

# **The Obfuscation of Tikanga Maori in the GM Debate**

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## **INTRODUCTION**

For decades genetic modification (GM) has been manipulating, splicing, recombating and recombining genes. The issues surrounding GM are vast and include environmental, social, health, economic and political forums. Many communities including indigenous peoples, farmers, scientists, environmentalists, academics and activists are speaking out and opposing this technology. Within indigenous communities there is strong opposition to GM and many active voices and forms of resistance taking place. Much of this resistance is coming from the Pacific, with strong Maori voices, in particular Maori women's voices actively resisting this technology.

Many Maori voices that oppose GM have debated their concerns in both indigenous and non-indigenous forums and continue to stand firm in their analysis of this technology as unacceptable to a Maori worldview. Part of the Maori resistance to this technology has been the impact the technology has upon our tikanga (Maori cultural paradigm). In addition to this Maori have also expressed concerns about GM as

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<sup>1</sup> This article is developed in part from the Ph.D. thesis work completed by Dr Jessica Hutchings and Dr Paul Reynolds and is written with conjunction with Ripo - The Indigenous Genes and Genetics Institute . We would also like to thank Dr Cheryl Smith for her invaluable advice and contributions.

negatively impacting on tino rangatiratanga (Maori self-determination), flora and fauna, food, traditional medicinal practices, human health, intellectual property rights.

Tikanga Maori provides a clear set of guidelines for developing an analysis about GM. Consultation and the need to develop a Maori perspective with regard to GM has been and continues to be fraught with problems. The over reliance on 'selected' Maori experts and advisors with regard to GM is allowing tikanga Maori to be redefined and reinterpreted to provide an acceptable analysis of this technology within the Maori cultural paradigm. Research teams interested in promoting their research, universities conducting this research and government agencies promoting this research seek these 'selected' Maori experts to legitimise their work.

This paper presents a counter hegemonic response to the 'selected' Maori experts perspectives on GM. It presents a view that is not propelled by being paid researchers, promoting Universities interests and supporting western science discourses. Within this paper we discuss the over consultation Maori have experienced with regard to GM. Furthermore we present a summation of diverse Maori concerns with regard to GM which demonstrates that there is not a single Maori view or 'perspective' with regard to this technology, but rather a diverse form of Maori opinions which opposes GM.

Within this paper we identify current GM activities taking place on Maori tribal land and look at recent developments in Aotearoa with regard to stem cell and other human genetic research. We discuss the obfuscation of tikanga Maori knowledge by the 'selected' Maori experts and we examine why attempts are being made to reinterpret

our tikanga. To overlook these damning attempts at rearranging our tikanga limits the intellectual analysis that needs to take place with regard to Maori and GM.

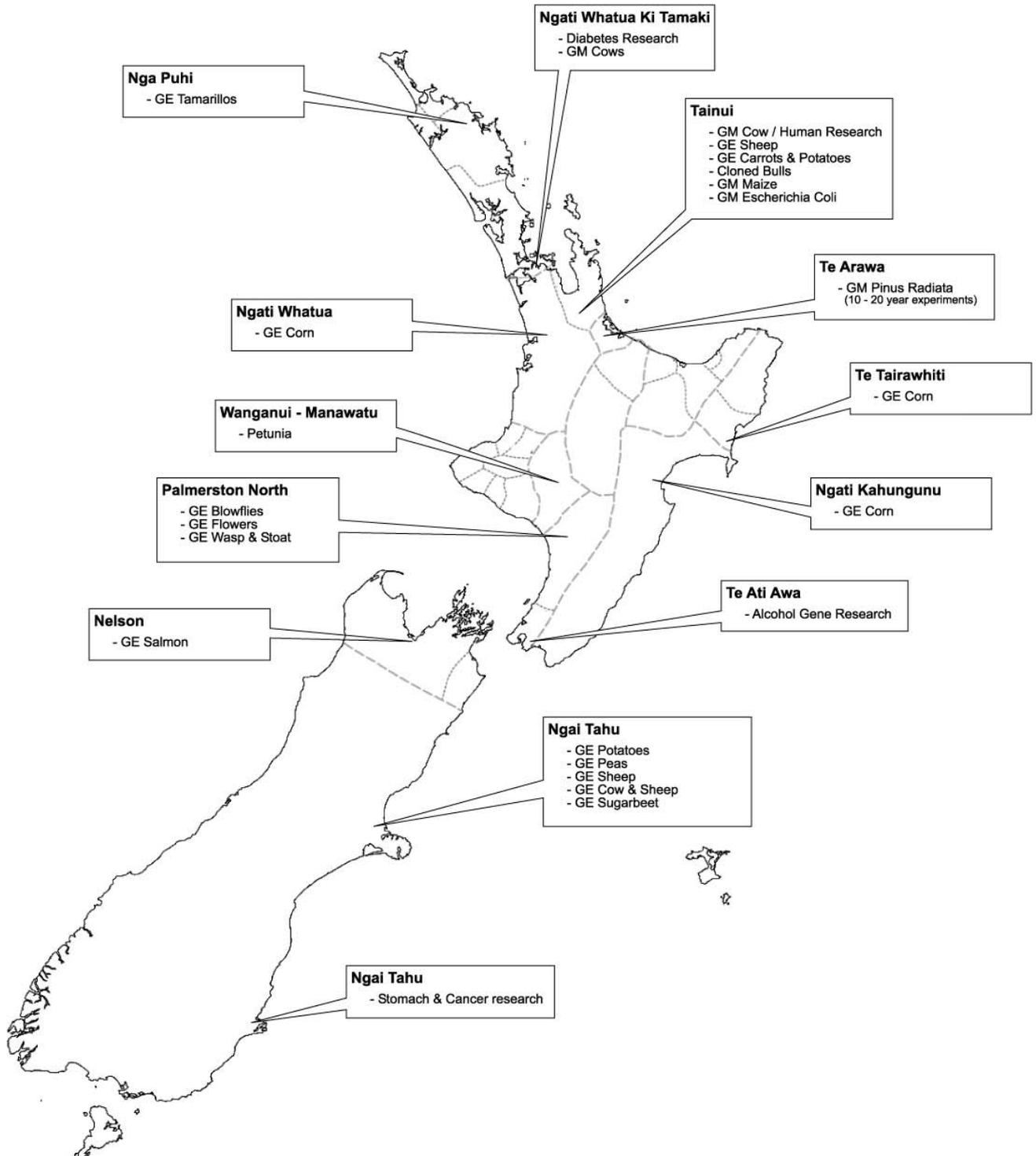
Furthermore this paper presents a mana wahine based framework for assessing GM.

## **CURRENT GM ACTIVITIES**

Work on GM began in Aotearoa in the late 1970s. In the early 1970s concerns had been voiced internationally within the scientific community as to the safety of certain experiments. This resulted in a 18 month worldwide voluntary moratorium (1973-1974) on any GM work. GM field tests were imminent by the mid 1980s. Since then there have been many GM experiments in Aotearoa that are of significant concern to many Maori. GM research continues to perpetuate a decidedly racist bias, where Maori, Polynesian and other populations are seen as having valuable genetic variations for researchers and many colonial myths continue to be researched.

The majority of GM research is being done by Crown Research Institutes and Universities, in collaboration and partnership with outside companies, many who are trans-national corporations and multinationals. Much of the GM research is shrouded in secrecy and in many cases it is very difficult to locate and reveal information about the research. Figure 1 maps the GM research being undertaken by Crown Research Institutes, Universities and private sector science corporations within iwi boundaries.

Figure1 Iwi Rohe Map Identifying GM research on Maori Land



## **“ALL CONSULTED OUT!” – GM AND MAORI**

Maori have been “consulted out.” There is a history of consultation that has occurred with Maori but not necessarily by Maori and for Maori. Even when some consultations have occurred with Maori and have been led by Maori researchers, the result has not necessarily been for or owned by Maori or conducted in a tikanga Maori way. Regardless of how conducted, the consultation that has occurred with Maori has revealed consistent expression of concerns relating to genetic engineering.

One example of such consultation with Maori is the government’s Review of the Patents Act 1953, which was initiated in 1989 by the then Ministry of Commerce (now called Ministry of Economic Development) as a general overhaul of the country’s intellectual property laws. Since 1989, Maori have made submissions on this issue in 1992, 1994, 1999 and 2002.<sup>2</sup> There appears to be consistency in all of the submissions made by Maori. The consultations revealed unanimity that there should be a halt to all decision making on this issue until the WAI 262 claim is heard and decided. There is also general opposition to reforms that extend patentability in biotechnology and grant patent rights to inventions based upon living organisms. The consultations have also established that patenting inventions derived from Indigenous flora and fauna infringes kaitiaki rights conferred by the Treaty of Waitangi and that there are concerns with patents on inventions based on traditional knowledge. There was also concern that the concept of collective ownership of knowledge is not recognised. There was general opposition to patenting of genetically modified

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<sup>2</sup> Ministry of Economic Development discussion paper on website, March 2002, “Review of the Patents Act 1953: Boundaries to Patentability,” Section 4: Maori and the patenting of biotechnological inventions, [http://www.med.govt.nz/buslt/int\\_prop/patentsreview/discussion/patentsreview-06.html](http://www.med.govt.nz/buslt/int_prop/patentsreview/discussion/patentsreview-06.html), accessed on 27 September 2003. Summaries of the submissions are available on this website. It appears the government has received ample submissions for each consultation round conveying concerns of Maori, but chooses to ignore Maori concerns when policy decisions are made.

products and processes because of the concern with social and environmental effects as well as cultural and spiritual concerns with the alteration of life forms.<sup>3</sup> More specifically, in the tikanga Maori knowledge conception of the world, life forms have a whakapapa back to Atua (the Gods), and each life form has its own mauri, including genes. The Ministry of Economic Development summarises the views on genes of Maori submitters.

Genes are a part of the whakapapa relationship as animal or plant life. For Maori, a gene has Mauri that continues to exist ex-situ (when taken from its original place). The same perspective is carried over to issues of replication, trans-genetic engineering and cloning. Hence to alter the “genes” or genetic material is to alter the blood of ancestors, altering the whakapapa relationship by changing or introducing “new blood.”<sup>4</sup>

As a result of all of this government consultation with Maori on the Review of the Patents Act 1953, a recommendation has been made to establish a committee, a Maori Consultative Committee for the Intellectual Property Office of New Zealand. This proposal concurs with a recommendation made by the Royal Commission on Genetic Modification. The new committee’s role would be to provide advice only to the Commissioner of Patents, with the ultimate decision on whether or not to issue a patent continuing to lie with the Commissioner. The proposed functions of the Maori Consultative Committee include:

- Providing advice to the Commissioner of Patents as to whether an invention claimed in a patent application is derived from or appears to be derived from traditional knowledge, indigenous plants and animals;

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<sup>3</sup> Ibid.

<sup>4</sup> Ministry of Economic Development information paper on website, February 1999, “Maori and the patenting of life form inventions: An information paper produced by the Patenting of Life Forms Focus Group for the Ministry of Commerce,” [http://www.med.govt.nz/buslt/int\\_prop/maoripatent/maoripatent-03.html](http://www.med.govt.nz/buslt/int_prop/maoripatent/maoripatent-03.html), accessed on 27 September 2003.

- Providing advice to the Commissioner of Patents as to whether the commercial exploitation of such an invention is or is likely to be contrary to Maori values.<sup>5</sup>

Although seeming inclusive of Maori values and beliefs, in fact the Maori Consultative Committee has limited authority over Indigenous flora and fauna only, not cows or bacteria or wheat or corn. The committee is a consultative committee only and the Commissioner of Patents has the final say. The establishment of the Maori Consultative Committee lends some credibility to the Intellectual Property Office of New Zealand, which gives the appearance of consulting seriously with Maori. The fact remains that the advice given by the consultative committee can quite easily be ignored.

In an exploratory report entitled *Genetically modified organisms and Maori cultural and ethical issues*, commissioned by the Ministry for the Environment, policy writer Nici Gibbs outlines the basis of Maori concerns about genetically modified organisms:

All elements of the natural and divine worlds, including humans and genetic material, are related and are linked by the possession of mauri – the life force; It is the responsibility of the present generation, as kaitiaki, to protect the mauri of genetic material from defilement or abuse; Genetic manipulation may be seen to interfere with the integrity of species, and, therefore, may interfere with the mauri of the affected species; Kaitiakitanga is part of the exercising of rangatiratanga, and the ability to effectively exercise both affects the mana of an iwi or hapu; and The Treaty guaranteed Maori rangatiratanga over their taonga. Genetic resources could be considered to be taonga, and control over genetic resources may therefore be part of this guarantee.<sup>6</sup>

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<sup>5</sup> MED Cabinet paper on website, 6 August 2003, “Review of the Patents Act Stage 3, Part 3: Maori Consultative Committee for the Intellectual Property Office of New Zealand,” [http://www.med.govt.nz/buslt/int\\_prop/patentsreview/cabinet/part3/index.html](http://www.med.govt.nz/buslt/int_prop/patentsreview/cabinet/part3/index.html), accessed on 27 September 2003.

<sup>6</sup> Gibbs, Nici, *Genetically modified organisms and Maori cultural and ethical issues*. (Wellington: Ministry for the Environment, 1996), 18.

Gibbs believes Maori have unique concerns about genetically modified organisms that are based on three key concepts: “mauri (emphasising the life force present in all elements of the natural world); whakapapa (emphasising the interconnectedness of all elements of the natural world); and kaitiakitanga (emphasising the responsibilities of present generations to maintain the integrity of the natural world for future generations).”<sup>7</sup> The purpose of this government commissioned report was to offer up questions for further debate and explore whether “genetic manipulation is never an acceptable technology, or whether genetic manipulation may be morally and ethically justifiable by Maori in some instances.”<sup>8</sup> An earlier discussion document, prepared in 1991 as an Information Paper for the Centre for Resource Management at Lincoln University, highlighted similar Maori concerns. It points out that spiritual values are important to Maori culture and that all things have a spirit or wairua, that Maori have a deeply held spiritual connection to the land and the natural environment, and that Maori have a kaitiaki (stewardship) relationship to all things in Aotearoa, not just native flora and fauna.<sup>9</sup>

The 2001 Report of the Royal Commission on Genetic Modification highlights the findings of its extensive consultation with Maori at consultation hui and in the commission hearings. The Commissioners, in summarising “Te Ao Maori: the traditional Maori world view,” state:

Maori spiritual values we heard about frequently involved the concepts of whakapapa, mauri [life essence], tapu [sacred] and noa [free from tapu] (and whakanoa [make common]), hara [sin] and ke [not sin], mana [influence/authority], ihi [power] and wehi [fear/awe], whanau, hapu and iwi. All are relevant not only to understanding the holistic or ecological approach

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<sup>7</sup> Ibid., 44.

<sup>8</sup> Ibid., 45.

<sup>9</sup> Macer, D., Bezar, H., & Gough, J., Genetic engineering in New Zealand: Science, ethics and public policy. (Information Paper No. 27. Lincoln University, NZ: Centre for Resource Management, 1991), 28.

Maori have to their environment, but also to explaining why Maori prioritise a duty of kaitiakitanga or “obligated stewardship.” To Maori this duty is easily explained by tracing whakapapa (genealogy) up through the ancestors, to the Gods, and ultimately to Papatuanuku, the Earth Mother, and Ranginui, the Sky Father. By going sideways in these kinship links, Maori trace descent lines for all living creatures and so have to honour them as kin.<sup>10</sup>

This summary is consistent with tikanga Maori views expressed in various fora.

Maori have described their whakapapa links to all things and a consequent inherent kaitiaki responsibility to all things. They stated that life must not be interfered with because the integrity of whakapapa must be kept intact. Although there were a few paid Maori consultants who did not oppose GM, the majority of oral and written submissions made to the Royal Commission by Maori opposed GM, in particular, the mixing of genes to create transgenic organisms. They expressed concern that there was a breach of the Treaty of Waitangi in terms of inadequate consultation with the Treaty partner. There was also concern with Indigenous flora and fauna and traditional knowledge being conceived in intellectual property terms. The Commission seemed to politely acknowledge these concerns and then dismiss them.

All of the reports of consultations with Maori mentioned here were not led by or necessarily for the benefit of Maori. The reports were prepared as a token effort to “consult” with Maori. Although government commissioned consultations with Maori revealed markedly similar and consistent concerns in their summarised reports, from the Ministry of Economic Development to the Ministry for the Environment to the 2001 Report of the Royal Commission on Genetic Modification, the result has been that all of this consultation has been for nothing. The government is intent on narrowing the sphere of Maori authority. Moana Jackson is right that it is not enough

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<sup>10</sup> Royal Commission on Genetic Modification, Report of the Royal Commission on Genetic Modification: Report and recommendations 2001. (Wellington: PrintLink, 2001), 19.

that “we be heard with ‘exquisite politeness’ and then marginalised,” as was the case in the Royal Commission Report.

In May 2000 the International Research Institute for Maori and Indigenous Education (IRI) based at Auckland University produced a report entitled *Maori and Genetic Engineering*. The report explored three key areas (food, human health and biological diversity) by conducting twenty-four key informant interviews with Maori who were knowledgeable about tikanga Maori and/or GE and related issues as well as nineteen general focus groups with a total of ninety-four Maori from a variety of locations, age brackets and backgrounds.

Both key informant interviewees and focus group participants raised concerns regarding many aspects of tikanga Maori, including interference with the wairua, whakapapa, and mauri of a species, and the kaitiaki role of Maori. In particular, the mixing of whakapapa in transgenic research was seen as abhorrent and a desecration of mauri, or life force, and wairua, spirit. Both interviewees and focus group participants also saw the Treaty of Waitangi as the foundation document and process where Maori may assert tino rangatiratanga over their taonga and all living things, including Indigenous flora and fauna. They viewed New Zealand intellectual property regimes as breaching the rights of Maori (whanau, hapu, iwi) as tangata whenua, granted them in the Treaty of Waitangi, which is the basic argument made by the WAI 262 claimants. Both groups had similar dilemmas over human health research, inasmuch as it was felt that sick whanau members might benefit from genetic experimentation that leads to a cure of disease. Both groups, however, saw cloning as abhorrent. The report highlighted the fact that the key informants and focus group

participants believed that there was a critical need for more open and urgent discussion around human health research.

In another consultative project led by Maori researchers, the privileging of the tikanga Maori worldview is less clear. “Incorporating tangata whenua values into scientific decision making: what and how”<sup>11</sup> is funded by the Foundation for Research, Science and Technology and led by Dr Mere Roberts (Zoologist/Environmental science) with Dr Manuka Henare (Business Studies/philosophical anthropologist).<sup>12</sup> The aim of the project is to devise a decision-making framework that incorporates tangata whenua values for inclusion in the GMO regulatory process and policy development.<sup>13</sup> The project appears to be trying to massage a Maori sensibility into a Western reductionist scientific framework, much like trying to mix oil and water. Put simply, the Pakeha, Western reductionist, scientific discipline and framework is hostile toward tikanga Maori. This project will be referred to later in terms of its role in the obfuscation of tikanga Maori with regard to GM.

In addition to the Maori concerns discussed there are strong mana wahine voices speaking out and resisting GM. Clear mana wahine voices are coming from the roopu Nga Wahine Tiaki o Te Ao, whose membership includes, mothers, grandmothers,

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<sup>11</sup> Information obtained from a variety of sources: Roberts, M., Genetically modified organisms and Maori: A critique of the ERMA process for assessing cultural effects under the HSNO Act 1996, 2000; FRST website: <http://www.frst.govt.nz/Publications/guides-forms/RFP-ImpactsNewTechnologies.doc>, accessed on 21 August 2003; ERMA website: <http://www.ermanz.govt.nz/news-events/archives/events/erma-conference02/manuka-henare.pdf>.

<sup>12</sup> Other researchers involved in the project are Associate Professor Richard Benton (Linguist), and Mark Henare (post graduate student in anthropology), all of Auckland University, and international collaborators Dr Terre Satterfield (psychological anthropologist) and Dr Melissa Finucane (psychologist) of Decision Research based in Eugene, Oregon, USA, a non-profit research centre with primary engagement in work for government and non-government organizations seeking to improve decision-making processes.

<sup>13</sup> This research is part of the explosion of research since the completion of the Royal Commission on Genetic Modification, substantially funded by the government body Foundation for Research Science and Technology, into how to engage Maori in consultation and devise frameworks for dialogue.

aunties, sisters, daughters, lesbians, film makers, doctors, academics, activists, scientists and environmentalists. This roopu was formed by a group of Maori women concerned about protecting their kaitiaki status with regard to GM. Nga Wahine Tiaki o Te Ao stated in their submission to the Royal Commission on Genetic Modification that:

Aotearoa is Maori land, and therefore any organism grown from it is subject to tikanga Maori which provides a collective basis from which to properly care for the environment and distribute resources. Anything created in Aotearoa will be subject to claims for ownership as kaitiaki, furthermore we will continue to exercise our rights as Maori and prevent the introduction of GM and GMO experimentation in Aotearoa. We expressly do not give permission for our intellectual property to be used for the purposes of GM and GMO experimentation.<sup>14</sup>

Maori women have specific roles to play as kaitiaki in regard to ira tangata. In particular Maori women hold key roles in protecting whakapapa, mauri, ira and tapu.

As is highlighted in the following quote:

Within tikanga Maori (Maori culture), Maori women hold unique roles in the protection of mauri (life force), tapu (sacredness) and whakapapa (genealogy). As a Maori woman I am empowered to state that our cultural essence and survival demand opposition to genetic engineering (GE) and biotechnology. While yet struggling to rescue traditional lands, waters and culture from desecration by colonisation, the assumption of the kaitiaki cloak requires we employ the wisdom of our ancient lores and protect the greatest and creative whole of all – the genome.<sup>15</sup>

## **TIKANGA MAORI KNOWLEDGE & WESTERN REDUCTIONIST SCIENCE**

Tikanga Maori knowledge provides clear guidelines for how Maori might conceptualise a set of tikanga-informed values, practices and knowledge for the issue of GM. Recent consultations over GM have again exposed the traditional problems of

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<sup>14</sup> Nga Wahine Tiaki o Te Ao, 2000:1.

<sup>15</sup> Hutchings, J. Molecular Kaitiakitanga Guarding our Sacred Molecules. (Organic NZ 60 (4) 9-10)

reliance on “selected” Maori experts. Research teams interested in promoting their research, universities conducting this research and government agencies promoting this research seek these “selected” Maori experts to legitimise their work. Yet over and over again consultation with the general Maori public has revealed the same concerns relating to GM and the use of traditional knowledge, flora and fauna. Dr Cheryl Smith believes there have been two main responses to such consultation with Maori:

1. We have been told that we must need more education, especially about science. We are told that obviously we don't understand new things. More education of communities needs to happen and the science curriculum in schools needs to change, for example. This has been particularly evident as a response from ERMA representatives who told us at hui that more education was needed and who also submitted a paper to the incoming government to ask for a budget to educate us. (Within one Maori women's network I work with there are kuia (women elders), doctorate graduates, Masters graduates, lawyers, medical specialists and we have made representations to ERMA)
2. The ways we think, our philosophies, need to be changed. We have had our traditional stories re-told to fit the new scientific paradigm, we have had findings appearing re-translating and re-explaining their meanings to show that mixing of genetic material is ok, we have been told that the stories where our ancestor transformed into a bird was genetic engineering, that it was a traditional practice.<sup>16</sup>

There are numerous other examples of obfuscation techniques that require mention.

The most insidious of responses though is the reinvention of traditional stories and the reinterpretation of tikanga. Individuals are involved in these reinventions without any collective reflection with other whanau and iwi members. It is of considerable concern that our own people are co-opted as individuals and enlisted to retell our stories and reinterpret our tikanga without accountability to the wider cultural grouping. This practise of course is similar to the individualisation of land titles in the early eighteenth century by the government to alienate land from group guardianship.

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<sup>16</sup> Personal communication with author, 8 October 2002.

## **Reinterpretation of stories**

One of the most controversial reinterpretations of stories was made in a submission to the Royal Commission on Genetic Modification by paid consultants for the New Zealand pro-biotechnology lobby group, the Life Sciences Network (Inc), Paora Ammunson<sup>17</sup> and Tamati Cairns.

Whilst the vast number of Maori who appeared before the Commission stated that they were opposed to GM, only one of the Interested Persons group argued that GM was a “traditional” practise because they argued that Maui’s transformation and other korero [other similar stories] could be seen as genetic modification... This has been discussed at a number of hui and Maui was not genetically modified.<sup>18</sup>

In the written submission prepared for the Royal Commission by Paora Ammunson and Tamati Cairns, a sanctimonious scolding was delivered that was critical of existing Maori interpretations of tikanga, including the kaitiaki and whanaungatanga (familial relationship, one of the family) relationship that Maori have for all things and any arguments used that explain that genetic modification is a violation of whakapapa or mauri. The following excerpt is an example of the arrogance and flippancy used in the witness brief:

We recognise the usefulness of the kinship personification in highlighting the importance of respect for the environment. However we do not believe that the relationship between trees, rocks and people is one that truly parallels the whanaungatanga practised by Maori amongst their blood kin. It goes without saying that the level of support that a rock can provide to the socialisation and

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<sup>17</sup> Paora Ammunson (Ngati Kahungunu ki Wairarapa, Te Arawa) is a chief consultant of PHP Consulting Limited based in Wellington. Among his skills he is listed as an expert in tikanga Maori and associated concepts and philosophies. PHP Consulting Ltd specialises in managing relationships between governments, companies and Indigenous communities. They also offer a Treaty & Maori Relationships Profile for companies or organizations, where they have adapted risk management analysis to Treaty and Maori issues. The PHP Consulting Ltd website is: <http://www.php.co.nz/index.htm>, accessed on 12 November 2003.

<sup>18</sup> Reynolds, P., & Smith, C.W., *Aue! Genes and Genetics*. (Whanganui, New Zealand: Whanganui Iwi Law Centre, 2003), 31.

economic needs of a family is significantly different [than] that of a human relative.<sup>19</sup>

Maori are presented as not “expert” or “sophisticated” enough to interpret their own traditional stories, which supposedly indicate that GM was practised in the past and can be interpreted in the stories as a natural and logical step towards progress in the present and future. However, Ammunson and Cairns appear to have drawn on the writings of some Western writers, including the writing of nineteenth century New Zealand Governor Sir George Grey, to help significantly in the areas where the traditional stories were reinterpreted. Similarly some leaps in logic were made to achieve the desired outcome.

There are some stories and customary examples of mixing human tapu [sacred] and organs with other species. The stories of the ancients are filled with examples of men and gods transforming themselves into other life forms. Maui, the celebrated demigod turns himself into a kereru (native pigeon) to secretly follow his mother into the underworld. Wairaka the celebrated Bay of Plenty woman leader calls on the gods to metaphorically turn her into a man to avoid and appease the clash of tapu involved in her sailing a waka [canoe] to safety. The customary ceremonies involved in eating the vital organs of a vanquished foe symbolise the victor taking the abilities of his enemy into his own physical body. In each of these examples, there is no significant and prohibitive norm that results in the actors being somehow culturally inappropriate.<sup>20</sup>

It is therefore clear to Ammunson and Cairns that the current “Maori side of the GM debate is coloured by simplistic and western-driven understandings of tikanga. Maori groups, as with all communities, can be manipulated by emotional scare tactics, and, be blinded to the potential benefits.”<sup>21</sup> As a result, Ammunson and Cairns see Maori

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<sup>19</sup> Royal Commission on Genetic Modification Witness Brief by Paora Ammunson and Tamati Cairns for the New Zealand Life Sciences Network Inc., sB(g), s2, s23. Accessible from the Royal Commission on Genetic Modification website: [http://www.gmcommission.govt.nz/pronto\\_pdf/nzlsn/nzlsn\\_wb\\_ip0024\\_paora\\_ammunson.pdf](http://www.gmcommission.govt.nz/pronto_pdf/nzlsn/nzlsn_wb_ip0024_paora_ammunson.pdf), accessed on 7 April 2004.

<sup>20</sup> Ibid., sB(g), s2, s45.

<sup>21</sup> Ibid., sB(g), s2, s56.

understandings of GM evolving and believe a more sophisticated debate needs to occur around interpretation of key customary Maori concepts and tikanga to achieve greater understanding.

Their witness brief goes on to discuss further benefits for Maori from GM. We argue that although the voices of Ammunson and Cairns are Maori voices, they are adopting a non-Maori discourse placing their arguments in a Life Sciences discourse, that favors hegemonic colonial patriarchal ideologies. The views of Ammunson and Cairns serve to remind us not to essentialise or universalise Maori views with regard to GM as some Maori are arguing for the benefits of GM even if the argument is constructed and situated in a hegemonic colonial discourse. This point is also highlighted by the membership of the RCGM having one Maori Commissioner, Dr Jacqueline Allen, who stated her whakapapa as Ngai Tahu. However on defining her role as a Commissioner she noted that she was not occupying her position as a Maori Commissioner but as a Commissioner who has an experience in working with Maori issues. Like Ammunson and Cairns views, Allen's repositioning of her Ngai Tahu ethnicity to view and assess issues regarding GM remind us not to essentialise or universalise the views of Maori men and Maori women. Although Allen is a Maori woman she is not purporting a mana wahine view. She is in fact working within and perpetuating the hegemonic colonial patriarchal ideologies by denying her space on the Commission as a Maori space.

Bevan Tipene-Matua concurs and believes Maori need to be more fully informed so that they can consider the possible benefits of genetic engineering technology, which requires "more time for Maori and others to discuss and debate the wider issues (not

just the scientific ones) regarding GM.”<sup>22</sup> Similarly, Dr Mere Roberts in her Witness Brief to the Royal Commission on behalf of ERMA’s Maori body, Nga Kaihautu Tikanga Taiao (NKTT), states:

Because some of the uncertainty about the future uses, risks and benefits of GE perceived by Maori may be based on insufficient knowledge about this technology, NKTT is concerned that more attention be given to educational efforts concerning GE and directed at Maori. NKTT believes it can make an important and increasing contribution to this role.<sup>23</sup>

It appears that Dr Mere Roberts and her colleagues are indeed contributing to the educational efforts directed at Maori. In a spring 2004 article entitled, “Whakapapa as a Maori mental construct: Some implications for the debate over GM of organisms,” an elaborate exploration of the concept of “whakapapa” is outlined utilising the whakapapa origins of the kumara, or sweet potato, as a case study. The authors believe that the primary lesson learnt from the exploration of origins of the whakapapa of the kumara is that risk-taking can be beneficial. This situation occurs when younger people outsmart older people and when a “trickster/hero” takes dangerous risks on behalf of his/her people so that they may have access to new knowledge and technology.

One might therefore conclude from these stories that normally prohibited actions are justifiable if the cause or purpose is correct (tika) or worthy and the potential benefits appear to outweigh the risks...sometimes it is only through deliberately flouting culturally embedded norms that important and beneficial changes to society are brought about.<sup>24</sup>

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<sup>22</sup> Tipene-Matua, B., “A Maori response to the biogenetic age.” In Prebble R. (ed.), Designer genes: The New Zealand guide to the issues, facts and theories about genetic engineering. (Wellington: Dark Horse Publishing Ltd., 2000), 109.

<sup>23</sup> Royal Commission on Genetic Modification Witness Brief by Dr Mere Roberts for the Environmental Risk Management Authority (ERMA) Maori body, Nga Kaihautu Tikanga Taiao (NKTT), sB(b), s4. Accessible from the Royal Commission on Genetic Modification website: [http://www.gmcommission.govt.nz/pronto\\_pdf/environmental\\_risk\\_management\\_authority/Environmental%20Risk%20Management%20Authority%20\(WB%20IP%2000076-Dr%20M%20Roberts%20for%20Nga%20Kaihautu%20Tikanga%20Taiao.pdf](http://www.gmcommission.govt.nz/pronto_pdf/environmental_risk_management_authority/Environmental%20Risk%20Management%20Authority%20(WB%20IP%2000076-Dr%20M%20Roberts%20for%20Nga%20Kaihautu%20Tikanga%20Taiao.pdf), accessed on 7 April 2004.

<sup>24</sup> Roberts, M., Haami, B., Benton, R., Satterfield, T., Finucane, M., Henare, M., & Henare, M., “Whakapapa as a Maori mental construct: Some implications for the debate over genetic modification of organisms.” (The Contemporary Pacific 16, 1, 2004), 22.

Although appearing feasible, we believe this story is just another effort to reinterpret Maori stories. This story softens the effects of obvious infringements of tikanga Maori when GM technology is employed. The simple message is that our ancestors were risk-takers. It is therefore appropriate to take risks, in the form of GM technology and research, for the greater good of humankind.

### **Reinterpretation of tikanga**

As in the reinterpretation of stories, tikanga has been reinterpreted in a variety of ways to accommodate genetic engineering. In this section we will discover how key concepts such as mauri (life essence) and whakapapa (genealogy) have been reinterpreted, and karakia (prayer) has been seen as the way forward to smooth the path toward acceptance of GM.

In the 30 September 2002 decision made by ERMA in relation to Application GMD02028, submitted by AgResearch to develop transgenic cattle that can express functional therapeutic foreign proteins in their milk and to develop transgenic cattle to study gene function and genetic performance, mauri was reinterpreted significantly. As opposed to the traditional belief that all things have a mauri, a life force and essence, the ERMA decision incorporates an unexpected variation on this conception, which is aimed at ultimately quashing concerns that genetic engineering will interfere with mauri.

Many Māori are concerned about the apparent mixing of the mauri of one organism with another through the transfer of genes. Yet, following traditional thought, the mauri of an organism is the exclusive property of that organism. It is indivisible and not transferable. The mauri is a quality of the totality of the organism and is not separable except at the death of the organism. It is imbued at creation and departs when it separates itself from the tinana [body]

thus releasing the wairua [spirit]. The separation brings about the death of the organism. While the mauri can vary in strength and vitality over the course of life, it does not leave until death. When genetic material is extracted from an organism, it is thus removed without the mauri of the host organism. This is because a gene is a chemical that produces a protein not an organism. In other words, the only mauri present is the mauri of the particular sequence of bases, which constitute the gene. Each gene therefore contains its own mauri, the mauri of the gene, which allows it to exist and function. However, the gene does not have the mauri of the organism from which it is extracted.<sup>25</sup>

Therefore, in relation to Application GMD02028, “When the genetic material is extracted it only has its own mauri, which is not the mauri of the human from which it derives because the totality of the human is not present in the individual gene. It thus follows that the gene does not introduce the mauri of the human into the cow.”<sup>26</sup>

Mason Durie in his Deputy Vice-Chancellor’s Lecture in 2003 titled ‘Mana Tangata, Culture, Custom and Transgenic Research’ questions the ERMA hypothesis, he states.

Quite apart from the dubious hypothesis that a gene can be said to possess a mauri that is separable from the mauri of the organism it serves, the ERMA analysis overlooked the fundamental starting point upon which Maori world-views are built – the relationships that confer coherence within the natural world. While scientific method often dissects the whole into smaller parts in order to find the truth, Maori philosophical methods work in the opposite direction; truth is a function of wider relationships and higher order synergies. If it were to contemplate discussion on the mauri of a gene, a Maori analysis would probably have been more concerned with the relationship of the gene’s mauri to the host organism, rather than its separateness. The mauri of a gene would then be contemplated as something that only had meaning within the context of relationship with a higher order entity. As such it would be an essential part of the human dimension.<sup>27</sup>

By compartmentalising and conceptualising the mauri of the human gene as independent from the mauri of the totality of the human, this interpretation of mauri negates the tikanga Maori views of the large majority of Maori in the country,

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<sup>25</sup> Environmental Risk Management Authority (ERMA) Application GMD02028, s4.6, p.33. Accessible from the ERMA website: <http://www.ermanz.govt.nz/search/application3.cfm?applicationcode=GMD02028>, accessed on 7 April 2004.

<sup>26</sup> Ibid.

<sup>27</sup> Durie, M. 2003. Deputy Vice-Chancellor’s Lecture. Mana Tangata, Culture, Custom and Transgenic Research. Delivered at Massey University Wellington Campus.

including Maori submitters who presented tikanga evidence to the Royal Commission. In the Report of the Royal Commission on Genetic Modification, it was acknowledged that the large majority of Maori submitters opposed the creation of transgenic animals, as in Application GMD02028, because of the mixing of mauri. However, “Tamati Cairns and Paora Ammunson, when giving evidence for the Life Sciences Network, took the view that this mixing occurs all the time anyway. ‘The water piped through a family home has a mauri that mixes with the mauri of the drainpipes and eventually the mauri of the water glass.’”<sup>28</sup> Ammunson and Cairns further clarify this point stating, “It is not a new phenomenon or a culturally reprehensible thing for the mauri of one thing to be mixed or come into contact with the mauri of another. However like tapu (sacredness) the issue is not about whether or not humans have the power to mix the mauri of ‘x’ object with the mauri of ‘y’ object, but more a matter of how best to do this.”<sup>29</sup> Again, this interpretation of the mixing of mauri as a common phenomenon has the effect of negating tikanga Maori views of the majority of Maori. The creation of transgenic animals is not to be dismissively passed off as a natural and common phenomenon that can be mediated through a “best practice” methodology, as implied by Ammunson and Cairns.

Another example of reinterpretation of tikanga can also be found in the 30 September 2002 decision made by ERMA in relation to Application GMD02028. In this example, the Committee vested with the responsibility whether or not to approve research involving the creation of transgenic cows reinterprets whakapapa in its decision.

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<sup>28</sup> Royal Commission on Genetic Modification, 2001, 35.

<sup>29</sup> RCGM Witness Brief, sB(g), s2, s49.

The Committee recognises that there are many types of whakapapa such as the genealogy of creation and the genealogy of a human being. Whakapapa has logic and a structure that can be misunderstood and inadvertently misapplied. The key principle to understanding whakapapa is the idea of the laying of dimensions over each other. This idea is in the term papa, which is the act of laying one dimension over another. According to The Williams Maori Dictionary (1975:259) whakapapa is to place in layers, or, to lay one upon another. However, sometimes whakapapa is used in a European sense to refer to a family tree (see The Reed Dictionary of Modern Maori (1995:305). In this usage genealogy refers to a coming down from the top of the family tree but the appropriate Māori term is whakaheke, to come down from the top. The tree metaphor is the opposite to the meaning of the primary Māori idea of building layers from a base or foundation. Colloquially, it is stated that a person can whakapapa to an ancestor or to God. The whakapapa of human beings starts in a whanau and the union between a male and female who because of the union have children. This, according to tikanga is a level of papa. To develop further the whakapapa requires the building of additional papa or levels. It follows that to suggest the papa is the result of placing a gene from one person into another is a misunderstanding of both the science and traditional Maori thought. The result of the transfer is still one person and is only an infinitesimal part of someone else.<sup>30</sup>

The purpose behind using such a long quotation here is to give the reader the opportunity to see the elaborate length and logical sequencing of attempts at reinterpreting tikanga. In this version of whakapapa, the Committee labours the point that the mixing of whakapapa in the creation of transgenic cows is “infinitesimal” and therefore of negligible concern to tikanga Maori.

In yet another attempt at reinterpreting and nullifying the impact on tikanga, it is believed karakia (prayer) may be performed to help any potential spiritual or other breach that may occur. This point is made clear in the decision handed down by ERMA in relation to Application GMD02028, where the applicant, AgResearch, and local hapu, Ngati Wairere, are encouraged to dialogue and karakia:

The spiritual risks are, however, amenable to mitigation through ongoing dialogue and appropriate karakia, provided the motive and purpose of the research are identified and articulated. The Committee concludes that, while the expressed concerns still remain, there are procedures in place between

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<sup>30</sup> ERMA Application GMD02028, s4.6, p.34.

Ngati Wairere and AgResearch to enable the dialogue to occur and appropriate cultural steps to be taken to avoid, as far as practical, the emergence of spiritual harm. Given this situation, the Committee's view is that risks attributable to the spiritual concerns are low.<sup>31</sup>

A similar stance is made by Ammunson and Cairns in their witness brief to the Royal Commission in regards to the mediating effects of karakia.

While there may be no traditional karakia for transplanting genetic material, there are many appropriate karakia and supporting rituals for transplanting mauri and appeasing tapu across species. We can conclude that establishing a means by which we can carry out the act of genetic manipulation across species is not of itself beyond the ken or volition of Maori philosophers and tohunga [expert/priest/spiritual leader].<sup>32</sup>

When attempts are made to reinterpret tikanga, it is useful to identify who is doing the reinterpreting and to ask why they are doing it. In the examples used in this section, the reinterpretation attempts are made by persons and bodies with vested interests. The decision to approve research creating transgenic cows was given by ERMA, the GE/GM regulatory body in New Zealand. The decision to approve the application, which incorporates reinterpretation of tikanga, was a forgone conclusion as GE/GM applications have a strong history of being approved.<sup>33</sup> The witness brief prepared by Paora Ammunson and Tamati Cairns also incorporates reinterpretation of tikanga. The authors are paid consultants of the New Zealand Life Sciences Network Inc. and therefore are a mouthpiece for an organization that has vigorously promoted biotechnology, genetic engineering and GM in New Zealand. In contrast, the large majority of Maori who have been consulted or who have made submissions on their

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<sup>31</sup> ERMA Application GMD02028, s4.6, p.36.

<sup>32</sup> RCGM Witness Brief, sB(g), s2, s42.

<sup>33</sup> ERMA, Briefing report for incoming government. ER-BR-02-1 07/02. (2002a), 25.

views of GM, as illustrated in the above section on surveys of Maori, are not paid consultants and do not work for ERMA.<sup>34</sup>

### **Obfuscation of Tikanga**

Obfuscation of tikanga Maori also occurs in a variety of other ways. Although not an exhaustive list, below are a few brief examples to illustrate the variety of techniques used to obfuscate:

#### ***1. Is there a distinction between a human gene and a copy of a human gene?***

In the report by Nici Gibbs for the Ministry for the Environment,<sup>35</sup> she raises this very question in relation to the placing of human genetic material into a sheep and comes to the conclusion that there is no distinction for Maori. Whether a human gene is copied or not is irrelevant as Maori are kaitiaki for all things in Aotearoa. Further, it doesn't matter whether a human gene is copied or not when it is inserted into a sheep, for example, because violation of tikanga occurs at two levels: when genes are tampered with and when mixing the genes. Aroha Te Pareake Mead states further,

The practice, then, of synthetically reproducing a gene from an original for research use would not withstand cultural scrutiny, as most Maori would consider that a copy, like a mould, only exists because of an original. Without an original whakapapa, copies and variations would not exist. Isolation, reproduction or manipulation of the physical gene would not alter the perception by Maori of the whakapapa and mauri inherent and inextricable from the gene.<sup>36</sup>

As is suggested in this quote, any research with DNA sequences that constitute “genes” is inherently problematic because of the interference with whakapapa, mauri and wairua (spirit).

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<sup>34</sup> In fact, Maori have sometimes incurred great personal expense in travelling to different consultation hui, preparing submissions with little or no resourcing, and taking time off their own work to be heard.

<sup>35</sup> Gibbs, 1996: 38.

<sup>36</sup> Mead, 1997: 129.

## **2. But the cow is an introduced species so tikanga doesn't count.**

Angeline Greensill believes that this point is irrelevant, again because we are kaitiaki for everything in Aotearoa.

*When we talk about “kaitiakitanga” of our native species and other taonga [precious gifts], the commission, and the lawyers, and all these other people basically say, cows are not from here, therefore, they're not one of your taonga, and therefore you don't have a say. Well as far as I'm concerned you're in our space, this is Aotearoa [New Zealand], and everything that happens here, whether it's a cow or anything else, impacts upon us. We are responsible for everything whether it's indigenous to this land or not, they're all sharing our space, and the impacts will affect all of us. So, that's not an argument that I accept.<sup>37</sup>*

Referring to the AgResearch application process to create transgenic cows, Jacqui

Amohanga further clarifies this point.

*The cow's an interesting one because like all through that whole process, even up to today, everyone goes, “Well cows were introduced into this country. Why is it so significant to you?” Yet, a cow is still the mokopuna [grandchild] of Rangi [Sky father] and Papa [Earth mother].<sup>38</sup>*

## **3. Do my individual rights take precedence over the collective?**

This point is significant for Maori. In relation to the human genome and health, Gibbs notes, “the genome [an individual's genome] is collectively owned by the iwi, hapu or whanau. An individual must first discharge their obligations to the group and its control over whakapapa before consenting to the use of their genetic material for any uses ranging from collection of genetic specimens, to use in non-human species.”<sup>39</sup> Dr Leonie Pihama further explains that there are obligations to other whanau, hapu and iwi.

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<sup>37</sup> Angeline Greensill, research interview with the author, Hamilton, 9 March 2002.

<sup>38</sup> Jacqui Amohanga, research interview with the author, Hamilton, New Zealand, 9 March 2002.

<sup>39</sup> Gibbs, 1996: 40.

*We are really clear around nga tikanga and between individual and collective rights. What comes with those individual rights or whanau rights is that they're also obligations. We can say to whanau wanting to be involved in research, you're asserting your whanau right to do that but you also need to ensure that your whanau rights don't impinge on ours. You also have obligations back to us as well. So if you go ahead fiddling with your genes, you need to let everyone else know that that's what your whanau are doing because this whanau may not want it. We don't know what's going to happen 50 years out from now. What are we doing? That whole power of two thing where it affects the next generation... There's a tikanga, it's actually about whanaungatanga and caring and friendship. So our people don't want to say, no you can't find a cure for your uncle or aunty. And on the whole we don't say that, even the most staunch line, we would never say to your family, no you can't. But I would want them to be really clear about the particular implications for my whanau, hapu, and iwi, and Maori in general and collectively.<sup>40</sup>*

Jacqui Amohanga is clear on this point.

*Basically the whakapapa belongs to, like myself does not just belong to me, it belongs to everybody that comes on my whakapapa line.<sup>41</sup>*

Within the tikanga Maori worldview the kaitiakitanga of the human genome is a collective responsibility of Maori. If an individual, or even whanau, make a decision to enter research arrangements with others that will impact on genes, on whakapapa, then other whanau, hapu and iwi must be consulted before that decision is made.

#### ***4. Does it make a difference if GM/GE research is in the lab or containment?***

This is a non-issue for us and was a non-issue for the Nga Puni Whakapiri group we conversed with. Whether research is conducted in the laboratory or in containment is also irrelevant. The mere fact that the research is being conducted is more pertinent than where the research is taking place. The research, wherever it is conducted, is still an infringement of tikanga.

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<sup>40</sup> Dr Leonie Pihama, research interview with the author, Auckland, 13 March 2002.

<sup>41</sup> Jacqui Amohanga, research interview with the author, Hamilton, New Zealand, 9 March 2002.

## **5. There is more than one Maori view on GE**

When an argument is made that there are conflicting views on Maori interpretations of GE,<sup>42</sup> the arguers are not satisfied with the consistent results from consultations and submissions made by Maori in relation to tikanga, as demonstrated in the above section “Tikanga Maori knowledge: Consultations with Maori.” It is also important to ascertain who are the dissenting voices, as is illustrated in the sections “Reinterpretation of stories” and “Reinterpretation of tikanga.” Speaking in relation to the Royal Commission process, Dr Leonie Pihama states that when we use our own terminology, the issue is very clear for our people and there are no conflicting views.

*What we realized in part of the process of the commission was that in fact, when we bring it to our own terminology it's very clear. When we talk whakapapa [genealogy], mauri [life essence], tapu [sacred], noa [not sacred], all those concepts, and interrelationships between the various species, it's really clear. It's very clear what you do and don't do. I think we need more of that kind of submission. And in that sense, we really don't need the technical terms. But what we need in terms of the technical stuff, is that when we go onto processes like the commission, we go into debates with organizations like the Life Sciences Network, or with our own people who partner with Life Sciences, manipulating our knowledge. So the Paora Ammunson's and Tamati Cairns', those kinds of people that write for multinationals – they write about us for the interests of multinationals and pharmaceutical companies.<sup>43</sup>*

## **6. It is a responsibility to employ GE technologies in our role as kaitiaki**

GE researchers are quick to promote the potential healing powers from using this new technology, as is the case in a *New Zealand Herald* article entitled, “Potential healing power of GE potato,”<sup>44</sup> which is one of the many research projects utilising plants and animals as hosts for the production of medicines and medical ingredients. Similarly, it is disturbing when tikanga is twisted to incorporate acceptance of GE. Ammunson and Cairns highlight the potential benefits from genetic engineering for Maori,

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<sup>42</sup> For example see *NZ Herald*, “More than one Maori view on genetic engineering,” 26 October 2003.

<sup>43</sup> Dr Leonie Pihama, research interview with the author, Auckland, 13 March 2002.

<sup>44</sup> *NZ Herald*, “Potential healing power of GE potato,” 26 October 2003.

including both public health benefits and potential economic benefits, with potential kaitiakitanga benefits of GE being the most interesting. Ammunson and Cairns see genetic technologies as the way to eradicating pests and diseases, and even as a way, nay an obligation, of repopulation as part of Maori kaitiaki responsibilities.

We are also aware that some Maori groups see the potential in GE technologies to revive or protect endangered species such as native birds. The question to consider is if humans shirked their kaitiakitanga duties and were responsible for pushing some species to the brink of extinction, shouldn't we use the technologies available to use to repopulate those species?<sup>45</sup>

### *7. Fear of further acculturation if we accept this new technology.*

The issue of GM is just colonisation again in a different guise. Dr Mere Roberts surmises that Maori see the GE/GM issue as acculturation and fear the accompanying detrimental impact on culture and traditions, basically tikanga Maori.

Many Maori are therefore aware that acceptance of this new technology may possibly result in the loss or serious compromise of their traditional customs and beliefs, and this fact motivates some to hold even more closely to them. So the issue is not so much about whether GE is safe, but about the extent to which its acceptance will erode or so alter the spiritual values and hence the very fabric of their traditional beliefs, that these no longer constitute an entity or culture that is distinctly "Maori" as opposed to "pakeha" or any other culture.<sup>46</sup>

Although we agree that this issue is colonisation as usual, and Maori are concerned with the further delegitimisation of traditional culture, we think Maori are first and foremost concerned with the infringement of tikanga that results from GE research. Bound up in the notion of infringement of tikanga is the obvious interference with whakapapa through the creation of transgenic organisms for example, and the unknown risks associated with genetic engineering. This position is supported by the

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<sup>45</sup> RCGM Witness Brief, sB(g), s4, s8.

<sup>46</sup> Mere Roberts, Genetically modified organisms and Maori: A critique of the ERMA process for assessing cultural effects under the HSNO Act 1996. (2000), 20.

voices of the many consulted, as illustrated in the section “Tikanga Maori knowledge: Consultations with Maori.”

As is demonstrated here, the obfuscation of tikanga Maori occurs in a variety of forms. As Jacqui Amohanga explains, this enlisting of our own people to support biotechnology is of great concern.

*In regards to getting the message out to people, in particular from a non-colonised viewpoint, we do have kupapa [traitors] in this country that, particularly some of the ones that participate in the Royal Commission process, that came out and sort of do a whole reconstruction of some of our value systems just to justify biotechnology happening in this country. For us at the grassroots level, it's really, really hard and difficult to fight against the biotechnology industry being imposed in our country, let alone having to go through and fight against our own people that have been bought off by them.<sup>47</sup>*

Although the above is not an exhaustive list, the examples used illustrate their role in complicating the issues for Maori.

## **A MAORI METHODOLOGY FOR DEVELOPING AN ANALYSIS ABOUT GM**

Current debate about GM and other new technologies such as nanotechnology, depend largely upon the frameworks through which the analysis occurs. Maori concerns with regard to GM are partly due to having our tikanga examined reinterpreted and retold in non-Maori paradigms by both Maori and non-Maori. The reinterpretations of our tikanga to fit the western reductionist scientific paradigm, as discussed, demonstrates the dangers of using tools developed for one body of knowledge to understand another. In order to understand Maori cultural and spiritual values the challenge is to shift the debate from the western reductionist scientific risk paradigm to a Maori based paradigm.

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<sup>47</sup> Jacqui Amohanga, research interview with the author, Hamilton, New Zealand, 9 March 2002.

Similar approaches have been used in the research methodology discourse through the development and establishment of kaupapa Maori research methodologies.

Furthermore the development of relevant instruments to measure outcomes from mental health interventions for Maori, has, for example, resulted in the construction of a measure, Hua Oranga, that is based on customary Maori understandings of health<sup>48</sup>.

The development of Maori focused frameworks to assess GM and other new technologies are critical to allow Maori a decolonised, critical and relevant space to shape and form analysis. More recently a mana wahine framework to assess the impacts of new technologies has emerged. This framework has been developed by Maori women to bring a critical focus to the areas of GM relevant to mana wahine. The framework ensures that areas of importance to a mana wahine analysis such as decolonisation and emancipation are central to the frameworks analysis<sup>49</sup>.

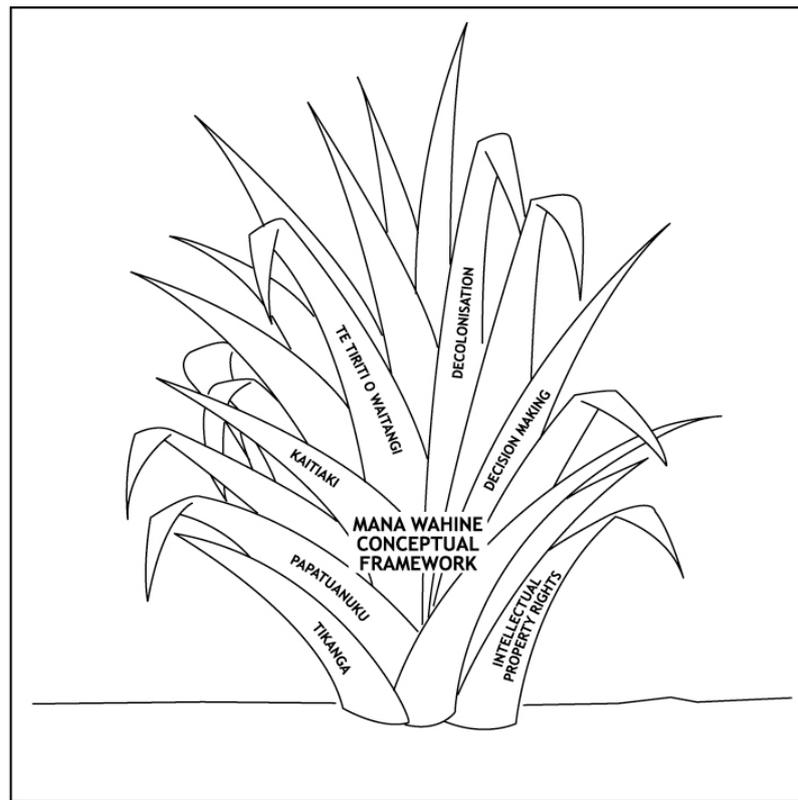
The mana wahine conceptual framework has critical focus areas. The critical focus areas of tikanga, Papatuanuku, kaitiaki, Te Tiriti o Waitangi, decolonisation, decision-making and intellectual property right are the key areas to engage with when using the framework to develop a perspective or an analysis about an event, discourse or situation. The board nature of these focus areas allows, iwi, hapu, whanau and tangata nuances to be accounted for and to actively participate in shaping the discourse of the focus areas. The critical focus areas are represented below in Figure 2

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<sup>48</sup> Durie, M. 2003. Deputy Vice-Chancellor's Lecture. Mana Tangata, Culture, Custom and Transgenic Research. Delivered at Massey University Wellington Campus.

<sup>49</sup> See Hutchings, J. 2004. Claiming our ethical space – A Mana Wahine Conceptual Framework for Discussing Genetic Modification. "Te Pukenga Korero" Vol. 8 No. 1 Summer.

Figure 2: Mana Wahine Conceptual Framework for Assessing GM



From the critical focus areas emerges questions to focus a Maori and in particular a mana wahine analysis specifically on GM.

#### Tikanga

- Is this technology congruent with our tikanga?<sup>50</sup>.
- Do the canons of tikanga Maori such as whakapapa and mauri approve the use of this technology?

#### Papatuanuku

- How does this technology protect the uha of Papatuanuku?
- Is the relationship between Maori women and Papatuanuku enhanced through the use of this technology?

#### Kaitiaki

- As kaitiaki, do Maori women approve the use of this technology?
- What are the key elements the mana wahine kaitiaki role protects?

#### Te Tiriti o Waitangi

- Does the development and implementation of this technology endorse our Te Tiriti rights?

<sup>50</sup> When referring to tikanga we also refer to the diverse tikanga amongst whanau, hapu and iwi.

- Has this technology been developed with the full participation of Maori exercising their Te Tiriti rights?
- Is Te Tiriti o Waitangi being used as one of the decision making tools in the development of this technology?

#### Decolonisation

- How does this technology assist in the decolonisation of Maori?
- How does this technology challenge hegemonic colonial masculinist ideologies?

#### Decision-making

- In what ways are Maori women recognised and supported as decision-making participants in the development of this technology?
- Are mana wahine perspectives visible and validated with regard to this technology?

#### Intellectual property rights

- Does this technology support Maori women protecting their cultural and intellectual property?
- Is our biodiversity protected from commodification?<sup>51</sup>

## DISCUSSION

Indigenous peoples from around the world have been resisting the current threat to the integrity of their knowledge and culture, to their tikanga knowledge. They call these threats ‘bio-prospecting,’ ‘biocolonialism’ and ‘biopiracy’ to express the continuation of the colonial exploitation of Indigenous communities, albeit dressed differently.

This time, genetic engineering and manipulation is the culprit. This new technology is swathed with the promise and risk of research and applications that will impact the whole of humanity.

The area of GM is highly visible in New Zealand, as has been the resistance by Maori who have been at the forefront of a broad-based opposition. Since 1998 major political contestations have emerged around the issue of GM, particularly leading up to and after the 2000 Royal Commission on Genetic Modification. The de-

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<sup>51</sup> See Hutchings, J. 2004.

legitimising of Indigenous knowledge and the privileging of Western reductionist science, underpin these contestations. In response to these challenges, government interests and biotechnology industry groups have also been legitimising the industry through processes of “consultation” and establishment of various regulatory and public consultative bodies, such as the Bioethics Council, the Environmental Risk Management Authority (ERMA), Institutional Biological Safety Committees and ethics committees.

New Zealand is in a period of rapid change in relation to the regulation and legislation of biotechnologies, with two pieces of legislation currently progressing, and in one instance already progressed, through public consultations prior to consideration by parliament. In 2004, the Bioethics Council completed consultations with the New Zealand public on the ethical, spiritual and cultural dimensions of using human genes in other organisms. In 2004 the Health Ministry conducted consultations with the public before offering policy direction to the government on a new bill that will be introduced to parliament in December 2004 to regulate the storage and use of body parts and human tissue and tissue-based therapies, including organ and tissue donations.<sup>52</sup> In 2004 also the Human Assisted Reproductive Technology Bill, known as the HART Bill, was put before parliament for passing into law.<sup>53</sup> The HART Bill was recently passed by Parliament, which now gives New Zealand the dubious honour of being the first country in the world to sanction inheritable GM.<sup>54</sup> An example of inheritable GM considered in the HART Bill is the GM of germ cells (sperm or egg) or embryos so that modified genetic makeup is passed on to the next

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<sup>52</sup> *New Zealand Herald*, “Opinions aired on tissue storage, organ donation,” 28 April 2004.

<sup>53</sup> New Zealand Ministry of Justice website, <http://www.justice.govt.nz/pubs/other/pamphlets/2003/hart/questions.html>, accessed on 14 April 2004.

<sup>54</sup> See the Center for Genetics and Society website for a brief critique of the HART Bill, <http://www.genetics-and-society.org/policies/other/newzealand.html>, accessed on 14 April 2004.

generation.<sup>55</sup> The Bill allows for pre-implantation genetic diagnosis or genetic screening which ultimately gives parents the “choice” as to whether or not they wish to prevent the birth of children with chromosomal diseases such as Down's Syndrome, and with other genetic disorders, including Tay-Sachs disease, cystic fibrosis, sickle cell disease, Huntington's Chorea, and Cooley's anaemia, most of which are single-gene disorders. This Bill will also help parents with gender selection of their children.

In response to the ideology of progress linked to biotechnology being championed by the New Zealand Government and business sector, two national Maori organisations have emerged as part of the wider resistance to biotechnology development: Nga Wahine Tiaki o Te Ao (a small but dedicated national group of Maori women) and Te Waka Kai Ora (a national Maori organics movement) as well as numerous local organizations with a similar kaupapa. The strategy here is to resist on the one hand and offer an alternative on the other.

For Maori, resistance has been framed around notions of “whakapapa,” genealogy, “kaitiakitanga,” guardianship, “mauri,” life essence, and “tangata whenua,” people of the land. Maori resistance to all forms of colonization in New Zealand, however, has existed for 164 years. This new wave of resistance to biocolonialism builds on perspectives and organizational strengths developed in the ongoing anti-colonial resistance by Maori.

## **CONCLUSION**

“If the embryo and whakapapa of future generations can be put at risk then we are seeing colonisation being extended into a whole new terrain - the human genome.”

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<sup>55</sup> *New Zealand Herald*, “Opinions aired on tissue storage, organ donation,” 28 April 2004.

Dr Cheryl Smith, Presentation to Kaupapa Maori Workshop, Auckland University, 12 November 2004.

Ultimately Maori, and other Indigenous peoples, have found that Western reductionist science takes precedence over any resistance to new technologies. Donna Ngaronoa Gardiner sees this as symptomatic of the arrogance of Western reductionist science.

In the event of a community saying no to the experiments, Western scientists view that resistance as being based on ignorance and misunderstanding of the projects aspirations. These attitudes reflect beliefs about western racial superiority – that western science knows best – even if the subjects of that science do not consent. This is also a symptom of arrogance and the belief that any innumerable number of experiments can be undertaken in the name of science. The fact that Indigenous populations may not consent because of a fundamental difference in world view is of little consequence to unscrupulous companies and scientists.<sup>56</sup>

Indigenous and Maori world-views, contrastingly, respect all life and are based on hundreds of years of knowledge accumulation and experience. Indigenous people around the world have similar conceptions of life and existence. Fundamental to this conception is that we are all merely kaitiaki or guardians on this earth for future generations, so what we do to the earth now will be felt by generations that come after us. For North American Indigenous peoples this is embodied in the concept of the seventh generation. Maori have similar terms such as “te ao hurihuri,” the world turns from the dawn to the night, and “ara mai he tete kura,” as one fern frond dies another shoot comes forth.<sup>57</sup> All of these concepts have a connectedness to whakapapa and its continuance in life’s journey.

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<sup>56</sup> Gardiner, D., N., “Hands off our genes: A case study on the theft of whakapapa.” In Cultural and intellectual property rights: Economics, politics & colonisation. Volume Two. (Auckland: IRI/Moko Productions, 1997), 54. Although we agree that Western reductionist science (Pakeha science) is problematic for Maori and other Indigenous people, there are some “good” applications of science. However, the philosophy and tikanga which reductionist Pakeha science is built on is arrogant.

<sup>57</sup> Personal correspondence with Dr Cheryl Smith, 8 September 2003.

Maori and other Indigenous people have valid and legitimate knowledge. Tikanga Maori knowledge offers a valuable framework for assessing the impacts of research projects and as principles that can offer researchers and scientists crucial guidance, as it has done for generations of Maori.

For Maori, tino rangatiratanga, or self-determination, is the ultimate goal in all resistance to power.

At the end of the day sovereignty – tino rangatiratanga is a key component in the ability to make decisions for ourselves – as Indigenous people, the ability to have the control over our own decision-making, the ability to say what ought to be held in reserve, and the ability to say what is able to be commercially used in a sustainable way.<sup>58</sup>

Resistance highlights the vitality, strength and will of Maori to incorporate the validity and legitimacy of tikanga Maori knowledge in our shared lived experience, in a collective struggle to protect the whenua (land) of Aotearoa and the entire whanau (family) of living relatives for whom it is home.

There has been a strong and consistent expression of concern by Maori about biotechnology and genetic engineering. What is evident in New Zealand is that there is little room to say “no” to research. Dissent is managed and domesticated by various processes, which include the Royal Commission on GM. Policy makers, ministers of parliament, ministries and the government are failing to deal honestly with the broad sense of unease that Maori communities have with these technologies. They are responding to the “no” response of Maori by co-option of Maori people and obfuscation of tikanga Maori knowledge. As well, the government is strongly promoting more “dialogue” and “education” of Maori communities and increasing

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<sup>58</sup> Smith, G., H., “Controlling knowledge: The implications of cultural and intellectual property rights.” In Cultural and intellectual property rights: Economics, politics & colonisation. Volume Two, (Auckland, New Zealand: IRI/Moko Productions, 1997b), 21.

funding and resources to the regulatory bodies, not for regulation of the new technology but for risk perception management. These activities are ultimately designed to domesticate Maori dissent.

Maori whanau, hapu and iwi in various fora have voiced their opposition to GM. GM is not ok; it can't be more clearer than that.