or adviser is not considered to be a joint author[19].

The purpose of copyright is to provide a balance between competing socially desirable objectives, providing rewards and incentives to creators and providing for the interests of the community in access to information and the advancement of culture. In practice interests protected by the Copyright Act are primarily economic. They provide remuneration for creators rather than protection for the non-pecuniary interests of creators in their knowledge and do not provide for control of the subsequent use of knowledge.

C. Plant Variety Rights Act 1987

Under the Plant Variety Rights Act 1987 (PVR Act), a grant of Plant Variety Right for a new plant variety[20] gives the holder an exclusive right to produce for sale and to benefit from the commercialisation of the protected variety. The aim of plant variety rights is to encourage investment and effort into New Zealand plant breeding by allowing a breeder to control commercialisation of the variety and allowing New Zealanders access to overseas varieties which would not otherwise have been released into the country. The International Union for the Protection of New Varieties of Plants (UPOV) is a Geneva based organisation concerned with plant variety protection. Member states of UPOV, including New Zealand nationals, are entitled to apply for protection in all other member states.

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19 *Wiseman v George Wiedenfeld & Nicholson Ltd* (1985) FSR 525.

20 Pursuant to section 2 of the Act, variety means "a cultivar or cultivated variety of a plant to which this Act applies; and includes any clone, hybrid, stock, or line of such a plant; but does not include a botanical variety of such a plant".

A significant criticism of this legislation is that the granting of plant variety rights excludes everybody else from any proprietary interest in indigenous flora for which plant variety rights have been granted. This includes developing or researching any of these varieties. The Crown has unilaterally sold the majority of these exclusive rights to commercial firms, of which a majority are foreign based multinationals. Native plants species of 27 genera are currently the subject of research in France in a joint inter-governmental program. Several varieties of indigenous species of significance to Maori are now owned by foreign companies, including the Koromiko, the subject of a Waitangi Tribunal Claim.[21] The Claimants contend that they are excluded from developing or researching any of these species, or any other indigenous species for which "Plant Variety Rights" have been granted and that this is contrary to the Treaty of Waitangi.

Plant Variety Rights may only be granted in respect of varieties which are: new, distinct, uniform and stable.[22] Varieties developed by pharmaceutical companies or research institutions based on customary knowledge have received rights and benefited from the returns on them. In its natural form, traditional knowledge is not protected by plant variety rights as many indigenous plants and variants cultivated by Maori are not considered new and distinct. This criteria is very much based on western definitions of research and the capabilities of modern science.

Also, similar to the Patents and Copyright Acts, the period of exclusivity does not reflect the ongoing nature of Maori interests in indigenous flora. The duration of a plant variety right is either twenty or twenty three years[23]. Furthermore, groups are not eligible to apply for plant variety rights. As the current legislation does not recognise or provide for property which a group can own, a Maori tribe can not own property in its own right.

D. Breach of Confidence

Breach of Confidence is a common law remedy which extends protection to

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21 Waitangi Tribunal Concerning the Treaty of Waitangi Act 1975 and Wai 262, The Indigenous Flora and Fauna Claim.

22 Plant Variety Rights Act 1987, section 10.

23 Above n.22, section 14.

some unfixed works through an equitable action for breach of confidence. This right developed as a way of protecting confidential information. It prevents persons to whom information has been divulged in confidence from using that information, or the further disclosure of the information. The rational of the law of confidence is that it stops a person making a wrongful use of information beyond the purposes for which it was disclosed to them.

A successful action for breach of confidence requires proof of three elements: confidentiality; circumstances imparting an obligation of confidence; and, thirdly, an unauthorised use of the information.[24] In Australia, the Supreme Court of the Northern Territory has accepted that there could be tribal ownership in confidential ideas.[25] Despite this, to date this type of property right has not been used to a great extent.

E. Joint Ventures

During the 1930's there was a move to create trusts and incorporation's from multiple owned Maori land. There are now more than 600 trusts and incorporation's managing the land for economic development and production with assets in excess of $0.5 million. The trusts and incorporation's are called Maori Authorities and are the constituent members of the Federation of Maori Authorities (FoMA). It is the mission of FoMA to protect, to foster, to advance and to unify the interests of Maori Authorities in the true spirit of Tino Rangitiratanga implicit in the Treaty of Waitangi[26].

The Wakatu Incorporation originated from the New Zealand Company and developed successfully in forestry and crops. The Incorporation has served a wider purpose of breaking down barriers and misconceptions regarding Maori business people. Other operators are coming forward to form joint ventures. Joint ventures are a particularly suitable form of business relationship as often Maori possess knowledge of medicinal or

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24 *Coco v A N Clark (Engineers) Ltd* (1969) RPC 41 (Ch D).

25 *Foster v Mountford* (1977) 14 ALR 71.

26 Federation of Maori Authorities (INC), Ahu Whenua Trusts and Maori Incorporation's, page 2; Paper presented at the Native Title and the Trans Tasman Experience, Sydney, 24 February 1994.

cosmetic properties of indigenous plants but may not have the requisite capital to set up a company. Under a joint venture the knowledge and practices can remain secret and be protected. Such arrangements are increasingly common.

F. Conservation Areas

The process of creating and regulating national parks, reserves and other conservation areas, has excluded Iwi from access to, and control of many indigenous plant species. Current law and policy regarding the right to use indigenous flora is not entirely clear. For example, in 1993 Food and Crop Research Inc, University of Otago, extracted samples of plant material from conservation areas and retrospectively applied for a permit. The intention of the company was to carry out tests on plant extracts for the development of pharmaceutical products. If the genetic testing is successful, the chemical components could be artificially produced and the plant resource would not be adversely effected. The application by Crop Research raised the question whether seeds and cuttings can be taken from conservation areas, national parks and reserves by private individuals and organisations to raise into plants for general sale.

Under section 30(5) of the Conservation Act 1987, the Director-General may authorise the taking of plants (including indigenous species) for any purpose "directly necessary or desirable for conservation purposes". In some circumstances 'propagation and sale' could be construed as 'desirable for conservation purposes'.

In contrast, section 5 of the National Parks Act 1990 requires the written consent of the Minister of Conservation for the taking of any part of an indigenous plant in a national park. If a management plan does provide for the taking of indigenous plants for scientific research and education in line with the general policy, it is unlikely that the taking of seeds and cuttings for ultimate sale to the general public could be regarded as "educational", unless plants were propagated for the purpose of sale to an educational institution. For similar reasons, section 49 of the Reserves Act 1934 may not provide for permits to take plants from a reserve for the purpose of propagation and general sale.

It remains to be established however, whether the Minister can authorise the collection of plants for the purpose of scientific research which could result in commercial use. It seems that scientific research is viewed as a distinct purpose on its own and does not have to be linked to any conservation purpose. The fact that ultimately, should the research be successful, the intention is to use the information obtained to develop commercial products, does not mean that authorisation to take plants cannot in the first instance be given. In regard to the National Parks Act, there is no specific provision for taking for scientific purposes. It is difficult therefore to provide a black and white answer in relation to these parks. Following the reasoning outlined above, the Reserves Act pursuant to section 49, may allow the taking of flora for scientific research with the ultimate intention of the development of commercial products (subject to any conservation management strategy or plan).

As there is likely to be a move toward the formation of national and international contracts giving consideration to the sharing of the benefits of genetic resources, including those in conservation areas, the question of ownership of genetic resources and associated cultural and intellectual property rights moves centre stage. Given the trend of commercialisation of many research outcomes, both policy and legislation will need to be developed

G. Summary

Conceptually it is possible for groups to own property. A precedent which establishes that there can be group rights in property can be found in American-Indian law over a century ago.[27] Maori law does not place emphasis on individual ownership, often Maori cultural property will be collectively owned. It appears that legal protection for traditional Maori knowledge is inadequate and that the inability to recognise a collective property right is the main legal barrier to the protection of traditional knowledge.

Providing a collective property right would reduce fears of the knowledge being alienated or used inappropriately. It should also help overcome fears

27 *Journeycake v Cherokee Nation* (1893) Ct Cl 281.

of being locked out of development. Allowing an individual to hold copyright or patent as the case may be, overlooks the nature of Maori interests in indigenous flora. If a tribe is given the legal status of a juristic person under the act, individual creators who recognise that interest may assign their right directly to the tribe. Recognition of the legal status of tribes would give Maori tribes would also better serve the purpose of the legislation discussed by encouraging innovation and the sharing of knowledge.

III WAI 262: THE INDIGENOUS FLORA AND FAUNA CLAIM

A. Background

There is currently a claim before the Waitangi Tribunal for ownership of native plant and animal varieties (WAI 262).[28] The claim was lodged by Haana Murray (Ngati Kuri) and Dell Wihongi (Te Rarawa) and others in 1992. The claim canvases a variety of issues including control, management and development of knowledge relating to indigenous flora. In summary Wai 262 is;

> "A claim relating to the Protection, Control, Conservation, Management, Treatment, Propagation, Sale, Dispersal, Utilisation and Restriction on the Use of and Transmission of the Knowledge of New Zealand Indigenous Flora and Fauna and the Genetic Resource contained therein."[29]

Claim 262 poses a challenge to the Crown's definition of tino rangatiratanga.[30] To date this phrase has been used to the Crowns advantage, as subordinate to 'sovereign authority' or 'kawanatanga'. This view is challenged by the Claim which defines rangatiratanga as 'absolute sovereign authority';

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28 Above n.21.

29 Above n. 21, cover page.

30 B Biggs "Humpty Dumpty and the Treaty of Waitangi" in I Kawharu (ed) *Waitangi: Maori and Pakeha Perspectives of the Treaty of Waitangi* (Oxford University Press, Auckland, 1989) page 314 "The unqualified exercise of (their) chieftainship, highest chieftainship."

"3. That te tino rangatiratanga o te Iwi Maori was and is an absolute authority which incorporated and incorporates a right of development which permits the iwi to conserve, control, utilise and exercise proprietary and ownership rights over natural resources including indigenous flora and fauna."[31]

In 1993, the state of Queensland declared sovereignty over native animals by amending the state Conservation Act[32] to give the state outright ownership if of its fauna. The amendment also guarantees that the state shares in any profits made from exploiting them[33]. This move was partly in response to the Biodiversity Convention which urges countries to take control of their genetic resource and perhaps from a working party set up to examine assess to Australia's' biological resources. Some parties consider that this is unnecessary because once a country ratifies the Biodiversity Convention, the Convention assumes it automatically. Others argue that the state may not have the power to declare sovereignty over its biota.[34] Given the various opinions and understandings and the economic implications of a claim such as WAI 262, it is to be expected that the claim to rights of ownership to New Zealand indigenous flora and associated knowledge will come before the Tribunal.

B. The Claim

WAI 262 can be classified into four broad areas of complaint. These are outlined below. Detailed claims have also been made in regard to four specific species of flora and three species of fauna[35]. These illustrate more clearly the effects of actions listed by the claimants.

1. The Right to Development

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31 Above n. 21, page 1.

32 Fauna Conservation Act 1989, section 7.

33 Above n.32, Part XI, Royalties.

34 Dayton L, *Queensland Sets Out Rights Over Native Species*, New Scientist, 1 May 1993, page 7.

35 Detailed claims are made in regard to Kumara, Pohutukawa, Koromiko, Puawananga and various species of indigenous export timber. Claims are also made in respect of fauna including: Pupu Harakeke, Tuatara, and Kereru.

This refers to the effective ability of Iwi to develop and have access to changing technologies in the utilisation of plant genetic material and also to determine the associated intellectual property rights of such species. The Claim states that rangatiratanga incorporated and incorporates;

> "6. ...the right to participate in, benefit from and make decisions about the application of existing and future technological advances as they relate to the breeding, genetic manipulation and other processes relevant to the use of indigenous flora and fauna."[36]

A detailed claim involves Pohutukawa. The wood of the Pohutukawa has many uses including: carving, fern root beaters, mauls, paddles and spinning tops. The inner bark and nectar are used medicinally. Under the Plant Variety Rights Act , a variety of the Pohutukawa (Var. 195 "Carousel") has been granted a plant variety right. This vests in the applicant all proprietary rights in the "new" variety.

The Claimants therefore claim specifically that the granting of the plant variety right deprives te Iwi Maori of access to and control over the discovery, genetic development, and plant breeding technologies which are part of the right to development inherent in the exercise of te tino rangatiratanga. They further claim that this is contrary to the Treaty of Waitangi.

In many developing countries governments have tended to look at their indigenous cultures as an impediment to development and nationhood. In Papa New Guinea for instance, administrators sought to discourage tribalism by consolidating power and commerce away from the villages. At the end of the day, the fundamental requirement for development, is the control and management, in an autonomous way, of genetic material and associated knowledge.

2. *The Right To Conserve Preserve and Protect Species*

The Claimants assert that the Crown has taken over responsibility for conservation and preservation of many indigenous species without proper

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36 Above n 21, page 1.

consultation with Maori. The Claimants also assert that this protection is inadequate. The loss of ancient kumara varieties is cited as an example.[37]

3. *The Right To Use and Dispersal of the Species*

Here the claimants are objecting to Crown controlled trade, both internal and international, in native plants. International agreements such as GATT assume it is solely the responsibility of the state to commodify resources and ideas and to allow for free trade in these commodities. The Koromiko for example, is sold nationally and overseas and is under commercial evaluation in Europe.

4. *The Right To Cultural/Spiritual Concepts*

Crown protection policies regarding flora have restricted access to certain species and areas leading to alienation and denial of the cultural and spiritual values attached to the particular species and areas. This aspect of the claim refers to the ability of Iwi to give expression to the cultural and spiritual ethos associated with indigenous flora.

Research for Wai 262 will include an examination of the law and policy relating to the commercial exploitation of indigenous species and their genetic material, including issuing of proprietary rights and patents. It will examine past and present input into this area.[38] The research will also include a summary on the question of ownership of intellectual property and its application in this particular area.

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37 Above n 21, page 8; The Claimants state that in 1964 the Crown deliberately allowed these ancient varieties to be disposed of overseas thereby rendering them extinct in this country. The Claimants further state that the kumara was subject to Crown policies which failed to preserve those varieties brought to Aotearoa by Kupe and propagated by Maori for centauries thereafter.

38 Direction Commissioning Research, Waitangi Tribunal concerning the Treaty of Waitangi Act 1975 and Wai 262 The Indigenous Flora and Flora Claim, 14 June 1994.

IV VALUES AND PERCEPTIONS OF KNOWLEDGE

A. A Maori World View

The Maori world view is one which sees the world as an integrated whole and forms the basis for the holistic approach of Maori to the environment, including indigenous flora. Genealogy as a tool for transmitting knowledge pervaded Maori culture. Every class and species of thing had their own genealogy. This was a handy method of classifying different species of flora and fauna, the order in which processes occurred and the order in which activities or ceremonies should be conducted. According to typical classificatory genealogy, Tane Mahuta the God of the forest married several wives to produce different families of children. From one wife was born the healing trees , from another the building trees etc. The same technique was applied to herbs, root crops, berries, birds, soils, rocks and so on. Everything has its whakapapa or genealogy.

It is a basic tenant of Maoridom that the inner corpus of sacred knowledge was not to be shared with the 'Tutuaa' - the common herd, lest such knowledge be abused or misused. Some knowledge was considered to be tapu and there were sanctions (such as tapu) which ensured that it was protected, used appropriately and transmitted accurately. Sacred lore was not lightly taught and was shared only after a long apprenticeship. Knowledge in this context was a taonga[39] that was bestowed only on those who had demonstrated a gift or skill in this area and who had shown readiness to receive and respect such knowledge.

In addition to the transmission of a corpus of knowledge, techniques were used to test poisonous plants and trees; those that were good for healing and for food; ways by which highly poisonous berries such as the karaka berries could be rendered harmless and utilised as food. Knowledge was not static but consciously developed and continuously evolving.

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39 "All (their) treasured possessions, cultural heritage." Above n.30, page 314.

B. Knowledge According to Modern Definitions

The colonisation of Maori culture threatened the maintenance and the transmission of traditional ethnobiological knowledge. The process of colonisation by Europeans was a stripping away of mana. Research is a small but important part of the colonisation process because it is concerned with defining knowledge. Most research is carried out by pakeha people. The definition of research and what is to be considered valid research, has been prescripted by dominant group interests. European culture focusing on the natural universe conforms to strict mechanical laws that can be understood and are scientifically describable. It therefore requires scientific methodology to understand and describe cause and effect. The different ways in which knowledge is perceived is complicated by the power relations between the two parties. It is difficult for Maori forms of knowledge and learning to be accepted as legitimate.

The United Nations Sub-Commission on the Prevention of Discriminations Against Minorities in its *Study on the Cultural and Intellectual Property Rights of Indigenous Peoples* [40] stated:

> "Industrialised societies tend to distinguish between art and science, or between creative inspiration and logical analysis. Indigenous peoples regard all products of the human mind and heart as interrelated, and as flowing from the same source: the relationships between people and their land, their kinship with the other living creatures that share the land, and with the spirit world. Since the ultimate source of knowledge and creativity is the land itself, all of the art and science of a specific people are manifestations of the same underlying relationships, and can be considered as manifestations of the people as a whole"[41]

A central issue is what counts as *new* knowledge in a bicultural context. Knowledge nurtured and known in the Maori world as part of existing knowledge is not generally considered suitable for research or new knowledge for those who define what is new, worthy and valid. Viewed as

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40 (E/CN.4/Sub.2/1993/28) 28 July 1993.

41 Above n.40.

knowledge in the public domain, it has been commonly accepted practice amongst many research professionals to access traditional information for published works and the development of government (local and national) policy. Such works have been considered as 'public record'. The eventual work is published as an author's work and the financial proceeds are retained by the author. It has been argued that the proceeds could not be returned as the 'true owner' of the information could not be identified. In the absence of identification of the true owner, it can be asked what right another person has to assume ownership.[42]

Also of note is the *scientific* debate which continues within New Zealand, that is, whether customary knowledge is considered to be (traditional holistic) scientific knowledge. Generally the status of customary knowledge is undermined by a refusal to accept it as scientific, instead referring to a special "relationship"[43] or some similar term. Recently it has been stated that refusal to accept the validity of indigenous knowledge as being scientific is a racial not a philosophical question, and likewise, the notion of innovating traditional knowledge and protecting only the innovation is also racist as it does not recognise the value already present in the original form.[44]

Despite precautions in scientific methodology and greater cultural sensitivity, limitations still persist where submerged cultural considerations are overlooked, either because they are not always readily identifiable or because they are not acknowledged by researchers. It is easy to quantify and assess tangible effects on a given species or habitat but not to give effect to cultural and spiritual considerations associated with a given species or attributes of an area. While it is acknowledged that some researchers have been more successful than others in coming to terms with Maori expectations, research practices raise numerous professional ethical questions regarding the lack of attention given to the development of ethical procedures.

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42 Mead A, *Misappropriation of Indigenous Knowledge: The next Wave of Colonisation*, Otago Bioethics Report, Vol.3, N.1, February 1994.

43 Resource Management Act 1991, section 6(e).

44 Mead A, *Indigenous Rights to land and Biological Resources*, page 4, Paper presented to: Biodiversity: Impacts on Government, Business and the Economy Conference, Organised by the Institute for International Research and the New Zealand Department of Conservation 1994.

Ideally, operating procedures should clarify: the methodology used to obtain free and informed consent; ownership of samples once collected; control of samples once collected; economic beneficiaries should samples be commercially exploited; and, rights of indigenous communities to research and product results. The Mataatua Declaration[45] is an internationally leading document in this respect. It affirms that indigenous peoples are the rightful owners of their cultural and intellectual property and that the first beneficiaries must be their direct descendants. The Declaration requires hapu and iwi, in the first instance, to develop codes of ethical procedures to be observed by "external users".[46] Under these procedures Iwi could make and implement policies and practices which recognise and protect traditional knowledge. Government must ensure that policies and legislation will contribute to such a process.

V CULTURAL AND INTELLECTUAL PROPERTY DEFINED

A. Is there a Difference?

In this paper I refer to 'cultural and intellectual' property. Often the terms are not used together as legal regimes refer to different types of property. This is particularly so in academic contexts where the term cultural property is used when referring to tangible property such as artifacts. Cultural property laws impinge on the freedom of an individual or individuals to use that property. Intellectual property laws however, create property rights in certain types of property. While there may be some merit in drawing this distinction, for tangata whenua these two are inextricably linked and any separation is perceived as false. In practice Maori do not draw such a distinction between culture and intellect. A similar conclusion was reached by the United Nations Sub-Commission on Prevention of Discriminations Against Minorities[47] which concluded:

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45 First International Conference on the Cultural and Intellectual Property Rights of Indigenous Peoples was held in Whakatane, 12-18 June 1993 resulting in the Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples.

46 The Mataatua Declaration affirms are rightful owners and definers of their cultural and intellectual property and that the first beneficiaries must be their direct descendants. All others including hapu and Iwi as well as agencies at national, regional and international level are "External users".

47 Above n.40.

"...the distinction between cultural and intellectual property is, from indigenous peoples viewpoint an artificial one and not very useful".

The separation has been likened to the distinction sometimes drawn between art and craft, one being a supposedly 'higher' form. In this case a distinction is seen as elevating western science. International Conventions are now beginning to reflect the perception of tangata whenua as should any new legislation in this particular area.

B. Intellectual Property Defined

1. Problems of Definition

A 1992 report of the United Nations Economic and Social Council stated that intellectual property of indigenous peoples is divided into three categories; crafts, and folklore, biodiversity and indigenous knowledge.[48] In 1993, the Mataatua Declaration asserted that it was the right of indigenous peoples to define for themselves their own cultural and intellectual property. Te Puni Kokiri, the Ministry of Maori Development, has recently initiated a research program examining the nature of Maori cultural and intellectual property, attempting to resolve some of the issues surrounding the definition of what exactly constitutes traditional Maori knowledge. Te Puni Kokiri has identified a need to examine the characteristics of Maori cultural and intellectual property themselves with a view to test the compatibility of the UNESCO categorisation[49].

There is no standard definition of the term 'intellectual property'. In general, the term is used to describe the laws relating to copyright, patents, designs and certain analogous common law and equitable rights such as passing off and trade secrets. Intellectual property is property in a legal sense, it is a form of intangible personal property as are cheques and shares. Most forms of intellectual property are 'choses in action', rights which are enforceable by legal action as opposed to possessory rights. Because of the nature of the rights it is usual to speak of infringement rather than breach.

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48 Report of the United Nations Economic and Social Council, 6 July 1992.

49 Discussions with Te Puni Kokiri officials.

Breach is suggestive of pre-existing contractual or tortious duty owed by and to specific persons.

2. *Legal Characteristics*

Intellectual property laws seek to regulate and protect not the physical form something takes, such as a book, but the idea or intellectual endeavour contained within it. In this sense intellectual property is perhaps the most basic form of property because a person uses nothing to produce it other than their mind. A central aim of intellectual property regimes is to balance the often competing interests of the creator and the general public by providing incentives and rewards for the development of ideas and knowledge, whilst ensuring the interest of the general public in the exchange of information and ideas is satisfied. Exchange of information is also crucial to innovation and economic development.

Protection is generally in the form of the creation of a monopoly type situation for a specified period of time. During this time the owner of rights receives the return on his/her idea and can restrain others from doing certain things whilst exploiting the right for themselves. The owner has a form of property which s/he can use as s/he likes. Subject to some constraints, a rights holder and can take legal action to deter would be trespassers or obtain damages against those who have trespassed just as the owner of real property can do.

Intellectual property rights encompass rights relating to the preservation, use, development and control of indigenous knowledge bases in fields such as medicinal plants, agricultural biodiversity and environmental management. In New Zealand the same criteria for protection is applied for all individuals, companies and institutions. Tribal groups are not recognised as having legal status.

C. Definitions of Cultural Property

1. *Taonga*

Using Marsden's[50] analysis, cultural property or things of value corresponds to the term taonga Maori.

> "There is no specific term in Maori for the word value. With his holistic view of the world the Maori idea of value is incorporated into the inclusive holistic term "taonga" - a treasure or something precious...The object or end valued may be tangible or intangible, material or spiritual." [51]

The term taonga relates to both physical and metaphysical. Iwi customary knowledge forms the major component of what Maori describe as the 'mauri' or life force of cultural and intellectual property. Misappropriation of physical indigenous taonga therefore, is wholly related to misappropriation of indigenous knowledge.[52] One of the difficulties of current intellectual property laws is the inseparability for Maori of the physical and metaphysical, the tangible and the intangible aspects of cultural and intellectual property. Article II of the Treaty of Waitangi (the Treaty) guaranteed to the chiefs and tribes of New Zealand they would retain tino rangatiratanga of their taonga, either collectively or individually. Under the Treaty, Maori were subject to all the rights and privileges of British citizens. As a consequence, Maori law was over-ridden by the imposition of the British legal system. The new laws did not provide protection of Maori traditional knowledge.

2. *Critique of Traditional Definitions*

One of the fundamental problems with the protection of indigenous peoples cultural and intellectual property has been the definition of what is to be protected. An understanding of what it is we are trying to protect is

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50 Marsden prepared a comprehensive paper on Maori value systems for the Resource Management Law Reform, Maori Marsden, 1988; *The Natural World and Natural Resources: Maori Value Systems and Perspectives.* RMLR Working Paper No 29.

51 Above n.50, page 29.

52 Misappropriation of a natural resource prevents the parallel metaphysical resource from being utilised. This is why in defending iwi claims to the Waitangi Tribunal concerning sacred sites, confiscated lands and polluted waters, iwi consistently raise the 'mauri factor', which is essentially the metaphysical connection between customary knowledge of environmental and cultural wellbeing with a physical tangible resource. A Mead, *Delivering Goods and Services to the Public without Compromising the Cultural and Intellectual Property of Indigenous Peoples.*

essential in order to understand threats to the property and to develop effective mechanisms to protect it. To date, definitions of cultural property have been limited to fixed or tangible works and distinguished from intellectual property law. Typically cultural property is defined in one of three ways : the 'enumeration' method has been adopted in the Antiquities Act 1975. This model lists items. When an item appears among a list, it is an 'antiquity'.[53]

The second method, the 'classification' method, is used in the Historic Places Act 1980 to classify New Zealand buildings. Using this approach nothing is protected until a decision to this effect is taken by a designated person.[54] The third method is the 'categorisation' method. This uses a very general description to establish what is included within the concept of cultural property. This method allows a general category of things to be protected.

3. *International Definitions*

The 1964 UNESCO Recommendation on the Means of Prohibiting and Preventing the Illicit Export, Import and Transfer of Ownership of Cultural Property[55] defines cultural property as:

> "the movable and immovable property of great importance to the heritage of a country, such as works of art and architecture, manuscripts, books and other property of artistic, historic or archaeological interest."[56]

The 1970 Convention[57] on the same subject takes the important step of acknowledging that any definition of cultural property should be defined by the culture itself in order to take into account the specific needs, concerns and values of the culture. It states that signatory countries may designate

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53 Antiquities Act 1975, section 2. This defines an antiquity is "any meteorite or part of a meteorite" or "any bones, feathers or other parts; or the eggs of a moa."

54 Historic Places Act 1980, section 35.

55 Adopted by General Council in its thirteenth session, Paris, 19 November 1964.

56 Above n 55, Article 1.

57 The Protection of Movable Cultural Property: A compendium of Legislative Texts (Vol 1) (Paris, UNESCO, 1984) 358.

what is their cultural property for themselves.[58] This Convention began the shift in debate from focusing on who has the right to establish protective mechanisms for intellectual property rights of indigenous people and what those mechanisms should be, to who has the right to define the property itself.

In June 1993 the nine Iwi of Mataatua, the Bay of Plenty region, lead by Ngati Awa, convened the worlds first International Convention on Cultural and Intellectual Property Rights of Indigenous Peoples. The week long conference focused on the commodification of indigenous cultural and intellectual property throughout the public and private sectors. An international declaration was subsequently developed, the Mataatua Declaration. The Mataatua Declaration emphasises the importance of the role or responsibility of indigenous people to define cultural and intellectual property. It does not make an assumption that it is the sole responsibility of the state. Given that ultimately any definition must to some extent be subjective this becomes an important distinction. The Declaration makes the following recommendations to states, national and international agencies:

> "In the development of policies and practices, states, international and national must:
>
> 2.1 Recognise that indigenous people are the customary guardians of their customary knowledge and have the right to protect and control the dissemination of that knowledge.
>
> 2.4 Accept that the cultural and intellectual property rights of indigenous peoples are vested with those who created them"[59].

Any subsequent conventions, codes of ethics or legislation and policy should adopt this approach.

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58 Above n.57, "For the purpose of this Convention, the term "cultural property" means property which on religious or secular grounds, is specifically designated by each state as being of importance...".

59 Above n.45, 2.Recommendations to States, National and International Agencies, page 4-5.

VI TRADITIONAL KNOWLEDGE AND ASSOCIATED ISSUES

A. Value of Traditional ethnobiological Knowledge

It is now widely recognised that ethnobiological knowledge of indigenous people can be of great use in focusing the search for new medicines and chemicals. Over time indigenous peoples have explored the medicinal and various other properties of plants and developed an understanding of the basic ecology of flora and fauna. Local communities have identified appropriate species, their locations, the time for collection, parts to use and methods of preparing, storing and use. Researchers gain insight into not only the identity of the plant but also the specific part of the plant that contains the substance, the method of preparation and the symptoms the substance will alleviate.

While there is a growing appreciation of this knowledge, particularly with respect to medicine, there is asymmetry between the recognition and value given to information, innovation and resources contained in developing countries and information, innovation and resources found in industrialised countries. The contributions of public and private sector institutions in industrialised countries tend to be considered patentable innovation while the roles of indigenous and local communities in developing or conserving land or traditional healers' knowledge of medicinal plants are given no value. Most companies that have used indigenous knowledge, or genetic resources from other countries have not provided compensation to the countries of origin nor to the local communities that helped identify promising new compounds. Practices and biological materials have been treated as free goods. While there is no doubt that value may be added by the contributions of scientists, what needs to change is the recognition of the value already in existence when the material is collected.

In the past decade researchers have realised that they have much to gain from traditional agriculture and healers. However there has not been sufficient time to devise guidelines for the equitable exchange of information. In New Zealand for example, from an era of being ignored and considered primitive, Maori are now catapulted into commodifying knowledge at local, national and international levels. The middle zone,

which is the partnerships between research institutes, companies and the local indigenous communities, has not had time to develop. At present in New Zealand negotiations are carried out between Iwi and multinationals such as the Body Shop on an adhoc basis and with out the benefit of guidelines.

B. Ethnobotany based Discovery Processes

Most Ethnobotanists active in drug research are well aware that healers provide significant intellectual guidance and believe they are entitled to the same intellectual property rights as other investigators. A small but growing part of the international pharmaceutical community have adopted 'Ethnobotany-based discovery processes'. Sharman Pharmaceutical's is one such company. In return for knowledge and biological resources, the company distributes some of the royalties from the commercialisation of the compounds to organisations in the host countries. However most of the benefits are indirect.[60]

Researchers differ in the criteria they use to select the societies they study. Cox[61], a leading ethnobotanist, has developed three main criteria. He focuses on those communities living a floristically diverse region (such as a tropical rainforest); secondly, communities that have remained in a region for many generations so they have had time to explore and experiment (such as aboriginal peoples populating Australia); and, thirdly, communities possessing a tradition in which healers transmit their plant knowledge from generation to generation, usually through apprentices. Having located 'healers', Cox will explain the mission to them and to tribal chiefs. This process is considered to be analogous to informed consent in clinical settings.

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60 The company created a nonprofit organisation, called the Healing Forest Conservancy, which focuses on enabling indigenous peoples to participate in and share responsibility for development and management of natural resources especially those plants traditionally used for medicinal purposes. Sharman also provides health care to the indigenous peoples during their scientific expeditions and distributes an unspecified proportion of profits from the commercialisation of plant compounds to organisations in the countries that specialise in plant collecting.

61 Cox is dean of general education and honours and professor of botany at Brigham Young University. He also serves as an adviser to a variety of governmental, academic and industrial research groups and foundations.

Now that the ethnobotanical inquiry is expanding, formal guidelines are being devised. With a growing number of companies bio-prospecting, such arrangements become increasingly important. Such guidelines could form the basis of international convention and national legislation, replacing existing mechanisms such as patent. Similar guidelines could be considered in New Zealand as part of the process of implementing the Mataatua Declaration.

C. International Obligations

1 GATT TRIPs

The Uruguay round of negotiations, which concluded on 15 April 1994 in Morocco under the rules of the General Agreement on Tariffs and Trade (GATT) have been a focus in intellectual property discussions since talks began in 1986. For the first time in GATT, intellectual property is seen as a trade topic. Trade-Related Aspects of Intellectual Property (TRIPS) is part of the 26,000 page GATT agreement. With the adoption of the latest agreement, signatory states are obliged to adopt a patent system for micro organisms and to establish either patents or some sui generis form of intellectual property for plants.

During the years 1988 to 1991, a series of informal international meetings took place under the title of the Keystone International Dialogue on Plant Genetic Resources. The Keystone initiative fell short of addressing concerns relating to intellectual property over biomaterials. In 1992 this notion was taken up and a group calling themselves the "Crucible Group" formed to debate the intellectual property agenda. The Group produced a nonconsensus document embodying wide differences of opinion.[62] The Group has intensely differing views on the place of intellectual property in trade. In regard to GATT-TRIPS, issues the group agree upon include:

> a) no country should be coerced into adopting an intellectual property system for living materials, that there are valid ethical and practical reasons why each country should be allowed to reach its

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62 Crucible Group, *People, Plants and Patents: The Impact of Intellectual Property on Trade, Plant, Biodiversity, and Rural Society*, International Development Centre, 1994.

own position[63];

b) secondly, existing conventions for intellectual property favour those with access to economic and legal resources and can work unfairly against those who do not have such access;

c) thirdly, that current intellectual property conventions do not acknowledge the intellectual contributions of informal contributors. The Group consider that this omission is one of the reasons why the intellectual "stock" of these peoples and of developing countries is undervalued[64].

Following these discussions, the Group made a 'recommendation' to the effect that, sovereign states should not be required to adopt systems of intellectual property that may risk the well being of the peoples or be required to adopt unrealistic time frames to enact intellectual property provisions related to international trade agreements[65].

2. *Initiatives of Indigenous People and the United Nations*

At an international level, Agenda 21 of the 1992 United Nations Conference on Environment and Development (UNCED), popularly known as the Earth Summit, makes specific mention of the intellectual property rights of indigenous people. Chapter 15 provides a moral framework for signatory countries. Under this agreement signatory countries agreed to;

"recognise and foster the traditional methods and the knowledge of indigenous people and their communities....and ensure the opportunity for the participation of those groups in the economic and commercial benefits derived from the use of such traditional methods and knowledge..."

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63 A country may choose to adopt an existing mechanism for protection, create a new mechanism better suited to national interests, or encourage innovation by other means altogether.

64 Above n.61, pages 94-99.

65 Above n. 61, Recommendation 14.

In partnership with indigenous people and their communities, governments, and where appropriate inter-governmental organisations, should aim at fulfilling the following objectives:

> "Adopt or strengthen appropriate policies and/or legal instruments that will protect indigenous intellectual and cultural property and the right to preserve customary and administrative systems and practices."[66]

The Convention on Biodiversity[67] takes the moral framework a stage further and provides a legally binding framework. From merely affirming that there is value in indigenous knowledge, it requires countries to,

> "respect, preserve and maintain knowledge, innovations and indigenous practices of indigenous and local communities... and promote their 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 utilisation of such knowledge, innovations and practices;"[68]

Through the annual sessions of the United Nations Working Group on Indigenous Populations (WGIP), indigenous people have established a forum for information exchange and discussion of issues of national as well as international concern. The WGIP is tasked with developing a draft Universal Declaration on the Rights of Indigenous People. Article 29, which is of broad application , states:

> "Indigenous Peoples are entitle to the recognition of the full ownership, control and protection of their cultural and intellectual property. They have the right to special measures to control, develop and protect their sciences, technologies and cultural manifestations, including human and genetic resources, seeds, medicines , knowledge of the properties of indigenous flora and fauna, oral traditions... and performing arts."

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66 UNCED 1992, Agenda 21, (26.4(b)).

67 The Convention on Biodiversity, Gland, Switzerland, 1992.

68 Above n. 66, Part IV.B.

The Mataatua Declaration is one of the first international indicators identified by indigenous peoples of the ethics and protocols which should be considered by any individuals or organisations accessing indigenous cultural or intellectual property. Reading the Mataatua Declaration is essential for any researcher. Through the Mataatua Declaration and other agreements, minimum guidelines are being developed which researchers and policy makers should observe. Some of these include:

a) Developing a Code of Ethics for Collecting and Using Indigenous Information.

b) Ensuring the maximum standards of Free and Informed Consent are obtained from indigenous informants.

c) Sharing of any financial benefits.

3. *Biodiversity Convention 1992*

The term biodiversity is generally used to refer to the variability and variety of all species of plants and animals, their genetic material, and the ecosystems of which they are a part. Efforts to conserve genetic diversity at a local level have largely been overlooked. With the growing concern of the ability of genebanks to conserve adequately the variation needed, there is now a heightened awareness that indigenous communities are the primary managers of germplasm. The intergovernmental community has begun to provide appropriate incentive systems to enable them to continue to develop.

Until recently, nations freely exchanged plant genetic resources and drew freely on ethnobiological knowledge of local communities. The growth of technologies has raised the commercial value of genetic resources. The loss of biodiversity has also contributed to a narrowing of the free exchange principle. Over the years there has been a movement, culminating in the Biodiversity Convention, away from free access or common heritage to free trade.

The pharmaceutical community has come to realise that 7% of the earths surface hosts between half and three quarter of the worlds biological

diversity. Virtually none of this resides in Europe or North America. Biodiversity prospecting (or 'mining') has become a big business, with virtually all prospectors from industrialised countries and mining sites in developing countries. Recently Merck signed a US $1 million with Costa Rica for prospecting rights to one third of the countries land area.

The Biodiversity Convention is a global instrument committing signatory nations to work toward a common cause of preserving Biodiversity. The preamble of the Biodiversity Convention also reflects the desire of developing countries to protect their resources, tangible and intangible, from exploitation. Accordingly, the Convention supports national sovereignty and the rights of nations to benefit from their bioresources. It reflects the view that states have sovereign rights over their plant genetic resources and that resources are available at the discretion of the developers. The Convention adheres to the philosophy that the resources of one country can be exploited by another.

Maori Congress[69] takes the view that the Crown has assumed an exclusive right to represent at an international level the two Treaty of Waitangi partners. In a country such as New Zealand, where ownership and management of natural resources rests with two Treaty partners, the Congress do not find it acceptable for one partner to act to enter into an international agreement which could allow for the countries natural resources to be commercially exploited by outsiders with out the consultation with the Iwi Treaty partners. The situation of Maori in New Zealand is analogous to that of indigenous peoples in other countries.

The Convention obligates each party, subject to its national legislation, to "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities where these involve Biodiversity".[70] While there is increasing recognition of the need to compensate indigenous people for their indigenous knowledge, this has to a great extent arisen as an offshoot of the need to address other issues. The Biodiversity Convention is an example. Included in the Convention are articles addressing compensation for patents and intellectual property

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69 The Maori Congress was established in 1990 and comprises 43 member Iwi. There are 15 Congress Committees tasked with developing specific issues for consideration by Iwi at regular Congress executive meetings.

70 Above n.66, Preamble

developed from ethnobiological resources.[71] The compensation is however, geared toward the preservation of the biological habitat, rather than direct compensation to the indigenous peoples for the use of their knowledge.

The extent to which this Convention or other conventions can protect the rights of people who have already discovered the uses of many plants is limited. Many national systems of intellectual property rights, such as patents, are not sufficient to ensure the flow back of benefits to indigenous and local communities and do not reflect their concerns. It is unclear what mechanism would need to be in place so that benefits were returned to the community and even if a system were developed most indigenous communities lack the financial, technical and legal means to claim such rights or ensure their effective implementation.

4. *Folklore*

Folklore like indigenous knowledge is a living phenomena which evolves over time. It is dynamic and is transmitted orally. Expressions of folklore whether manifested in physical or intellectual form are group orientated and change according to a groups needs. Folklore is open to the same risks as other 'intellectual' works.

Since 1973 UNESCO and WIPO have carried out studies concerning the protection of folklore concluding that there is an urgent need to identify and preserve folklore before it disappears altogether and also to protect it from misrepresentation and exploitation. In 1984 WIPO developed *Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and Other Prejudicial Actions*. The impetus is the abuses of traditions provoked by development of technology. The provisions recognise that returns from exploitation is not returned to communities responsible for developing and maintaining folklore. Despite this, model does not discuss the concept of ownership and concludes that an international treaty on folklore would be premature.

Sui generis model provisions seek to maintain a balance between

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71 Above n.66, Part IV.B.

protection and encouragement of future development. These allow the use of folklore with gainful intent and outside the traditional context subject to authorisation, and if appropriate, payment of a licence fee to the group concerned or a 'folklore authority'. Exceptions enable some beneficial use, for example, in education. These laws allow for profit making by indigenous people through the licensing provisions. Alternative licenses are discussed below in section VII.

VII MECHANISMS FOR PROTECTION OF TRADITIONAL KNOWLEDGE

In growing recognition of the importance of protecting knowledge, indigenous peoples are looking for alternative ways of protecting the transfer of knowledge and the sharing of financial rewards from that transfer. Sui generis legislation is "a unique form of intellectual property protection, especially designed to meet certain criteria and needs".[72] The term sui generis offers a wide variety of policy choices, because it could, presumably, include any arrangement for plant varieties that offer recognition to innovators - with or without monetary benefit or monopoly control.

A. Keystone Suggestions

One conclusion arising from the Keystone International Dialogue on Plant Genetic Resources (1988-91) was the acknowledgment that if GATT-TRIPS were adopted, the only intellectual property in the world that would not be protected would be that of indigenous communities. The report identified a fundamental inequity in the current intellectual property system. To deal with this inequity the Group suggested three (possibly complementary) choices: to develop a sui generis system of 'protection' that will meet the letter if not the spirit of GATT proposals; to propose a mechanism that will protect the intellectual achievements of indigenous peoples and rural communities within the intellectual property system; or to propose an alternative sui generis system of intellectual recognition that may be

72 Above n.61, page 110.

outside of intellectual property protection. These options are examined below.

1. *Alternative licence Approaches - Meeting the letter*

Compulsory licensing or related forms of automatic licensing have been hotly debated throughout the history of international intellectual property conventions. Under an automatic licensing system, national legislation requires that inventors make their invention available to all those prepared to pay. The approach maintains the right of a patent holder to charge royalties for the use of the invention. Under such a system society is assured of access to new discoveries. The global dispute over these approaches turns on ones view of the purpose of intellectual property protection and on societies comfort with private monopolies. In New Zealand definitions of 'invention' have not proved satisfactory in that they do not recognise the value inherent in indigenous ethnobotanical knowledge. A second obvious inequity of this system is its reliance on the ability to pay for a license.

2. *Protection within the Intellectual Property Framework*

a) *Community Property Rights*

Even if indigenous people could successfully apply for patents, plant variety rights or both covering medicinal plants and crop varieties under existing or modified intellectual property systems, there would only be short-term economic benefits in most situations most of the time. Some members of the Crucible Group consider that it is worthwhile instituting community intellectual property rights. The Group consider that community intellectual property rights with public defenders and review mechanisms could bring some support. This is similar to the legal status of groups and Maori tribal units in New Zealand. The Government of India adopted Plant Breeders Rights and Farmer's Rights simultaneously . This may amount to a similar form of community protection. A further suggestion of the Crucible Group was an internationally recognised office for a "Public Defender" to intervene in the potentially unequal relationships that could arise between communities and governments on

the one hand and countries and international corporations on the other. To achieve this, the implementation of community property rights would require much thought and careful crafting in order to recognise each parties interests and in particular any conflicting interests within a country.

Some members of the Crucible Group regard these suggestions as a natural extension of the current work of the intellectual property system. Others, although sympathetic to the need to encourage innovation at the community level, consider the proposal to be a large administrative burden, especially in the South, and a bureaucratic constraint.

b) Patent law Applied to Ethnobiological Knowledge

As pharmaceutical companies use patents to protect the substances they have isolated using the knowledge of indigenous people, it is logical to investigate the patent system as a means of protection for currently obtained ethnobiological knowledge and for the future transfer of this knowledge.

When indigenous people reduce a biological product to a useful form, current law still considers it a product of nature. When a company takes the next step of isolating the active substance in the biological product, it ceases to be a product of nature and becomes novel. Researchers only need take a small step to make a substance useful in their society, the companies who isolate or synthesise these compounds receive patents, yet the use often remains the same in both societies. As has been previously identified, this practice is inconsistent with not rewarding what is already known. In addition to usage, the form of a product must be considered. Customary knowledge is generally woven into many aspects of a culture but is not identified as a clear process which shows knowledge as the process of isolating, extracting or purifying the active substance. Knowledge is developed to the extent that it is valuable in a given society. Patent law effectively requires more specificity of knowledge than is needed by the local community. The application of this standard means that indigenous peoples are penalised for not reducing a substance to a form useable by western society.

In summary, patent protection is not currently an effective means of

protecting or compensating the transfer of knowledge from indigenous people. Nor does it provide an avenue for obtaining compensation for knowledge which may be transferred in the future. Applying the current interpretations of patent law there is little reason for using patents as a basis for protection ethnobiological knowledge of indigenous peoples. Granting ownership rights to indigenous people would not preclude western companies from sharing in the profits. The companies would still be able to purchase the rights to use, develop and market the products that are found through indigenous knowledge.

3. *Alternative Mechanisms- Sui generis forms of cultural and Intellectual Property Protection*

a) GATT TRIPs

Provision is made in TRIPS for signatory states to adopt sui generis forms of Intellectual Property protection covering plant varieties. Many policy makers outside the intellectual property field are not aware that intellectual property systems include a number of options that do not imply exclusive monopoly control over inventions. Among these are Inventors' Certificates that can discard financial compensation altogether in favour of nonmonetary awards and nonexclusive licensing arrangements. There is opportunity for innovation in this field particularly for developing countries.

One such possibility for development is the 1985 WIPO-UNESCO Model Provisions for the Protection of Folklore, which has the benefit of being accepted by both WIPO and UNESCO (1985). The provisions have three unique elements:

a) "communities" rather than identified individuals can be the legally registered innovators and can either act on their own behalf or be legally represented by the state.

b) Community innovations are not necessarily fixed and finalised but can be ongoing or evolutionary and still be protected by intellectual property law.

c) Beyond standard patent or even copyright provisions, communities retain exclusive control over their folklore innovations for as long as the community continues to innovate.

It must be noted that the model provisions are not directly applicable to all community innovation, scientific inventions are specifically excluded. Standard intellectual property law in many countries has expressly or by implication excluded protection for plants and pharmaceutical's. The significant point of the model is that the provisions acknowledge the concept of ongoing indigenous community innovation. It is not clear whether this offers an effective means of safeguard as little information is available about how it works in practice.

b) Contract Protection

Contract protection is an increasingly popular mechanism for the protection of property rights and is being sought by both local communities and pharmaceutical companies. When local people seek contract protection they emphasise compensation for knowledge and secondly a mechanism to ensure that any knew knowledge obtained by the company will be shared. An example of the initiation of contract protection by indigenous peoples is shown by the Kuna Indians of Panama. When pharmaceutical companies seek contract protection they seek a monopoly on all of the knowledge of the local people in return for the granting of royalties. Sharman Pharmaceutical is an example of a company initiating contracts.

In addition, contractual arrangements require individual or ad hoc agreements between each group of people and company or scientific group. Without a uniform set of guidelines for protecting and compensating local communities, contractual protection is likely to result in under compensation and unequal sharing.

c) Treaty Protection (Conventions)

Prior the Convention on Biodiversity, there had been little large scale recognition of the need to compensate people for their ethnobiological

knowledge. No legal basis was provided and no means of enforcement.

Convention and declarations provide guidelines for nations to follow in establishing international norms. Typically conventions contain goals and mechanism for achieving them but few if any substantive requirements. Furthermore, the formation and implementation of international agreements is typically a long process. Convention Number 107 adopted by the United Nations International Labour Organisation in 1957 for example, can be interpreted to include and protect industries based upon traditional knowledge. However only 27 countries signed tis convention and the agreement never came into effect.

This indifference has changed with the Biodiversity convention. Articles in this Convention address both knowledge and the requirements for providing compensation for the use of such knowledge. Article 16 addresses "Access to and Transfer of Technology" and states

> "In the case of technology subject to patents and other intellectual property rights, such access and transfer shall be provided on terms which recognise and are consistent with the adequate and effective protection of intellectual property rights.[73]

Articles 18, 20 and 21 of the Biodiversity Convention also address compensation.

Despite its widespread support, the Biodiversity Convention is focused toward investments that preserve biological diversity rather than compensation of the indigenous peoples. While this is beneficial with out direct compensation, indigenous people will not be able to utilise a return for other social purposes. Secondly, the provisions, as is characteristic of international conventions, are in general terms leaving the details to be worked out on an ad hoc basis.

d) Repatriation

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73 The Convention on Biological Diversity: An explanatory Guide; Draft Text, October 1993, page 76.

Current regulations dealing with the protection and repatriation of cultural artifacts are not generally applicable to the protection and compensation for the loss of knowledge. However it is possible to assess the possibility of applying or extending the current laws dealing with the protection of artifacts to native knowledge and extending the repatriation movement to ethnobiological knowledge. Losses suffered because of the transfer of cultural objects are finite losses and involve the transfer of physical; objects, while loses due to the transfer of knowledge are more abstract, involving the transfer of ideas. However, both concerns seem analogous as both personify something central to indigenous people reflect a loss of cultural knowledge.

Over the last decade statute has evolved to provide mechanisms to protect and repatriate artifacts of cultural significance. The evolution of these laws can be traced from the recognition of the need to respect funerary and religious objects, to the current recognition to the recognition of objects of cultural patrimony. A next step could be the need to respect and protect cultural knowledge, including ethnobiological knowledge. To date the merits of this approach have not been examined. In practice it may prove too difficult to extend protection form finite objects to include knowledge particularly given the problem of compensation. Other sui generis legislation would be more practical and effective.

B. Summary: Amendments or Sui Generis Legislation and Codes of Ethics

The paper recommends that tribal groups have a juristic personality. As rights of the type discussed in this paper are difficult to deal with under existing intellectual property regimes, sui generis legislation would be the most effective way to regulating this area. It is conceptually difficult to incorporate many of these rights into an amendment to an act such as the Patents Act particularly when one takes into account the conventions and attitudes underlying current intellectual property law. A separate piece of legislation would make its purpose clearer than an amendment could. It would help focus specifically on the value of traditional ethnobiological knowledge.

VIII WHOSE RIGHTS

Article II of the Treaty of Waitangi details responsibilities of the Crown towards protecting taonga or assets of Maori. Now the New Zealand Government has devolved much of its responsibilities to local government under the Resource Management Act 1991 (RM Act). The RM Act, while requiring consideration of the Treaty of Waitangi, assumes ownership by the state of all the countries natural resources.

The Copyright, Patent and Plant Varieties Rights Acts all assume it is the responsibility of the state to regulate plant genetic resources, based primarily on innovation. The Biodiversity Convention assumes responsibility by states to define, and regulate genetic resources, including but not confined to innovations. GATT assumes it is within the responsibility of the state to allow commodification of biodiversity of plant resources and to allow for free trade in these commodities leaving each country to develop consistent intellectual property rights legislation relating to indigenous flora.

Each of the instruments in the above mentioned examples serves to diminish the rights of indigenous peoples to exercise control over flora and to diminish the value of ethnobiological knowledge. Property rights generated under existing intellectual property laws do not tend to strike a balance between interests of rights holders, consumers and competitors, between pecuniary and nonpecuniary interests, or a social balance between short term and long term benefits. For these reasons there is a need for more responsible management of Maori cultural and intellectual property.

IX CONCLUSION

Existing intellectual property law based on its English parent law and definitions of knowledge has not addressed either the value of traditional Maori knowledge or the protection of it. It also does not reflect the nature of Maori interests in indigenous flora, which are group orientated and may extend in perpetuity. It has been stated that the safest options for the equitable sharing of indigenous knowledge and/of biodiversity in New Zealand is to ensure:

a) An agreed code of ethics covering all stages of the policy

b) active participation throughout all stages of policy design

c) a transparent mechanism to gain informed consent

d) incorporating into the methodology and outcomes defined benefits for the indigenous people concerned

e) an understanding that this procedure will have to be developed on a case by case basis[74]

In order to reflect the cultural property perspective of Maori, there must be explicit recognition of the legal status of Maori tribes. The protection of traditional Maori knowledge is essential to the continuation of cultural identities with in New Zealand.

74 Above n.44.

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