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**ORGANISATIONAL IDENTITIES AND
RATIONALITIES:
A RHETORICAL AND DISCOURSE ANALYSIS OF
ORGANISATIONAL COMMUNICATION ABOUT GENETIC
MODIFICATION IN THE NEW ZEALAND KIWIFRUIT AND
DAIRY INDUSTRIES.**

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ABSTRACT

This thesis examines how two of New Zealand's largest primary producer industries negotiated their relationship with the highly controversial practice of genetic modification. This was in an effort to maintain their dominance in export markets, at a time when genetically modified foods were on the one hand regarded as a possible liability in the marketplace, and on the other hand offered the apparent potential for innovation and economic gain.

The two case studies featured in this thesis—the dairy industry and the kiwifruit industry—both earn significant export incomes and are seen as national icons as well as major institutions for New Zealand. However, these two industries take differing positions in the debate about genetic modification. The kiwifruit industry has urged extreme caution while the dairy industry has argued for rapid involvement in genetic modification.

The research takes a critical-interpretive perspective on the two cases. The study is both issue- and case-driven, and uses a combination of rhetorical criticism and discourse analysis to examine the social construction of meanings about genetic modification. The research focus is on the intersection of public relations and organisational communication, including issues management, and especially on the ways in which rhetoric is used as a means of managing multiple organisational identities.

The research findings indicate that the positioning of these two industries on genetic modification is largely market-driven. The differences in their policies result from contrasting industry products, industry markets, and industry cultures. The values and values-related tensions, expressed explicitly and implicitly in the research data, indicate that there is a dynamic interplay between the rationalities used by the industries to justify their positioning on genetic modification and the multiple identities that need to be managed by each industry. In the kiwifruit industry, environmental concerns are highlighted by an emphasis on 'soft' pest management and organic production, and kiwifruit become a luxury raw product sold mainly to

markets in Europe and Japan. In the dairy industry, commodity milk products compete on the basis of low-cost, efficient production, and the major markets are in South East Asia and Latin America.

This thesis contributes to recent work on corporate identity and organisational communication. Significantly, it demonstrates how the blurring of boundaries between internal and external organisational communication has increased the need for a more complex understanding of how organisations manage multiple organisational identities, particularly where broader socio-political issues, including national identities and international markets, are concerned.

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CHAPTER ONE

INTRODUCTION

This thesis examines how two of New Zealand's largest primary producer industries, the dairy industry and the kiwifruit industry, negotiated their relationship with the highly controversial practice of genetic modification (GM)¹. The thesis aims to describe, analyse, and critique the principal features of these two exemplars of corporate/organisational discourse in New Zealand's GM debate, using a combination of rhetorical criticism and discourse analysis to examine the social construction of meanings about GM.

The term GM is generally given to technologies that alter the genetic make-up of an organism, whether within a species (isogenic), or cross-species (transgenic). These technologies developed following the groundbreaking research of Crick and Watson in genetic science, in the 1950s, identifying the molecular structure of DNA. GM is then a 'biotechnology,' derived from the biological sciences.

Rapid developments have taken place in both genetic and genomic sciences and there is the potential for the resulting technologies, whose implications have not been fully researched or understood, to have far-reaching social, environmental, and economic effects. GM is thus a biotechnology that is the subject of intense debate. It is contested scientifically, economically, and in terms of the environment and public health, both in New Zealand and internationally.

¹ The terms 'genetic modification' (GM) and 'genetic engineering' (GE) are used interchangeably throughout this thesis, and are not intended to privilege a particular set of meanings. 'Genetic engineering' is a term widely used in much of the literature, particularly in Europe and in New Zealand prior to the Royal Commission on Genetic Modification in 2000. Since the Royal Commission, 'genetic modification' has become the more commonly used term in New Zealand.

In 2000, the New Zealand Government set up a Royal Commission on Genetic Modification to facilitate wider understanding of the contested nature of the issues, and to inform Government policy on GM. The Commission reported in 2001, and in 2002, the New Zealand Government identified biotechnology as one of three key strategic economic development areas for New Zealand (*Growing an innovative New Zealand*, 2002). Biotechnology was defined in the associated biotechnology strategy document as:

. . . a broad term for a group of technologies that are based on applying biological processes. It involves the use of living things or their derivatives to solve problems and make products. (Ministry of Research, Science and Technology, 2002, p. 7)

GM was further distinguished in this strategy as an aspect of “modern” biotechnology: “A range of techniques from DNA technology, molecular and cellular biochemistry through to gene technology” (Ministry of Research, Science and Technology, 2002, p. 7). GM was contrasted with “traditional” biotechnologies such as fermentation applications, like cheese and bread-making, and existing animal and plant breeding techniques.

The Rationale for the Study

The research design of this study, and the decision to look at the GM debate from an industry perspective, stemmed from the findings of my Masters’ dissertation (Henderson, 2001). This suggested there was significant concern within sectors of the New Zealand public that large corporations might be driving decision-making about GM for self-interested commercial gain (Henderson, 2001; Henderson & Weaver, 2003). Given this concern, and the lack of previous research focusing on industry perspectives of GM, this study focuses on the ways in which New Zealand *industries* both affect and effect the social construction of the GM debate.

A large number of organisations, 117 in all, including a number of industry organisations, made submissions to the Royal Commission on Genetic Modification in 2000, with a range of positions represented. At the time I was deciding on the focus for this study, the Royal Commission had not made its final recommendations, and the groups presenting submissions arguing that New Zealand should invest

significantly in GM technologies included Crown Research Institutes, some universities, and many large primary production industries in New Zealand. The largest of these industries, the *dairy* industry, argued strongly *in favour* of GM.

In contrast, the majority of groups presenting submissions arguing *against* the commercial development of GM in New Zealand included activist environmental groups (for example, Greenpeace); religious groups (for example, Anglican, Catholic and Jewish groups); Maori groups; and small groups representing, for example, organic crop certification, and the protection of birds and animals; the *kiwifruit* industry seemed to be a lone industry voice taking such a *cautious* position.

From the outset of this study, I was interested in why two primary production industries with a number of *common* features, the dairy and kiwifruit industries, should take positions on GM that seemed to be diametrically *opposed*. Both industries are prominent in the New Zealand business environment and represent significant export income to New Zealand; both have formed large farmer/grower cooperatives with single marketing platforms, and collectively represent a large interest group of New Zealanders. In addition, both industries seem to rely heavily on marketing their products using brand imagery that focuses on positioning these products as healthy and natural, and on New Zealand's status as a 'clean, green' environment. The sizes of the kiwifruit and dairy industries, their importance to the New Zealand economy, and the somewhat iconic ways in which images of kiwifruit and dairy products have come to symbolise New Zealand culture and identity, both nationally and internationally, suggest that these industries have the potential to significantly influence public policy on GM. These similarities and differences suggested to me that aspects of *identity* might provide a useful lens with which to explore these industry perspectives of GM.

The study explores how the industries' positions on GM and their associated identity management and issues management practices are negotiated with stakeholders at the levels of policy development, research, production, manufacture, and marketing. In particular, the study compares and contrasts the position of each industry—expressed in formal messages, such as corporate public relations

campaigns and policy statements—and the differing understandings of industry members² within each industry group, evident in the texts of interviews. That is, within each industry, the study compares and contrasts participants' comments and the meanings negotiated by the industry groups and produced collectively, noting paradoxes or ambiguous viewpoints, any changes or ambivalent meanings represented over the period of the research, and possible relevant social or ideological contexts. The study thus explores the ways in which particular meanings legitimated and defined issues about GM for the kiwifruit and dairy industries, and how these industry positions contributed to the wider political debate and public policy-making process in New Zealand. The research, then, is issue- and case-driven, and highlights key points in the GM debate during the period from July 2000, when the Royal Commission was set up, to October 2003, when the New Zealand Government lifted a moratorium on commercial applications for GM field trials.

Of concern from the start of this study were the *values* held by these two industries. My discursive orientation toward values means that I am not concerned with *assessing* the foundational or core values of these industry organisations but focus instead on the ways in which the industries represent specific practical values (such as consumer concerns, or safety) and, in a broad sense, the importance of being 'values-based'. Each industry organisation inevitably takes values-based positions, in terms of their chosen practices and with respect to public policy on GM, given the controversy over GM both in New Zealand and internationally.

At the same time, the two industries negotiate multiple identities at the level of specific industry group, industry, and nation which invoke particular values about, for example, acceptable agricultural or horticultural practice, best business practice,

² 'Industry members' refers to all stakeholders internal to the industry concerned. The term includes growers/farmers, supplier organisations, and manufacturing employees, as well as administrative staff in the corporate industry organisations. However, not all kiwifruit industry members, for example packhouse/suppliers, are employees of ZESPRI, the kiwifruit industry organisation.

and appropriate public policy in the context of GM. The linking of industry identity with the '100% Pure' image of New Zealand, for example, would suggest a symbolic alliance with other groups concerned about the environmental impacts of GM. The study focuses on identity as both an act or process and a state of belonging (Cheney, 1983a) and on possible strategies of identification such as establishing rapport or common ground, identification through antithesis (what the organisation is not), or the transcendent use of the term 'we' (see Burke, 1973).

This organisational communication research project takes a discursive approach to explore how values function in the rhetorical positioning of these two industries in relation to GM issues. It draws on literature at the intersection of organisational communication and public relations, including issues management, and especially on the ways in which rhetoric is used as a means of managing multiple organisational identities (Cheney & Christensen, 2001b). In their issues management communication, organisations frequently highlight different values, invoking different identities, for specific stakeholder groups or audiences. For example, in relation to GM, primary industry organisations might focus on technical benefits, such as the possible reduction in spraying for pests and diseases, in their communication to their producers/growers. This would invoke a pragmatic, operational industry identity and privilege a cost-benefit approach to the issues.

The primary research question for this thesis then centres on the negotiation of 'values and values-related tensions' in the messages and discourses of these industries:

What explicit and implicit values, and values-related tensions, are evident in the organisational communication of the kiwifruit and dairy industries, as they contribute to the social construction of issues surrounding genetically modified foods and crops in New Zealand?

As the study progressed, it became apparent that the kiwifruit and dairy industries presented various logics or rationales for their positioning in relation to GM, as they negotiated with both the specific values represented in GM discourses and the function of values themselves in the GM debate. In making its submission to the Royal Commission, each industry drew on particular rationalities to argue for its own strategic positioning on GM. For example, the dairy industry drew on economic and technical/scientific rationalities, while the kiwifruit industry drew on economic and environmental rationalities. At the same time, each industry had to defend its chosen position to diverse stakeholders, including industry members, international consumers, and other interest groups concerned about GM issues in New Zealand. Each industry's representation of its strategic positioning on GM negotiated multiple forms of rationality to foster the identification of these diverse stakeholders with the industry position. Thus, I found it necessary to introduce *rationality* as an important though secondary concept in my literature review and analysis.

Rationality involves the connections between means (that is policies or processes) and ends (that is outcomes, often stated in terms of values), and Weber (1978) introduced the idea that rationalities can be multiple and contingent rather than singular and fixed. Rationality is thus relevant to this study on two levels: both in terms of the logics presented by the two industries in their policies on GM, and, at a meta-level, in terms of their negotiation of what is 'rational' in the debate and how this implicates their identity and image. The theoretical framework developed in this study thus provides a fresh way of looking at the social construction of meanings about GM. For instance, debate about GM can be seen as a rhetorical and discursive battle for identity evident in the positioning of organisations as they seek to influence public knowledge, public opinion, and public policy.

Indeed, the debate about GM in New Zealand is firmly set within a political context (Ashwell & Olsson, 2004; Hager, 2002; Rogers-Hayden, 2004; Rogers-Hayden & Hindmarsh, 2002; Weaver & Motion, 2002), and Government policy positions GM as providing potential economic advantages for New Zealand,

following the recommendations of the Royal Commission on Genetic Modification in 2001.

The New Zealand Government's public discussion paper *The New Zealand Biotechnology Strategy*, in 2002, recognised both the pace of research and the need for careful deliberation of the issues:

Developments in biotechnology move swiftly. We will need to work hard to keep abreast because those developments will bring great opportunities. They can also carry risks. It is important that a balanced approach to biotechnology is taken so that our economic, social, environmental and cultural values are given equal consideration. That is why we have developed this strategy. (Ministry of Research, Science and Technology, 2002, p.3)

However, the sense of strategic urgency evident in this statement means that policy may be implemented before sufficient research has been completed to understand the values, assumptions, and beliefs upon which the policy is built, and the breadth of the possible implications. An examination of the range of meanings constructed in the debate about GM issues is then as important as a scientific understanding of the new technologies.

It is therefore crucial that locally-based research informs public policy and debate about GM in New Zealand; although, to date, few qualitative research projects have been completed. Public opinion surveys have attempted to define attitudes to GM but projects that will contribute to an understanding of the processes involved in the construction of the debate are as yet largely incomplete and need to follow up the outcomes of the Royal Commission.

One of the key features of this project is its originality. No other research that I am aware of has completed a detailed case study of primary industries important to New Zealand export earnings, and the ways in which these industries participate in and influence the GM debate. The study is comprehensive; its comparative examination of two industries taking different positions on GM explores multiple forms of data, including documents, interviews, and focus groups with industry members. This enables a consideration of organisational identity and the representation of social values at a variety of levels, focusing on different stakeholder

groups within each industry, the industry organisations, and aspects of New Zealand's national and international identity.

This study may assist these industries in developing future decision-making and communication practices in the GM debate. It should also contribute to the growing body of knowledge that informs New Zealand policy on developing sustainable business opportunities, and contribute towards a theoretical understanding of the ways in which the GM debate in New Zealand is politically, economically, culturally, and socially constructed. My concern with how values, identities, and rationalities are expressed and function in the communication of the kiwifruit and dairy industries furthers work on the interrelations of these three foundational concepts as they function in discourse. For example, the expression of a dominant market rationality, arguing that the structure and conditions of the market requires certain policies, focuses attention on particular values, suggests certain identities in alignment with other business and governmental positions, and is represented as a 'rational' choice alongside other explicitly value-based positions such as those offered in the context of the environmental movement. The final section in this chapter outlines the organisation of the remainder of the thesis.

Preview of Thesis Chapters

The second chapter—*The New Zealand context for GM: Issues and key parties*—describes the historical development of GM issues in New Zealand, including key moments in the debate, recent New Zealand legislation, the role of the Royal Commission on Genetic Modification, the development of a policy direction, and events leading up to the lifting of the moratorium on applications for commercial field trials. This chapter also briefly introduces contexts for understanding the issues, including the prevalent political, economic, scientific, and environmental parameters of the GM debate. Finally, the two case study industries are introduced and their GM policies are summarised.

Chapter Three—*Literature Review: Theoretical perspectives of genetic modification issues - building a theoretical framework based on identity management*

and rationality—describes and critiques previous approaches to GM research, and introduces the theoretical framework for the data analysis. It highlights the advantages of focusing on the intersection of organisational communication and public relations, particularly in terms of issues management and the role of rhetoric in identity management. This includes the ways in which interest groups seek to influence multiple stakeholders and publics in an attempt to influence public policy, the rationalities they draw on to achieve this, and the ways in which activism/social movements influence which issues become significant in the public domain.

The next chapter, Chapter Four, introduces the methodology for the study and explains the ontological and epistemological basis for the critical-interpretive approach taken in this research. It discusses the combination of rhetorical criticism and critical discourse analysis used in examining the data, before explaining in detail the methods of data collection and analysis.

Chapters Five, Six, and Seven present the findings of the study, and each chapter is structured around a specific research question. Chapter Five presents a rhetorical and discourse analysis of dairy and kiwifruit industry policy on GM, Chapter Six focuses on the interplay of organisational identity and image evident in industry policy on GM, and Chapter Seven discusses the rationalities evident in the kiwifruit and dairy industries' issues management strategies through an examination of their engagement with key stakeholder groups.

The final chapter, Chapter Eight, draws together the conclusions from these findings, considers the theoretical implications of the study, and makes practical recommendations both for further research and for the dairy and kiwifruit industries' continuing negotiation with GM issues.

CHAPTER TWO

THE NEW ZEALAND CONTEXT FOR GENETIC MODIFICATION: ISSUES AND KEY PARTIES

Introduction

This chapter outlines the background to events associated with the GM debate in New Zealand. The first section briefly explains the historical development of GM issues in New Zealand through a timeline of key moments in the debate, including recent legislation, the Royal Commission on Genetic Modification, the announcement of Government policy on the technology, the general election in 2002, and the lifting of the moratorium on applications for GM commercial field trials in 2003.

In the second section, after a brief summary of the history of GM research, the New Zealand political and economic contexts for understanding GM issues are discussed, identifying concerns about potential environmental and cultural impacts, and potential scientific and economic benefits.

The final section of the chapter introduces the two case study industries: the New Zealand kiwifruit industry and dairy industry, and summarises their respective policies on GM.

A Timeline of Key Moments in the GM Debate in New Zealand

The following timeline identifies recent key events in the historical development of GM issues in New Zealand, and briefly explains the implications of each event.

A Timeline of Key Moments in the GM Debate in New Zealand

Key moments in relation to GM issues	Event	Implications
June 1996	The Hazardous Substances and New Organisms Act (HSNO Act) is introduced.	The HSNO Act provides a system for managing risks from hazardous substances and new organisms (including GMOs) in New Zealand. It came into force for new organisms from July 1998.
November 1998	Alliance MP Phillida Bunkle introduces a private members' bill calling for the labelling of GM foods.	Growing public concern about GM is widely reported in the media.
14 December 1998	The Green party launch a Safe Food campaign highlighting their policy to keep New Zealand 'GE free.'	
1998/1999	Jeanette Fitzsimons, co-leader of the Green party, argues for a Royal Commission to explore issues related to GM. Evidence of NZ involvement in GM emerges: <ul style="list-style-type: none"> (i) 'Mis'-perception that Lincoln experiments are inserting toad genes into potatoes (ii) King Salmon GM experiments create PR crisis (iii) AgResearch trials begin to insert human genes into dairy cattle (iv) Monsanto application to plant GM canola in NZ 	GM becomes a major election issue.
10 February 1999	The Green Party launch a campaign for 'GE-	

	Free' zones to be established in New Zealand.	
May 1999	Alliance MP Phillida Bunkle introduces a private members' bill calling for a commission of enquiry into GM and a moratorium on the sale of GM foods.	Continuing pressure is put on the Government to address GM issues.
5 October 1999	Jeanette Fitzsimons presents a petition to Parliament signed by 91,000 New Zealanders, calling for a commission of enquiry.	
27 November 1999	The general election results in a new Labour-led Government.	The Labour party defeats the National party after nine years in opposition and forms a coalition government with the Green Party.
29 January 2000	The United Nations Cartagena Protocol on Biosafety—a supplementary agreement to the Convention on Biological Diversity—is adopted in Montreal, Canada	The Protocol seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology. It establishes the 'precautionary principle.'
17 April 2000	The Government announces plans for a Royal Commission on Genetic Modification.	
24 May 2000	New Zealand signs the Cartagena Protocol.	The Cartagena Protocol was ratified on 24 February 2005 and came into force on 25 May 2005
July 2000	The Royal Commission on Genetic Modification commences.	This represents an opportunity for 'interest groups' to make both written and oral submissions to the Commission, and for the general public to make written submissions.
December 2000	The Australia New Zealand Food Standards Council (ANZFSC), now called Food Standards Australia New Zealand (FSANZ), agrees to a	Australia and New Zealand are amongst the first countries in the world to implement GM food labelling requirements.

	new labelling regime for genetically modified (GM) foods.	The standard 1.5.2 came into effect on 7 December 2001, but there was a 'stock-in-trade' provision until 7 December 2002.
27 July 2001	Report of Royal Commission on Genetic Modification.	
October 2001	Government announces policy on GM.	The policy advocates a precautionary approach that: <ul style="list-style-type: none"> (i) Allows for contained research (ii) Establishes a Bioethics Council (Toi Te Taiao) (iii) Sets up a two year constraint period, or moratorium, on GM applications for commercial field trials
February 2002	Government announces the policy 'Growing an Innovative New Zealand.'	The 'Growth and Innovation Framework' (GIF) has three major strands: <ul style="list-style-type: none"> (i) Biotechnology (ii) Information and Communication Technology (iii) Creative Industries.
April 2002	New Zealand Food Safety Authority compliance project on GM food labelling begins	
July 2002	The Law Commission report on liability issues associated with GM is released.	The Law Commission said it could not advise on new law until the Government decides to what extent those undertaking GM research should be held accountable.
19 September 2002	The general election results in a continuing Labour-led Government.	A minority coalition government is established between Labour, the Progressive Coalition, and United Future parties.

October 2002	The New Zealand Biotechnology Strategy is published.	
11 September 2003	The Cartagena Protocol on Biosafety enters into force after 50 statements of ratification have been received.	As of 11 May 2005, 119 statements of ratification have now been lodged with the United Nations including nations from Africa; the Asia/Pacific; Latin America/Caribbean; and Central, Eastern, and Western Europe; but excluding the United States.
29 October 2003	The moratorium on GM applications for commercial field trials ends.	
30 October 2003	An amendment to the HSNO Act, introduced in the New Organisms and Other Matters Bill, becomes law.	This allows for a new category of release called “conditional release”. The Environmental Risk Management Authority (ERMA), the body responsible for assessing applications under HSNO, can place controls on the use of GMOs approved for conditional release – for example special security fencing for animals, or requiring that a GM plant flowers at a different time from conventional crops of the same species.

Contexts for Understanding the Issues

The Development of GM Technologies

In the mid 1950s, James Watson and Francis Crick at the Cavendish Laboratory, in Cambridge, England identified the double helix molecular structure of DNA. By the mid-1960s individual chromosomes could be identified through patterning the different ratios of the four base nucleotides G, A, T, and C, the paired sub-divisions of DNA that exist in different ratios in each individual gene.

The process of gene mapping was initially slow, with only 50 genes mapped to specific chromosomes by 1973 (Rifkin, 1999). Yet, Stanley Cohen of Stanford University and Herbert Boyer of the University of California developed and patented the first cloning technique in 1975, and in 1983, Ralph Brinster of the University of Pennsylvania Veterinary School succeeded in inserting human growth hormone genes into mouse embryos (Rifkin, 1999). The Human Genome Project was launched in 1990. This international project involved 18 countries each investigating the sequencing of different segments of DNA (Enriquez & Goldberg, 2000; Rifkin, 1999). With the development of new computer sequencing programmes, this project was completed, well ahead of time, in June 2000, and mapping of many other plants and organisms is now also complete (Enriquez & Goldberg, 2000; King, 2000).

Internationally, initial concerns about GM centred particularly on the ethics of cloning. In 1991, PPL Therapeutics, a biotechnology company in Edinburgh, created a transgenic¹ sheep, 'Tracy', which produced a human protein in her milk. In 1997, two sheep were cloned from embryo cells, and 'Dolly' was cloned from adult cells at the Roslin Institute in Edinburgh, in 1998 (Ho, 1999). The potential to manipulate the genetic code of life forms now creates ongoing new possibilities for the prevention and treatment of disease, and potentially dramatic changes to

¹ The term 'transgenic' refers to an alteration to the genetic make up of an organism through transferring genes across species; the term 'isogenic' refers to the same process occurring within species.

agriculture, horticulture, forestry, and fisheries, with additional concerns about the consequent potential risks and benefits.

The rapid escalation of developments in GM science and technology has left little time for debate of the implications, with commercial development often rushed to market before the development, for example, of legal frameworks for the technology. GM crops made their commercial debut in the USA and Canada in the mid-1990s (Nash, 2000), well before any widespread discussion or analysis of their implications, because of the desire to immediately capitalise on possible benefits. Consequently, it was primarily from a commercial perspective that GM was initially understood and promoted by the science and business communities (Oram, 2000).

A number of international agreements, to which New Zealand is a party, have wide implications for the development of GM, for example, the Cartagena Protocol on Biosafety, the Earth Summit and World Trade Organization (WTO) agreements, the General Agreement on Tariffs and Trade (GATT), and the Trade-Related aspects of Intellectual Property (TRIPS) agreement. Yet, agreements setting up international frameworks for decision-making regarding GM (for example, by the Codex Alimentarius Commission, the Food and Agriculture Organization of the United Nations) are still in the development stage.

Increasingly, however, various aspects of GM are debated. First, the science itself is contested; GM techniques are described controversially as either accurate and precise (Conner, 2000) or imperfect and lacking in control (Ho, 1999). Scientists debate whether new GM organisms are biologically unstable or stable, whether GM presents a radical departure from other selective breeding techniques, and whether the new genetic characteristics of GM organisms are retained by future generations (see, for example, Davis, 1991; Reiss & Straughan, 1996; Rifkin, 1999).

Second, the risks to the environment are debated: the risk that GM products will contaminate other organisms through horizontal gene transfer, the risk that GM crops will self multiply uncontrollably, and the risk of loss of biodiversity (see, for example, Allan, Adam & Carter, 2000; Hindmarsh, Lawrence & Norton, 1998; Shiva, 1997). Environmental discourses provide a powerful alternative to scientific

and technological representations of GM. On 22 May 1992, the United Nations Conference at Nairobi wrote the text for the Convention on Biological Diversity, to protect international biodiversity. This was signed on 29 December 1993 by 168 member countries, not including the USA (Convention on Biological Diversity, 2000). The Cartagena Protocol on Biosafety, recommending that environmental policy should endorse the 'precautionary principle,' was finally agreed to and signed on 29 January 2000 by many member nations party to the Convention, but was not signed by New Zealand until 24 May 2000 in Nairobi because of New Zealand concerns about the possible effect on free trade agreements with the USA.

Third, the economic benefits of GM are contested. Arguments that GM will allow the world's hungry peoples to be fed are countered by arguments that suggest the problem of world hunger is one of unequal distribution rather than undersupply; and arguments that GM crops provide increased yields are also contested (see, for example, Campbell, 2000; Fox, 1992; Shiva, 2000).

Fourth, there is debate over the cultural impact of GM. Socio-political concerns provide another perspective on GM technology discourses, with arguments that transnational companies, and governments in the wealthy, capitalist 'North' are using GM to exploit nations in the impoverished 'South,' whose cultural and political concerns are being marginalised (Ho, 1999; Rifkin, 1999; Shiva, 1997, 2000). It is argued that traditional sustainable agricultural practices are being undermined by monoculture cropping, by the use of 'terminator' seeds by large corporations, and by the use of GM crops resistant to disease or sprays (see, for example, Evans, 2000; Jansen & Vellema, 2004; Shiva, 2000). Shiva (1997), additionally, argued that the patenting of new GM life-forms is biopiracy—the colonisation of life—and that traditional knowledge systems are being usurped; changing the patterns, for example, of indigenous agriculture and the ability of poor nations to produce traditional food crops (see also Hindmarsh & Hindmarsh, 2002). Shiva argued that the enclosure of land, forests, and rivers for private commercial gain reduces biodiversity and marginalises indigenous peoples' traditional cultural beliefs about the relationships between life-forms.

Internationally, nations can take multiple and sometimes different stances on GM. Conceptualisations of, for example, 'progress,' 'life,' and 'spirituality' reflect particular value-systems that underly a specific worldview or ideology.

Considerations of 'public good,' such as developing new medical techniques using GM technologies, and the consequent prioritisation of resource distribution, may then become problematic. Although democratic systems within Western societies such as New Zealand presuppose that all citizens have the right to be involved in discussion and decision-making related to public policy, such opportunities have not always been created.

Industrialised and affluent nations with traditions of positivist scientific research are largely at the forefront of GM technology development, yet the USA, Europe, and Japan, for example, differ markedly in their concerns about the resulting issues. As Dutton (1999) reported, European markets and consumers display more opposition to GM products than their US counterparts, and biotechnology companies still suggest that more education, and lower prices may help sway public acceptance of GM products. Rogers (1998) and Mitchell (1999), however, pointed out that as a result of highly criticised advertising campaigns by companies like Monsanto, and because of previous recent food scares, European publics are learning that facts about GM are particularly elusive, that a more important factor is developing trust in biotechnology companies.

The New Zealand Research Context

Prior to 1998, GM research was largely unregulated in New Zealand, with biotechnology research concentrated in seven universities, eleven research organisations, two producer boards, and ten individual companies (Marsh, 2000). Since 2002, the New Zealand Government has actively promoted biotechnology as part of its *Growth and Innovation Framework*. Biotechnology is a fast-growing industry in New Zealand, with nearly 50% of the 42 main biotechnology companies being created since 2000 (Cooper, 2003). The New Zealand Government has declared a commitment to biotechnology as part of the development of a knowledge

economy, listing biotechnology as one of three strands in the *Growth and Innovation Framework*, together with information and communication technologies, and the creative industries (*Growing an Innovative New Zealand*, 2002). The resulting New Zealand Biotechnology Taskforce aims to grow the number of biotechnology companies in New Zealand five-fold to more than 200, and the number of biotechnology organisations to over 1,000 (Biotechnology Taskforce, 2003).

As major exporters of primary produce to international markets, the kiwifruit and dairy industries' ability to access, and sell competitively to, those markets and provide economic returns to their owner/shareholders is paramount. However, given the contested nature of GM public policy in New Zealand, the political environment is also of crucial concern to each industry. Ultimately, decisions which will impact on both industries about if and how GM research and development will take place in New Zealand are political ones.

The New Zealand Political Economy

From the mid 1980s, the New Zealand political economy favoured a neo-liberal, free-market economic agenda with public service organisations expected to compete on equal footing with private business. The State Owned Enterprises, including Crown Research Institutes (CRI's), created as a result of government free-market policies, were required to operate with commercial objectives. This deregulation minimised the role played by politicians and interest groups in economic decisions, and resulted in increased power for the business sector (Kelsey, 1997). Both the fourth Labour Government and the following National Government were in favour of reducing state interference in markets (Simpson, 1994). In this environment, industries could operate largely autonomously, and the regulatory environment and legislation related to GM was expected to facilitate commercial research and development (personal conversation, Paul Atkinson, Research Director, AgResearch, January 23, 2003).

Phillida Bunkle, Alliance MP, and Jeanette Fitzsimons, co-leader of the Green Party, placed considerable pressure on both the National government (from

1997 to 1999) and the Labour-led government (following the 1999 election) to acknowledge concerns about the possible impact of GM on the environment. Bunkle attempted three times to introduce a food labelling bill as well as putting forward a private member's bill to set up a commission of inquiry into GM. All were unsuccessful.

The Green Party launched its policy on *Safe Food and Genetic Engineering* on 14 December 1998, a campaign for *Genetic Engineering Free Zones* on 10 February 1999, and presented a GE petition to Parliament on 5 October 1999. Both the Alliance and Green Parties were concerned at possible ecological risks to New Zealand's unique biodiversity.

However, it was three experimental research programmes involving GM, in 1999, that first really captured media and public attention. Experiments involving the 'mis'-perception that toad genes were being inserted into potatoes, GM salmon, and the insertion of human genes into dairy cattle put GM issues firmly on the public agenda. The election campaigns in 1999 then created opportunities for political debate on legislative and public policy issues related to GM. Given that the Government required an electoral mandate for controversial public policy, Fitzsimons spearheaded a further deliberate campaign to raise New Zealanders' awareness of GM (Fitzsimons, 1999, October 5). Following the election, the Labour-led Government operated as a minority coalition, supported by the Green Party which gained five seats in Parliament. This indicated significant support for Green Party policies on maintaining biodiversity and environmental sustainability, and keeping New Zealand GM free (Dann, 2000). On 17 April 2000, the minority Labour government bowed to the political pressure of the Green and Alliance Parties and initiated a Royal Commission on Genetic Modification, to commence in July 2000 (Fitzsimons, 2000, April 17).

The New Zealand Regulatory Environment for GM

In New Zealand, the regulatory environment for the development of GM products was considered, prior to the Royal Commission, to be one of the strictest in

the world. For example, it was blamed in many of the submissions to the Royal Commission for the potential loss of research scientists overseas, and seen as a barrier to maintaining research capability and a position at the forefront of cutting edge biotechnology research. This was perceived as adversely affecting New Zealand's primary production (Royal Commission on Genetic Modification, 2001).

The introduction of the Hazardous Substances and New Organisms Act (HSNO) in 1996, and the creation of the Environmental Risk Management Authority (ERMA) on 29 July, 1998, had tightened the New Zealand regulatory environment, and demonstrated growing awareness by the National Government of the need to acknowledge public concerns and support for alternative GM discourses. All GM research and field trials have to be approved by ERMA, although critics have stated that ERMA has no powers to enforce this, and the Ministry of Agriculture and Forestry (MAF), the enforcement agency, has few resources to do so (Fitzsimons, 1998, December 14). An amendment to the HSNO Act in October 2003 went some way toward addressing these concerns.

However, a report by the New Zealand Law Commission (2002) on liability issues associated with GM found that, "Current statute and common law will not ensure that all damage that could potentially be caused by GMOs will be compensated. It is unlikely that any liability regime could guarantee this" (para. 143). The Law Commission concluded that such decisions involved ethical and spiritual dimensions that were beyond the mandate of the legal system and required further widespread debate. Following this report, insurance companies may be equally unwilling to cover organisations for liability related to GM in New Zealand (Berry, 2003).

The New Zealand Royal Commission on Genetic Modification

The focus and terms of the Royal Commission required a report on:

. . . the strategic options available to enable New Zealand to address, now and in the future, genetic modification, genetically modified organisms, and products; and any changes considered desirable to the current legislative, regulatory, policy, or institutional arrangements for addressing, in New Zealand, genetic modification,

genetically modified organisms, and products. (Royal Commission on Genetic Modification, 2000)

Although the Commission ostensibly invited public comment: “We welcome you most warmly to participate in this important debate which impacts upon the future of all New Zealanders, our environment and its life forms” (Royal Commission on Genetic Modification, 2000), there were concerns that the timeframe for written public submissions and debate was too short (Fitzsimons, 2000, April 17). There were additional concerns that no ecologist was represented on the Commission (Jeanette Fitzsimons, co-leader of the Green Party, personal interview, 2000, September 28).

Additionally, media reports at the time of the Royal Commission indicated that expert witnesses, making submissions as ‘interested persons,’ believed lay publics’ views are frequently based on subjective moral values and should play no role in the ethical decisions to be made (“Public opinion not a good GM guide,” 2000). Scientists frequently argue that morality and ethics are subjective and therefore play no role in discussion about GM science (Rifkin, 1999, p. 102).

The Royal Commission was presented to the public as an opportunity for consultation, with the implication that there were choices to be made about proceeding with GM and that both the voice of ‘interested persons’ and the voice of individual members of the general public were important (Royal Commission on Genetic Modification, 2000). In fact, Rogers-Hayden and Hindmarsh (2002) argued that the way in which the Commission was set up, the processes and templates used in the collection of submissions, and the context of the analysis all favoured reductionist, modernist perspectives. They argued that the Commission marginalised the holistic worldviews in the submissions of environmental groups, and favoured submissions that privileged the role of science.

The main recommendation of the Royal Commission in its report, on 27 July 2001, was to “preserve opportunities” (Royal Commission, 2001, p. 2), that is the co-existence of all forms of agriculture, as well as opportunities for possible health,

medical, and other research benefits from GM. The report recommended limited commercial field trials of GM crops.

The Labour Government announced its GM policy on 27 October 2001, based on the Royal Commission report, seeking to control the political middle ground by allowing carefully controlled field trials for research purposes, while placing a moratorium on applications for the release of GMOs into the New Zealand environment for two years. The policy attempted to appease scientific and business concerns that New Zealand would be left behind in the internationally competitive arena of technology and product development. At the same time, it addressed Green Party and Alliance concerns that outside the laboratory GM represents unacceptable environmental risks (Clark, 2001).

The political nature of GM issues was again apparent in attempts to influence public opinion during the 2002 general election. GM became a major election issue when journalist Nicky Hager claimed that the New Zealand government had attempted to cover up the contamination of corn from imported GM corn seed, in a political crisis termed 'Corngate' (Hager, 2002; Taylor, 2003). However, at the election the Green Party's support declined. Labour again formed a coalition government but this time in conjunction with two new minor parties: a politically conservative Christian party, United Future, which gained unexpected rapid support during two televised political debates prior to the election, and the Progressive Party, a break-away group from the Alliance Party, led by long-term Labour stalwart, Jim Anderton.

Although there was a further groundswell of public protest and media comment at the time the moratorium on applications for the release of GM material was lifted on 29 October 2003, by May 2005 only three applications for field trials have been approved, with strict controls, by ERMA. The Forest Research Institute has approval for GM trees (ERMA, 2000), AgResearch has approval for field trials involving GM cattle (ERMA, 2001), and Crop and Food Research has approval for GM onions (ERMA, 2003). Media comment on GM has dramatically reduced, and public campaigns voicing concerns over GM issues have quieted. While

biotechnology and GM research and development continues, in the absence of specific events to trigger concerns, it may be that at the election in 2005, the Green Party will fail to regain the momentum of their campaign to minimise the development and impact of GM in New Zealand.

The New Zealand Economic Context

The economic value of GM to New Zealand has been hotly contested. Saunders and Catagay (2001) have commented that New Zealand is likely to have higher economic returns from “low or zero GM food production” since with current technologies and consumer preferences, there is a trend for trade to be moving away from countries producing GM food (p. 13). However, a Ministry for the Environment report in New Zealand, in 2003, looked at the economic value of New Zealand’s ‘clean, green’ image and whether this would be affected by a decision to proceed with GM on a commercial level (Business and Economic Research Limited (BERL), 2003). The report was touted by the Government as evidence of support for GM policy, with a projected small increase in gross domestic product (GDP) forecast over ten years; however, this interpretation of the report’s findings sparked intense controversy (“GE release will lift earnings”, 2003; Stock, 2003). The Green Party and the Sustainability Council of New Zealand commented that the figures could be interpreted differently, depending on the projected scenario; for example, depending on market demand, returns to farmers might vary between a projected 5.1% increase and a projected 43% decrease in earnings. Overall, the report inconclusively indicated possible effects on GDP varying between a drop of 2.4% and a rise of 2.5%.

Another report by Knight, Holdsworth, and Mather (2003) looked at perceptions of European food distributors related to New Zealand’s image and GMOs. It concluded that New Zealand has a “very highly rated country image in relation to food safety and food quality” (p. 4), but that factors involving confidence and trust are more important than a diffuse ‘clean, green’ image. There were definite negative perceptions of GM meat, milk and pasture grasses, and ambiguous reactions

to the possibility of GM crops contaminating non-GM crops. However, keeping New Zealand 'GE free' was not seen as of paramount importance. The report additionally commented that although organic products are still in high demand in Europe, they may increasingly be sought from European sources, rather than places such as New Zealand. As the New Zealand government has developed, and sought support for, its biotechnology strategy, a number of reports and discussion papers have explored public perceptions of biotechnology and GM (ERMA, 2002; Gamble & Gunson, 2002; Harsant & Kalafatelis, 2001; Hipkins, Stockwell, Bolstad & Baker, 2002; Ministry of Research, Science, and Technology, 2002; Network Communications, 2002; Smith & Montgomery, 2001). These reports concluded overall that the New Zealand general public would like more information about GM, and see more advantages in the health benefits of the technology than in GM food, agriculture, or horticulture. Indeed, there was an indication, of moderate concern in relation to food safety issues, with one third of consumers, particularly Maori and women, checking the labelling of food carefully or preferring to buy food labelled as 'organic' or 'GE free' (Gamble & Gunson, 2002).

As a result of public concerns, strategies related to New Zealand policy on GM have been the subject of much debate. The New Zealand Association of Crown Research Institutes (ACRI) asserted prior to the report of the Royal Commission on Genetic Modification that, "Genetic technology has the potential to lift New Zealand's economic performance and quality of life during the 21st century" (ACRI, 2000, p. 5). However, a Crop and Food Research Institute report (Christey & Woodfield, 2001) that claimed it is possible for GM crops and GE-free crops to coexist, given detailed guidelines and protocols, has been contested by organic growers (Chamberlain, 2001). Other reports in New Zealand have demonstrated an increase in the local market for organic produce (Campbell & Ritchie, 2002) and suggested that more farmers would support development of the organic sector (37%), with a smaller number interested in using gene technology (21%) (Cook, Fairweather & Campbell, 2003).

Bi-cultural Contexts for GM in New Zealand

As a bi-cultural nation, New Zealand needs to consider the values of both *Maori* and *Pakeha* (New Zealanders of European descent). Although Maori are reluctant to assume that they can speak for all *iwi* (tribes), common concerns about GM relate to the need to acknowledge the Treaty of Waitangi commitments held by the Crown towards Maori, the impact of GM on Maori knowledge and resources, the socio-economic impacts of GM on Maori, and the need to protect New Zealand's unique flora and fauna. There are specific concerns that GM violates important Maori cultural traditions and knowledge involving *whakapapa* (genealogy and the belief that all things in nature are connected), *mauri* (life force), and *rangatiratanga* (the right of Maori people to control their own destiny) (Jackson, 2001; New Zealand Maori Council, 2000; Tipene-Matua, 2000a; 2000b).

A discussion paper prepared jointly by a working party of ERMA and the *iwi* Nga Kaihautu (ERMA, 2002) also raised concerns that although approaches are being explored to include Maori spiritual and cultural dimensions in the decision-making processes related to HSNO, there is insufficient discussion as to whether the HSNO Act itself provides a satisfactory framework for a discussion of Maori issues related to GM.

The New Zealand Government established a Bioethics Council (Toi te Taiao) in December 2002 with the aim of "enhancing New Zealand's understanding of the cultural, ethical and spiritual aspects of biotechnology, and ensuring that the use of biotechnology has regard for New Zealanders' values" (Toi te Taiao, 2005). However, since Toi te Taiao has no decision-making powers, and technical assessments of GM risk are made by ERMA, the continued separation of technical and socio-political issues associated with GM is increasingly problematic in New Zealand.

It is clear, then, that the political, economic, and regulatory contexts for GM research and development in New Zealand create the potential for intense public debate about GM issues. Consequently, organisations and interest groups with an

interest in GM take strategic positions on the issues in an attempt to influence public policy decision-making.

First, as a nation with heavy reliance on agricultural and horticultural produce, both internally and for the export market, from an economic perspective, New Zealand must decide whether to support continued industrial development of food production. This involves competing in 'cutting edge' new technologies, such as GM, which can facilitate selling in bulk at low prices. One alternative is to promote organic food production, trading on the existing tourism marketing of New Zealand as clean, green, and nuclear free (Tourism New Zealand, 2005), since many European retail food chains like Marks & Spencer and Sainsburys now refuse to stock GM products. Denmark, for example, has already set itself the goal of being completely organic by 2020 (Oram, 2000).

Second, from a political perspective, as citizens and consumers, New Zealanders have a democratic right to know what is in their food and to debate policies that lead to the regulation of food production. At the same time current New Zealand free-trade policies make this problematic, since regulations may be deemed as trade barriers (James, 2000; Beston, 2003).

Third, many New Zealanders are increasingly concerned about environmental issues and see this island nation, far from the industrialised cities of Europe and North America as a potential GE-free haven, where the relatively unpolluted environment might become, for example, a seed bank for the rest of the world.

The following section of this chapter introduces the two case study industries explored in this study, the kiwifruit and the dairy industries, to provide further background for the analysis of the organisational communication about GM by these two industries.

The Case Study Organisations

The Kiwifruit Industry: ZESPRI

At the time of the study, the kiwifruit industry comprised independent growers and packhouse/supplier groups (some of which were owned by growers), as

well as a marketing company ZESPRI International, and research company ZESPRI Innovation, wholly owned by growers as part of the ZESPRI Group Limited². Kiwifruit New Zealand is the umbrella group of growers that licences ZESPRI International and ZESPRI Innovation on behalf of growers. New Zealand Kiwifruit Growers Incorporated (NZKGI) is the grower representative body. No kiwifruit grown in New Zealand are marketed or sold internationally independently of ZESPRI.

The following historical detail is taken from the centennial edition of the *Kiwifruit Journal of New Zealand*, edited by Webby, and published in 2004. The development of, and support for, an integrated marketing identity for the kiwifruit industry took place following a significant downturn in kiwifruit sales internationally in the late 1980s and early 1990s, which caused the industry much ‘soul-searching’ (Webby, 2004). In the late 1980s, kiwifruit were sold by independent growers to international markets through the Kiwifruit Marketing Authority, via several independent groups of exporters. Increasing competition from kiwifruit grown elsewhere in the world, for example in France, Italy, and Chile, began to erode the market advantage held by kiwifruit from New Zealand and to overtake New Zealand production, and there was fierce competition between the seven New Zealand exporters for international market access (Webby, 2004).

The decision to move to ‘single-desk’ marketing was made in 1988 with the formation of the Kiwifruit Marketing Board because growers wanted total control over all aspects of the industry. This decision was hotly debated with Government, and hard-won, since the prospect of a regulated industry sat uncomfortably in the neo-liberal political climate at that time (Webby, 2004). Government policies of this period favoured competition in industry and were suspicious of the power and inefficiency of monolithic producer boards (Kelsey, 1997).

² In this study, the term ‘ZESPRI’ is used to refer to the executive management groups in the kiwifruit industry.

Although, by 1992/1993, the kiwifruit industry returns to growers were the worst they had ever been, slowly the industry began to turn around with the increasing introduction of industry-wide initiatives. In 1997, the ZESPRI brand was developed and the marketing group ZESPRI International was separated from the industry management group, Kiwifruit New Zealand. The legislation which corporatised the kiwifruit industry was introduced in 2000, making shares in the newly formed ZESPRI Group Limited available solely to New Zealand kiwifruit growers. Under the leadership originally of Kiwifruit New Zealand, and later under the separate companies, ZESPRI International and ZESPRI Innovation, licensed by Kiwifruit New Zealand, timely and innovative systems have been set up on an industry-wide basis, in response to information derived from marketing and scientific research by ZESPRI International and ZESPRI Innovation. ZESPRI International continues to be a leading kiwifruit pioneer, owned by more than 2500 owner-producers, but ZESPRI Innovation has been restructured and research and development is now contracted to HortResearch.

The main kiwifruit crop grown in New Zealand is a variety called Hayward, marketed as ZESPRI Green fruit. A new cultivar, ZESPRI Gold, has now been developed and was first exported in 1998. ZESPRI Organic kiwifruit comprised only 3.53% of the total 65.1 million trays produced in the 2003/2004 season (ZESPRI Annual Report 2003/2004), but the voice of organic growers, and the commitment to organic production, has always been strong. Past Chairman Doug Voss, for example, was an organic grower.

The KiwiGreen integrated pest management system was progressively implemented from 1992 to 1997, along with the development of the wider ZESPRI System. These initiatives, together with Taste ZESPRI introduced in 2002, have all contributed to a very strong marketing identity for the industry within New Zealand, and a highly successful brand identity internationally (Webby, 2004).

Recent economic research by Dr Warren Hughes of the University of Waikato describes the kiwifruit industry in the following terms:

As a major player in the BOP [Bay of Plenty] economy, ZESPRI has been a driving force in the recent surge in growth throughout the region, but especially in the

Western BOP region. The profitability of the kiwifruit industry, and associated development of the supporting industries in agricultural services, engineering, road freight, packing and cool-store sectors has enabled the region to support fast population and employment growth with associated spin-offs for the region's construction sectors. (ZESPRI, 2004, September 14)

The industry generates revenues of \$1.84 billion annually, contributing more than \$520 million to the regional Gross Domestic Product (GDP). Dr Hughes' research concluded that:

. . . on a national basis, dairying (including processing) is currently slightly more profitable per worker than kiwifruit . . . [but] kiwifruit is currently much more profitable per worker for the New Zealand economy than the meat industry. (ZESPRI, 2004, September 14)

Kiwifruit are the largest New Zealand horticultural export with sales of \$911 million for the year ended 31 March, 2004. This is expected to increase to \$1 billion for the year ended 31 March, 2005, with 17 million more trays produced than last year (ZESPRI, 2004, December 21). Overall, the kiwifruit industry is a \$5 billion business contributing \$2 billion to New Zealand's GDP, and providing direct and indirect employment to over 26,300 of New Zealand's workforce.

ZESPRI currently enjoys a position as the world's leading kiwifruit brand. This luxury product is sold to lucrative markets, with major sales being in Europe and Japan. ZESPRI Green kiwifruit earned NZ\$414 million in Europe in the 2003/2004 season, compared to NZ\$168.6 million in Japan, NZ\$50.8 million in East Asia, and NZ\$23.2 million in North America (ZESPRI Annual Report 2003/2004). There have been some concerns about competition from Chilean and Italian fruit sold in the opposite season to New Zealand kiwifruit. However, ZESPRI is currently moving to year-round marketing of kiwifruit by licencing the growing of kiwifruit off-shore in the northern hemisphere.

ZESPRI is a member of the Sustainable Business Network (SBN) in New Zealand, a forum for businesses interested in sustainable development that prioritises economic growth, social equity, and environmental management. The Network's commitment to the environment aims to, "go beyond compliance through the adoption of proactive strategies to restore and enhance the environment in which we live, work and play" (SBN, 2005).

The Kiwifruit Industry Policy on GM.

The kiwifruit industry policy on GM was developed from recommendations from ZESPRI Innovation scientists and ZESPRI International marketing specialists. The industry has decided not to use any GM practices in its kiwifruit production and supply because of the current sensitivity of its major markets—Japan and Europe particularly—to GM food. This is despite the fact that no evidence is thought by the kiwifruit industry to exist at this time that suggests that GM foods might be less safe than conventional foods. However, the industry envisages no demonstrable advantages in developing GM food products for the foreseeable future, and indeed significant potential disadvantages, such as the alienation of current markets.

Because of this international market sensitivity, the kiwifruit industry believes that any *New Zealand* involvement in the commercial production of GM crops and foods would adversely affect the industry's access to international markets. After the report of the Royal Commission in July 2001, the industry urged that New Zealand retain a moratorium on *all* applications for commercial field trials of GM products, until market perceptions changed.

The kiwifruit industry appreciates that other industries might have different positions, and might perceive GM to be advantageous. Despite believing that the outcomes of GM science and technology are uncertain, the industry has no problems with the science or technology *per se*. It is happy for other industries to proceed with research at a laboratory/contained level or for specific health applications of GM. However, the kiwifruit industry itself has decided only to use genomic research to aid in identifying genetic attributes that might speed up its 'natural' breeding programme.

The Dairy Industry: NZDB/Fonterra

Although this study uses the term 'the dairy industry,' it in fact focuses on the largest of the dairy co-operatives, now called Fonterra. On June 18, 2001 shareholders voted to merge the two largest dairy companies, New Zealand Dairy

Group and Kiwi Dairies with the industry marketing organisation, the New Zealand Dairy Board (NZDB)³. These two companies comprised over 95% of the dairy industry, but two small companies chose to remain independent: Tatua Co-operative Dairy Company and Westland Co-operative Dairy Company. This study does not include data from these very small, independent dairy co-operatives, since they did not take an active role in debate about GM.

The merger, it was argued, would result in economies of scale, and reduce competition between the two main companies (New Zealand Dairy Group and Kiwi). It would ensure the new company could establish and maintain global brands, rather than being relegated internationally to being a supplier of commodities to other manufacturing businesses. The new company was envisaged as being primarily a global ingredients business. The merger resulted in the formation of a new industry organisation, the Fonterra Co-operative Group (Fonterra). This new company is co-operatively owned by nearly 14,000 New Zealand supplier shareholders (dairy farmers) and is governed by a Board of Directors and a Shareholders' Council. Fonterra comprises three operating divisions, New Zealand Milk Products (NZMP), the global ingredients business, New Zealand Milk (NZ Milk), the global consumer goods company, and Fonterra Enterprises, new businesses that comprise the research and development arm of the organisation, including ViaLactia Biosciences (ViaLactia).

ViaLactia is a commercially-focused biotechnology company, fully owned by the NZDB and later Fonterra, established in July, 1999. It conducts research based on identifying, discovering and commercialising biotechnology products for the dairy industry. Its aim is described as, "to consolidate and drive the industry's investment in biotechnology and the associated intellectual property" (ViaLactia, 2002). Initially research focused on exploring GM options on three levels involving bovine, forage,

³ The term 'NZDB' is used to refer to the dairy industry executive management group prior to the merger in 2001, and the term 'Fonterra' refers to the executive management group following the merger.

and microbe genomes. It has developed alliances to this effect with AgResearch (Grant, 2002), Orion Genomics (Lakey, Martin & Lents, 2001), and Livestock Improvement (Fonterra, 2002, September 16). However, since June 2004, Fonterra has cut the ViaLactia budget by 40%, and research is now focused on understanding relevant genomes to improve dairy production and efficiency at the bovine and pasture levels. The research in this study examined the dairy industry positioning on GM over the timeframe of the merger, that is during the last year of the existence of the NZDB, when the merger was being planned, through to the first two years after the formation of Fonterra.

Fonterra has over \$11 billion in assets, operates in 120 countries, and employs over 20,000 people, worldwide, with over 10,000 employees in New Zealand. It has 29 manufacturing sites in New Zealand and 35 manufacturing sites in other countries. Fonterra has revenues of over NZ\$14 billion a year, earns over 20% of New Zealand's export income, and generates 7% of its total GDP (Fonterra, 2001, August 27). Fonterra currently exports over 95% of its product.

Fonterra is one of the world's top ten dairy companies and contributes approximately 31% of the international dairy trade (MarketNew Zealand, 2004). It has joint ventures with other international companies including Nestle, Arla, and Dairy Farmers of America. Up to 80% of Fonterra's business is commodity products. As Craig Norgate, then CEO of Fonterra commented in a speech to the Dexcel Ruakura Dairy Farmers' Conference in 2002:

High-quality bulk ingredients will remain the core of the business in the foreseeable future. We have a competitive advantage in that business, because our on-farm productivity is second to none and because of our experiences in large-scale milk procurement, processing, management, and logistics. (Norgate, 2002, May 15)

Major markets for Fonterra are the United Kingdom, South East Asia, and Latin America, with emerging markets in China, Middle Eastern countries, and the USA. However, tariff and non-tariff trade barriers, together with export subsidies paid to producers in other countries currently impact heavily on New Zealand dairy exports (MarketNew Zealand, 2004). The top export products are milk powder, cheese, casein, and butter respectively, and the industry exports NZ\$7.06 billion worth of

products, approximately 23% by value of all New Zealand exports. However, NZ Milk has an additional portfolio of 96 consumer brands which sell to over 30 countries. The main consumer brands are Anchor, Anlene, Chesdale, Fern, Fernleaf, Mainland, Peters, Soprole, Tararua, and Tip-Top (MarketNewZealand, 2004).

New markets are currently developing for organic dairy products. In October, 2004, there were just 17 certified organic dairy farms in New Zealand, but the market is expected to support up to 250 certified organic dairy farms in the future (Rodale Institute, 2003). Recent media reports indicate that Fonterra is actively encouraging dairy farmers to convert to organic production, aiming for 17,000 tonnes of organic milk by 2009, to add \$58 million a year to the company revenue (Sherriff, 2005).

Fonterra's business strategy in late 2002 was described as involving seven themes:

. . . to retain our ability to produce dairy products at the lowest-cost possible, . . . to be the smartest player in globally traded dairy markets [this meant monitoring what products to produce, at what price and at what time of year to maximise the value of returns], . . . to build broader and deeper relationships with customers, . . . to develop innovative specialty dairy products, . . . [to] better exploit the health and nutritional benefits of milk, . . . [to] push further, harder, into the rapidly growing global foodservice sector, . . . [to recognise that] major markets will be increasingly important. (Norgate, 2002, September 12)

Fonterra seeks to maintain its position as a global leader in dairying. It is a member of the New Zealand Business Council for Sustainable Development,⁴ whose mission statement aims to "provide business leadership as a catalyst for change toward sustainable development, and to promote eco-efficiency, innovation and responsible entrepreneurship" (NZBCSD, 2005).

⁴ The New Zealand Business Council for Sustainable Development (NZBCSD) has slightly different aims from the Sustainable Business Network (SBN). Allen (2004) described the NZBCSD as embodying 'weak' sustainability, whereas the SBN embodies 'strong' sustainability. 'Weak' sustainability is based on neo-classical *capitalist* theory; aggregated capital, including human and natural resources, must be maintained intact over time to maintain production; whereas 'strong' sustainability is founded in *ecological* economics, arguing that certain properties of the physical environment must be sustained and the total stock of capital must remain constant over time.

The Dairy Industry Policy on GM.

The dairy industry policy on GM was formulated after a major strategic planning exercise was carried out by consultants McKenzie, McKenzie & Co. in 1998; this was led by the NZDB and the two major dairy companies at that time, Kiwi Co-operative Dairies and the New Zealand Dairy Group. A major concern was identified regarding the dairy industry productivity: milk production costs in New Zealand were rising and at the same time, the cost of producing milk in many competitor countries was falling. This meant that New Zealand was slipping behind its competitors in the international market place.

The strategic plan which followed resulted in recommendations aimed at increasing productivity. One of these was to form a single industry entity for marketing and manufacturing purposes, and this led to the formation of Fonterra, and the merger of the main dairy companies in New Zealand and the NZDB in 2001. A second initiative recognised that some of New Zealand's competitors were involved in biotechnology research, which was expected to result in a further decrease in their productivity costs, for example, in the USA, by using GM feed stuffs. Biotechnology was seen as an important research area for the New Zealand dairy industry, first, to create knowledge and understanding—to ensure that the industry could understand what its competitors were doing, to develop intellectual property in the area of biotechnology related to dairying, and to have the potential to use similar techniques themselves if that was required in the future. Second, biotechnology was thought to provide a possible means of increasing New Zealand dairy productivity. Third, biotechnology was thought to provide a possible means of developing new value-added products that might mean the industry was less dependent on competing in the more volatile commodity milk products market.

In the middle of 1999, a working group from the industry and the scientific community recommended to the Dairy Board that a research company subsidiary be established, which eventually became ViaLactia. The stated purpose was:

[To] urgently pursue biotechnology. . . . What we meant there by biotechnology was to understand the genomic underpinning of what was happening in plants and the

cow and in bacteria. (personal conversation, Kevin Marshall, CEO ViaLactia, September 6, 2002)

The research was to allow for both the improvement of conventional breeding of cows and the opportunity to use GM in the future.

The platform for the dairy industry positioning on GM was grounded firmly in the need to be competitive with other global dairy producers, and to preserve the opportunity for GM to be used in dairy production and research. However, it was also recognised at the time the policy was established that GM would only be used if it was acceptable to the end consumers of New Zealand dairy products.

To ensure that this new initiative in biotechnology research was understood and supported by the wider industry there was a strategic initiative to “pursue proactive communications” (personal conversation, Kevin Marshall, CEO ViaLactia, September 6, 2002). This resulted in communication campaigns within the dairy industry and statements which contributed to the wider public debate about GM. These campaigns argued that New Zealand needed to preserve the opportunity for GM to be developed commercially, and that the related legislative and regulatory framework should be made less stringent to facilitate this.

Conclusion

This chapter has summarised the historical development of GM technology and outlined the contexts for GM research and development in New Zealand to highlight the main issues that have come to surround this technology. It has also introduced the kiwifruit and dairy industries that form the basis for this study. Chapter Three next presents an overview of the GM issue-specific literature, and then discusses the theoretical framework for the analysis.

CHAPTER THREE

LITERATURE REVIEW: THEORETICAL PERSPECTIVES OF GENETIC MODIFICATION ISSUES – BUILDING A THEORETICAL FRAMEWORK BASED ON IDENTITY MANAGEMENT AND RATIONALITY

Introduction

This chapter introduces the key theoretical perspectives for this study. The first two sections look at issue-specific literature related to GM and biotechnology, to examine how GM issues have been analysed. Since the major focus of this study is on *communication* about GM, the emphasis is on research examining how GM has been talked about and represented. The major discourses associated with GM are first examined, and the main theoretical perspectives from which these have been understood are discussed and critiqued. At the same time additional theoretical perspectives that might usefully extend understanding of GM issues are highlighted.

Further literature analyses GM issues from the perspectives of media and public relations. The second section of this chapter discusses research examining how GM has been represented, and the rhetorical strategies employed in the construction of the issues. These two sections set a context for the later analysis in this study of the kiwifruit and dairy industries' communication practices in relation to GM.

The third section of this chapter presents a case for the theoretical propositions and concepts central to the analysis in this thesis. It examines in detail the theoretical underpinnings of aspects of organisational identity and identity management, and aspects of rationality relevant to this study. Organisations draw on particular discourses to create and maintain their organisational identity, and participate in a political environment where social movements, lobby groups, and activist groups may influence public policy. In doing so, they use rhetorical strategies to manage meanings about public policy issues in their organisational communication.

The final section of this chapter summarises arguments for a research approach that integrates organisational communication and public relations research perspectives on identity and identity management, and highlights the interrelationships between organisational identities, rationalities, and values to achieve a complex understanding of organisational communication about the controversial issue of GM.

Discourses of GM

As Alvesson (2004) has commented, the term ‘discourse’ is used in multiple ways in communication literature. For example, it may refer both to the details of spoken and written language texts in situated local contexts, and, in a Foucauldian sense, to the broader structures of language that constitute particular “regimes of truth” (Foucault, 1991, p. 73). Discourse is defined here as the language inherent in symbolic systems, institutional structures, and social rules and practices that constitutes forms of power which privilege specific interests and marginalise others (Fairclough, 1992; Foucault, 1988; Livesey, 2002). For example, a Western medical discourse comprises a specific technical vocabulary and a hierarchy of professional positions such as nurse, physiotherapist, general practitioner, and specialist physician. It additionally constitutes particular styles of patient/professional and professional/professional interaction that suggest differentials in power privileging the expertise of medical specialists. Although GM discourses are often represented as polarised, as pro- and anti-GM, the GM literature is wide-ranging, drawing on multiple values, and reflecting multiple discourses from different theoretical research perspectives.

Scientific perspectives of GM have represented the promise of the groundbreaking science of genomics, following Crick and Watson’s discovery of the structure of recombinant DNA (Davis, 1991; Lyon, & Gerner, 1996; Watson, 2003). This created excitement in the scientific world that has resulted in large-scale collaborative international research, for example, the Human Genome Project (Enriquez & Goldberg, 2000). Yet, such scientific developments have led to

technological outcomes which have been highly controversial. Biotechnology involves developing useful biological products for markets, the commercialisation of biological science (Aldridge 1996; Ho, 1999). Considerable research supports GM biotechnologies, citing the economic and health benefits to be accrued from these. This might be expected if such research is funded by scientific, corporate, and government interests that stand to gain financially from continuing developments in GM. However, a growing body of literature critiques these arguments, presenting alternative socio-political, cultural, and environmental science perspectives. For example, Ho (1999) suggested that the commercialisation of science has compromised the integrity of many scientists, and raised multiple issues in relation to GM and the environment, health, and agriculture. Rifkin (1999), similarly, provided a comprehensive social critique of the multiple impacts of GM on society, while Shiva's (1997, 2000) socio-political critique identified a variety of specific cultural issues related to GM. This section examines discourses of technology, risk, knowledge, and public perception in relation to GM.

Discourses of Technology and GM

One of the most prevalent GM discourses constructs GM as a 'cutting edge' technology that represents 'progress' and will bring consequent benefits to society on a number of levels. GM is frequently discussed from the perspective of technological *determinism*—technologies are considered to be inevitable developments that in turn dictate or heavily influence other aspects of society's 'progress.' In one form of this view, technological development is seen as largely or wholly positive. Such research assumes that the natural world can be vastly improved upon by man-made technologies, with an emphasis on control and *engineering* (see for example, Davis, 1991; Enriquez & Goldberg, 2000; Mannion, 1999; Oram, 2000). Considerable GM literature focuses on the technologies themselves and the strictly instrumental perspectives of those who are commercially interested, including governments, scientists and corporate businesses, and presenting the benefits (and risks) of GM technologies (for a comprehensive survey of this literature, see Uzogara, 2000).

Such instrumental research approaches often privilege the *economic* advantages of GM foods and crops for corporate business and consumers. For example, that GM crops may generate higher yields for lower production costs than conventionally-grown crops (Krueger, 2001). This literature draws on neo-liberal free-market economic discourses—that is, a preference for a ‘laissez-faire’ approach to government, with minimum regulation, facilitating autonomy for business and other major institutions to operate in a free-market environment. Such GM discourses argue for the economic advantages to producers, including new markets, the possible reduction in the use of pesticides, improved crop yields, and the resistance of crops to disease (see, for example, Conner, 2000; Hazelhurst, 2003; Krueger, 2001; Watson, 2000). For consumers, the benefits are represented as longer shelf-life of foods, improved nutritional quality, and an increased quantity of food that can provide cheaper prices and the possibility of feeding the world’s hungry (see, for example, Braun, 2002; Conway & Toeniessen, 1999; Johnston, 1999; Nash, 2000; Paarlberg, 2000). Benefits are also argued in terms of health, because of the possible commercial development of new medicines, nutraceuticals, and functional foods (Berridge, 2000; Braun, 2002; Elliot, 2000; Katan & de Roos, 2004).

However, taking a more critical cultural/economic perspective, Campbell (2000) debunked the economic argument that GM technology will ‘feed the world,’ pointing out that problems of world hunger are ones of power and distribution rather than supply and demand. Campbell argued that developed countries are trying to reduce food production in the developed world by subsidies, food ‘mountains’, and free-market policies:

People are hungry . . . not because food isn’t cheap and plentiful enough, but because these people have no means by which to even contemplate participating in the global food system. They are poor, they are resourceless, they have no access to land, they don’t have the basic entitlements required to feed themselves. (2000, p. 33)

It is somewhat contradictory, then, to be promoting GM technologies as being capable of *increasing* production.

Instrumental research identifying potential *risks* from GM technologies is also prevalent. Researchers have commented on possible changes in the nutritional quality of foods, potential toxicity in foods, and the development of allergies (Butler,

2000; Kedgley, 2000; Marks & Kalaitzandonakes, 2001). MacKenzie (1999), for example, argued that GM foods require an improved system of testing for toxicity and long-term effects. Health concerns have also been raised that resistance will develop to antibiotics, and that new viruses and toxins will be created (Butler, 2000; “How safe is safe?” 1999). Such risk concerns are informed by scientific research but are identified as largely consumer-driven (Hazelhurst, 2003; Nielsen, Thierfelder & Robinson, 2003).

The literature indicates that the scientific findings about GM technologies are contested as much as the possible economic benefits. For example, researchers argue that GM provides benefits for the environment in terms of *reduced* use of chemical pesticides and fertilisers, and bioremediation (Conway & Toeniessen, 1999; Johnstone, 1999; Krueger, 2001; Watson, 2000). Conner (2000) also argued that GM technology is very *precise*, and that safety issues are no different from those raised by traditional cultivation methods. Yet, scientific researchers equally report concerns that GM is a *random* process, resulting in unstable genes (Ho, 1999; McKenzie, 1999), and that GM crops will contaminate other crops as well as the environment, and may result in ‘super-weeds’ which require the *increased* use of new pesticides (Allen, 2000; Braun, 2002; Concar & Coghlan, 1999).

The scientifically contested impacts of GM technologies provide the basis for critical comment on associated discourses of sustainability and the conflict between environmental interests and trade/business interests. Work in progress is exploring issues of sustainability in relation to GM from the perspective of how concepts of ‘nature’ affect stakeholder approaches to biotechnology and sustainable development (Elmes, forthcoming), how sustainability discourses facilitate the legitimization of scientists’ GM research (Motion & Doolin, forthcoming), and how the ambiguity inherent in discussions about sustainability assists stakeholders in their positioning on controversial biotechnologies (Davenport & Leitch, forthcoming).

Muller (2004) pointed out that one of the underlying objectives of the Cartagena Biosafety Protocol was to address issues of sustainability, and the conflict between environmental interests and trade benefits, through the establishment of the

'precautionary principle'. Yet, countries that privilege ecological and socioeconomic factors may be seen as contravening WTO regulations, because the Protocol is contradictory when trade and environmental interests clash (Muller, 2004). Muller's critical socio-economic assessment of the Protocol argued that it does not set international standards by which to assess environmental impacts. Szerszynski, Lash and Wynne (1996) also critiqued the Bruntland Report for continuing to polarise debate about sustainability issues. They argued that although the Bruntland Report suggested that the instrumental rationales of mainstream science might be modified, it generated deterministic predictions for the management of sustainability issues that relied on the use of technologies that were equally instrumental. The resulting preference for *technocratic* environmental management, they argued, still tended to reify environmental problems, despite the mention of social scientific approaches. Szerszynski et al. suggested that reactions to the Bruntland Report have resulted in a divide between culture/nature that polarises modernist and anti-modernist approaches to sustainability issues. Moore (2001) additionally discussed current attempts by the USA to declare that moratoriums on GM products, and strict labelling regimes for such products, are illegal under the terms of WTO agreements. He pointed out that this may affect not only the food business relationships between Europe, Japan, and other nations with strict regulatory environments such as New Zealand, but extend to wider international and trade relations. Such critiques highlight the tendency for business interests to negate the wider impacts and risks associated with GM policies.

Beck (1992) has argued that business and technical/scientific perspectives of risk are increasingly privileged as a result of the continuing industrialisation of society. If rationality is defined as the links between means and ends, "between the premises of an argument and a logical or reasonable conclusion" (Cheney, Christensen, Zorn & Ganesh, 2004, p. 41), rationality can be seen as comprising logics or arguments and as an over-arching discourse. As Cheney et al. suggested, in Western cultures, being 'rational' is usually equated with being 'reasonable' and 'systematic', as opposed to being 'irrational,' 'unpredictable,' 'intuitive,' and 'emotional'. Latour (1993) pointed out that technical/scientific rationalities

frequently represent political and social concerns as myth or superstition, and separate these concerns from scientific and technical approaches to issues. Such instrumental rationalities privilege means over ends and marginalise traditional beliefs based on religion and metaphysics (Macey, 2000). They take the realist perspective that all knowledge is based on the objective experience of phenomena, and must be empirically verifiable to support the development of theoretical models which 'explain' attributes of the physical world (Brown, 2001; Latour, 1987, 2004; Segerstrale, 2000). From such perspectives, the 'facts' generated by GM research are represented as 'truths' that form the basis for decision-making about the use of new technologies.

These instrumental scientific perspectives have been extensively critiqued for assuming that science is neutral and failing to recognise that scientific discourses are themselves political in a debate sometimes termed 'the science wars' (Brown, 2001; Kitcher, 2001; Latour, 1993, 2004; Nelkin, 1984, 1995; Segerstrale, 2000; Wa Mwachofi, 1998). Rifkin (1999) critiqued many scientists' attempts to control 'nature' through GM and, like Ho (1999), noted the failure of such perspectives to consider the ecological and social implications of GM. Yet, Ehrlich and Ehrlich (1998) argued that many scientists are concerned about environmental issues. Scott and Carr (2003), for example, used cultural theory to analyse scientists' views on GM, and found that scientists take strongly polarised positions both for and against GM that depend on plural rationalities generated by diverse conceptualisations of 'nature'. Scientists seeing 'nature' as capricious or vulnerable argued that it cannot or should not be controlled by GM, while other scientists seeing 'nature' as resilient, justified the benefits of GM technologies.

In a similar political economy critique of technological determinism and biotechnology, Levidow (1998) argued that, "the neo-liberal framework of risk-benefit analysis . . . offers us a free consumer choice to buy safe genetic fixes" (p. 224). He suggested that technology is a means of *reification*, a way of treating something as concrete which is not. Levidow argued that biotechnology reifies agriculture, that talking about the efficiency of biotechnology reduces it to a

discussion of the attributes of the technology, commoditising nature in terms of quantifiable outputs (ends), through the use of a neutral technical tool (process). He suggested that the socio-political nature of the means of production becomes divorced from the commodities which are produced. Biotechnology, Levidow (1998) suggested, is constructed as value-free, rather than being seen as determined by social purposes, and creates the conditions for its own functioning through self-defining propositions.

Chapman (2004) additionally argued that technology can be seen as “world-building” rather than deterministic. Chapman’s critique of technology built on Arendt’s feminist philosophical framework to suggest that there are limits to the appropriateness of instrumental reasoning. She argued that such reasoning is appropriate for discussions about production, through work, but not about the end product, the world: “The world should not be judged instrumentally, but in terms of whether it provides a place for human action” (p. 59). Chapman, therefore, argued against the prevailing dominant framework of *risk assessment* in the consideration of technological developments such as GM, calling for a much wider appreciation of the impacts of technology. Like discourses of technology, discourses of risk reflect similarly diverse theoretical perspectives that impact on the approaches taken to GM. These discourses of risk are discussed in the next section.

Discourses of Risk and GM

As Wilkins (2001) suggested different understandings of risk—risk assessment, risk perception, and risk communication—draw on a variety of distinct theoretical approaches, including some that are solely technically focused and some that take account of diverse values.

Technical Risk Assessment.

Risk assessment in relation to GM is frequently represented in the literature as being technically or scientifically based. Tait (2001) defined scientifically-based theoretical perspectives of risk as “quantification of probabilities and outcomes, the development of quantitative models and the use of cost benefit analysis as a basis for

scientifically rational decision making” (p. 187). Burke (2004) commented that technocratic assessment of risk attempts to assess the statistical probability of harm, sometimes through a numerical value expressed as a negative power of ten (p. 27), and Wilkins (2001) defined risk assessment as “the strictly mathematical likelihood that a particular mechanism or system will malfunction within certain use parameters” (p. 164).

Wilkins, (2001), like Perrow (1984), pointed out that such risk methodologies are efficient for ‘normal accidents’ such as engineering malfunctions in mechanical equipment, but that the rules of probability on which this assessment depends become less reliable in instances such as GM, when the data set is built on limited experience or involves emerging knowledge, when the system is particularly complex (like living systems), and the system is ‘tightly coupled’ with variables that are highly dependent on each other.

Such narrowly defined technical understandings of GM risk are evident in Radin’s (2004) discussion of risk assessment, and his arguments that GM research provides the answers to questions such as “What can go wrong? How likely is it? How bad would it be?” (p. 2). They are also evident in Pires-O’Brien’s (2000) scientific discussion of GM crops and foods as being no different from other historical food production, therefore involving no greater risk. However, the commercialisation of science is blamed for cutting the timeframes for GM research and product development. The speed with which novel GM foods and crops might be introduced makes commercial GM technologies highly attractive to agribusiness. In some instances, it is argued that science serves industry needs such that the timeframes for research are compromised by commercial imperatives (“The public is right”, 2004). Ho (1999) also critiqued scientific and technical assessments that assume that GM risk can be managed, commenting, “The absence of evidence is too often taken to be evidence of absence” (p. 42). These critiques suggest that it is the *uncertainties* associated with GM that are as much a risk as those that can be calculated.

Nelkin (2001), similarly, critiqued the narrow definition of risk, which was adopted by scientists after the 1975 Asilomar Conference to allow continuing research on technical applications of GM. She argued that the focus on potential harms to health excluded wider issues surrounding the misuse of the technology, moral concerns about GM, and the possible conflict of interest created by commercialisation of GM research. Heller (2001) additionally argued that technical/scientific assessments of risk often provide a hegemonic frame for debate: a “set of statistically calculable, insurable harms assumed necessary for social progress” (p. 25). Similarly, in New Zealand, Roberts, Benton, Satterfield and Benton (2004) critiqued effects-based risk assessment and risk management legislation for failing to weigh cultural concerns, and intangible expressions of risk that acknowledge Maori spiritual values.

The major critiques of technical risk assessment thus suggest that this approach fails to consider the diverse values that are represented in other social and cultural understandings of risk.

Risk Perception.

Although Blaine and Powell (2001) identified risk perception and risk communication as important parameters in the GM debate, they still privileged technical scientific assessments of risk by their assumption that science should take a *leadership* role in incorporating public perceptions into policy development on agri-food technologies, such as GM. In contrast, Wilkins’ (2001) social science perspective acknowledged that, “Lay rationality, far from being inferior to scientific expertise, works with what scholars have termed an expanded vocabulary of risk that includes questions of culture, history and ethics” (p. 169; see also Juanillo, 2001). Wilkins’ social constructionist approach identified additional political and cultural measures of public understandings of GM risk, for example, in terms of unfamiliarity, the potential for catastrophe, uncontrollability, and unfairness. Glasner and Rothman (2001) similarly called for further ethical studies of GM risk perception, noting that these have tended to be focused on medical applications, rather than on the wider context of the globalised impacts of GM.

Boholm's (1998) comprehensive review of studies of risk perception, concluded that further research needs to be more qualitatively rich and theoretically complex, arguing that much of the existing research is simplistically empirical, and descriptive of known factual and objectively observable phenomena. Boholm critiqued the lack of cultural theorisation in many studies, commenting that such studies fit within a psychometric paradigm. This review suggested that lay publics do not rely only on statistical or probability calculations of risk. It looked at how perceptions of risk might vary from country to country, at media representations, and social background factors—such as gender, marginality, poverty, and occupation. (A full discussion of the literature focusing on public perceptions of GM forms the basis for the last section on GM discourses in this chapter.)

In contrast to technical approaches to risk assessment, and the largely instrumental approaches to risk perception, a growing number of studies take a social constructionist approach to risk—that is a relativist position that recognises the social and cultural influences on understandings of risk, and the importance of risk communication.

Risk Communication.

Studies in risk *communication* frequently theorise GM risk discourses as socially constructed. By this they mean that understandings of GM risk are subjectively constructed in meaning according to the situated context of the GM issues represented. For example, a patient suffering from diabetes who uses insulin derived using GM techniques might see GM technologies involving animals as less risk to the animal than an animal rights activist who has no similar, chronic medical condition. Palfreman (2001) called for risk communication to take account of the role of intermediaries in amplifying or minimising risk, while Palmlund (1992) argued for emotions to be treated as legitimately as facts—for a *critical* approach that critiques dominant relations of power, rather than the focus being on *functional* risk management or risk communication. Palmlund argued that:

Statements about risk serve the social function of creating separation and distance, bonding and unity. Their meaning on the surface deals with defining and comparing

risk, with communicating and persuading. On another level their meaning concerns changing or preserving the prevailing social order.” (1992, p. 202).

Palmlund theorised risk as social interaction—a political process where the control of reality is at stake.

Taking a similar perspective, Tait (2001) argued that the ‘precautionary principle’ in the Cartagena Protocol recognised that risks could no longer simply be assessed *after* firm evidence of harm (a reactive model). Science-based regulatory systems (common in the USA) were therefore modified in Europe, from purely technical, interest-based methods of assessing risk to include values-based assessment. Tait noted that concerns about environmental risks of GM are related to socio-political conditions associated with biotechnology which preclude technical assessment. The oft-used metaphor of Frankenfoods, Tait argued, defines an interest-based risk discourse when in fact risk discourses are values-based:

The underlying issues in the public debate are more about the Faustian bargain we have made, putting science, technology and the industries that increasingly control them in charge of world food production systems, with major impacts on the livelihoods of rural communities and on rural landscapes, and with no effective democratic oversight or control of their activities. (Tait, 2001, p. 185)

Tait suggested that the introduction of the ‘precautionary principle’ has allowed values-based discourses to have an increasing role in debate about GM.

In a somewhat similar vein, Davenport and Leitch (2004), taking a stakeholder perspective of risk management, theorised that organisations may primarily assess risk associated with GM from an interest-based (outcome) or identity-based (rule-generated) perspective, or both, depending on the impact of the issue. Davenport and Leitch’s ‘Issue-Impact-Action’ model suggested that the *issue* triggers perception of a threat by stakeholders to their interests, or identity, or a mixture of both. They argued that:

When interest-based stakeholders feel their interests are being threatened by the actions of identity-based stakeholders in response to an issue, they may also mobilize as identity-based stakeholders. (Davenport & Leitch, 2004, p. 4)

However, Davenport and Leitch’s research was more functionally oriented than critical, recommending different approaches to stakeholder conflict resolution. It focused on the role of the GM issue in mobilising stakeholder responses, rather than

on discussing how different aspects of identity and interest might be implicated in stakeholder actions.

Perri 6's (2005) research perspective again focused on the plurality and contextualisation of social constructions of risk, rather than seeing risk as an independent variable to be quantified or managed. He argued that people can have different understandings of the same problem (risk) without negating the idea that there is a common problem about which they disagree. Perri 6 based his theoretical understanding of risk on neo-Durkheimian institutional theory developed by Douglas (1986). This suggests that conceptual understanding is shaped in content and style by patterns of knowledge in social organisation, by the way institutions 'think'. Perri 6 modified Douglas and Wildavsky's (1982) grid model to explain how people can *move between* sense-making frames. He suggested that:

The selection of concepts, . . . their salience and relevance, the affect attached to them are all powerfully shaped . . . by crucial features of social organization. (6, 2005, p. 98)

He concluded that plural perspectives of risk are limited to the social bases that underpin how risk is framed.

As Douglas and Wildavsky (1982) pointed out, there is no objective, value-free method for assessing risk because each risk is associated with values and uncertainties. Organisational groups and cultures highlight different risks, depending on the type of organisation they belong to, their values, and worldviews. Since risks are socially selected and assessed, Douglas and Wildavsky argued, the choice of public policy to deal with risk is essentially political; for example, decisions about what evidence should count, and who should make decisions. From this critical perspective, risk can be seen as a product of knowledge and consent. As Douglas and Wildavsky explained:

Each culture rests upon its own ideas of what ought to be normal or natural . . . Debates about new technologies put into question the old perceptions of the natural and normal. (1982, p. 35).

They argued that our perceptions about 'nature' are part of our social system—fears about pollution of 'nature' are tied up in our social values, and we fear change because it would disrupt our social system. Our understanding of 'nature'—what is

natural—is then what mainstream political thought sees as natural, and increasing scientific knowledge only increases the range of uncertainty; it does not eliminate risk, only find new boundaries for its assessment (Douglas & Wildavsky, 1982). We often label things as ‘natural’ when we cannot do anything about them; if they are normal and beyond our control, they are ‘naturalised’, and this excuses us for taking responsibility or action.

If our idea of ‘nature’ is a human cultural construction, this throws into doubt the tendency of environmentalism to use ‘nature’ as a source of moral authority (Cronon, 1996). Cronon argued that ‘nature’ is a contested terrain, variously constructed as naive reality—the essence of something; a moral imperative—the way nature ought to be; Eden—a pristine paradise; an artifice or cultural construction; a virtual reality; a commodity; or demonic—earthquakes, disasters, and floods (1996, p. 51). The construction of ‘nature’ as a moral imperative, is, for example, used by GM interest groups such as the ‘GE-Free’ coalition and Mothers Against Genetic Engineering (MAdGE) in New Zealand (GE FREE NZ Ours for the picking! 2001). MAdGE and the ‘GE-Free’ coalition suggested that the impact of GM on the environment would be to create ‘natural’ forces that would be ‘out of control,’ that is to alter ‘natural’ environmental processes, for example, the potential destruction of monarch butterflies, and the creation of ‘super weeds’.

Social constructionist and critical approaches to GM risk thus consider the multiple understandings of risk derived from different value systems, which draw on the particular knowledge discourses privileged by different social, cultural, and political groups. The ways in which discourses of knowledge have been discussed in relation to GM are further explored in the next section.

Discourses of Knowledge and GM

One economic discourse of GM suggests that knowledge can be owned and commercialised. With the establishment of the TRIPS agreement by the WTO in 1994, member countries of the WTO recognised the importance of intellectual property rights on trade liberalisation. Critical research discussing government,

scientific, and corporate discourses of GM in these countries highlights the power relations created by the assumption that GM knowledge can be owned and commercialised. For example, in referring to GM, Muller (2004) represented TRIPS as an “infrastructure of accumulation, which is founded on knowledge control” (p. 16).

Worthy (1998) explored the different positions taken by Western industrial nations and developing nations with respect to the TRIPS agreement. He found that Western nations saw the agreement as “a means of promoting technological development by offering inventors and others the chance to gain rewards for their labours” whereas developing countries “considered that the purpose of intellectual property was to reinforce the economic power of the Western industrial nations and transfer wealth from the poorer countries to the richer ones” (Worthy, 1998, p. 3). Western nations thus saw GM knowledge from an instrumental economic perspective, whereas the non-West critiqued the hegemony implicit in such economic constructions.

Critical, political economy perspectives additionally represent the commercialisation of GM as the *commodification*¹ of ‘life’ (Berlan, 1989; Glasner & Rothman, 2001; Ho, 1999; Shiva, 1997, 2000). This has raised concerns about, for example, “the fate of the small farmer, and the global homogenization of culture by multinational capitalism” (Heller, 2001, p. 27). Murcott (2001) additionally suggested that when talking and thinking about food, we think too often primarily about its consumption (demand) rather than looking critically at the context of its provision (production and supply), and Adam (2000a) pointed out that socio-environmental analyses of GM foods highlight the need for a “temporal gaze” that

¹ Desmond (1995) defined commodification as involving one or more of “. . . the *appropriation* of the subject’s life force or energy and the replacement of this by non-human technology; the *colonization* of use value by exchange value; the tendency for a *veil* to be drawn over the origins of products; and finally the pursuit of a fundamentally *reductive* logic, including processes of objectification, disassembling and reassembling” (p. 722-723).

focuses on the implicit constructions of time represented in GM discourses. For example, Adam suggested that GM food production privileges time-saving, profit-making production efficiency, rather than the reproductive and regenerative capacities of the land.

In their critical study of global capitalism, Hutton and Giddens (2000) noted that, in a globalised world, the commercialisation of knowledge resulting in innovations such as GM foods is not contained within regional and national contexts. They argued that *commoditisation* is “the process by which capitalism tries to turn every relationship into a commercial exchange” (p. 17, see also Aune, 2001). In this neo-liberal political economy environment, science technologies, such as GM, are expected to participate in a free-marketplace of ideas and knowledge, as well as products.

Arguing from a socio-political perspective, for example, Shiva (1997, 2000) critiqued GM as constructed within a capitalist paradigm that she termed “biopiracy” (p. 5). Shiva (1997) suggested that patenting and monoculture cropping devalue many forms of knowledge and cultural systems, imposing Western values and interests. These are upheld by trade agreements such as the GATT agreement and the TRIPS agreement. Shiva argued that the common rights of peoples, including the right to work in traditional ways on their own lands, have been usurped by the private rights of multinationals seeking profit. Shiva (1997) argued that biodiversity is a “local common resource” (p. 67) and suggested that GM patents on forms of life represent the ultimate colonisation of life itself, enclosing the “creativity inherent to living systems that reproduce and multiply in self-organized freedom” (p. 7). She argued that ecological problems arise from applying an engineering paradigm to life. The potential loss of biodiversity, both locally and globally, resulting from GM food production, has been widely discussed (see also, for example, Christie, 1998; Ehrlich & Ehrlich, 1998; Ho, 1999; Rifkin, 1999; Shiva, 2000).

From this cultural and political economy perspective, Shiva (2000) and Ho (1999) also argued that the rich corporate businesses of the North control the international economy, and exploit nations of the South, through promoting GM,

monopoly agriculture and the patenting of seeds, and free trade demands. Shiva (2000) maintained that the enclosure of the agricultural ‘commons’ changed traditional relationships with the land, sea, rivers, and forests, and threatened the poor, women, farmers, and the Third World (p. 113). A specific example of this was discussed by Hindmarsh and Hindmarsh (2002) in their review of the development of multinational interests in Asia and GM rice production. They concluded that insufficient research has privileged local knowledge, in terms of consultation with local peoples and exploring the potential of traditional farming methods, and that this will be at the expense of the developing countries concerned, and to the financial advantage of the multinationals of the North. Glasner and Rothman (2001) pointed out that the demise of the nation state means that global entities (such as the WTO) have taken over aspects of traditionally national communication, culture, and economy. Much of what was previously defined as an aspect of ‘nature’, they argued, is now transformed into forms of “codified information” (Glasner & Rothman, 2001, p. 256).

Kurian and Munshi (2003) noted that development theorists often marginalise or ignore environmental contexts for human existence, while environmentalists often marginalise or ignore “the centrality of humans” in discussions of environmentalism² (p. 146). They drew on Plumwood’s (1993, 1995) theoretical perspectives of feminist ecology, to argue that culturally determined discourses—predominantly Western and neo-colonial—are anthropocentric, limiting the debate about GM in favour of human issues:

It is these dominant cultural pulls and pushes that marginalize the Other, leading to a decimation of not only numerous biological species of plants and animals by the creation of high-yielding hybrid varieties, but also a trampling of minority cultures and their languages, food habits and ways of doing things by a universalized T-shirt-jeans-fast-food-digital-television culture. (Kurian & Munshi, 2003, p. 158)

² Merchant (1992, 2000, 2003) argued for a similar radical ecological perspective that challenges the belief that people are free to exploit nature and to exploit others in society. She advocated a worldview where humans are in *partnership* with nature, recognising that meanings associated with nature are a social construction that changes over time.

In polarising the arguments, such discourses marginalise the ‘Other’—meaning both other cultures and the non-human environment.

Critical approaches to GM research that focus on discourses of knowledge have thus explored how representations of GM marginalise the ‘Other’; that is both other cultures, and the environment. The final section of this discussion of GM discourses examines literature focusing on public knowledge and public attitudes about GM in order to show how research has attempted to examine multiple understandings of GM.

Discourses of Public Perception, Dialogue, and GM

The existence of a considerable body of research centred on public perceptions of biotechnology and GM demonstrates both that there is concern that lay perceptions are marginalised, and that groups with a vested interest in developing GM—such as governments, scientists, and corporate business—are highly concerned about public distrust of the technology. This concern about the public distrust of GM is understandable since the continuing commercial development of GM products depends on public support (Nielsen, Thierfelder & Robinson, 2003). In Western cultures, these groups frequently take a neo-liberal public choice/rational choice perspective that suggests that in a free-market, *consumers* should decide the worth of GM. Yet, such groups also seek to ensure that consumer attitudes to GM are favourable. Phillips and Corkindale (2002), for example, suggested that innovative GM products need to be more *actively* marketed to consumers, rather than relying on the concept of substantial equivalence to non-GM foods.

In New Zealand, there has been a decline in favourable attitudes towards science, and concern about government, scientific, and corporate agendas, both specifically in relation to GM (Henderson & Weaver, 2003; James, 2003) and internationally as a result of, for example, food scares like BSE in Europe (Adam, 2000b) and environmental issues like the dismantling of the Brent Spar oil rig (Hansen, 2000).

In the next three sub-sections, I first examine literature reporting on consumer perceptions of GM risks and benefits from an instrumental perspective. Second, I look at the literature that seeks to understand consumer and public perceptions of GM, and third, I discuss recent calls for more dialogue about GM with wider publics.

Consumer Perceptions of GM Risks and Benefits.

Research reporting on public perceptions of GM takes a number of different perspectives. Attempts are made to *quantify* the extent of public support for biotechnology and particular applications of GM, as one basis for arguments for or against continued development. Gaskell, Allum, Bauer, Jackson, Howard & Lindsey (2003) found that, in the UK, rather than being generally risk averse people distinguish between different technologies, and in recent years there has been a shift towards a more positive response to biotechnology. They suggested that the public are possibly more concerned about GM foods than GM crops (food safety rather than environmental safety). Eurobarometer reports, however, also suggest that despite an increasing optimism about biotechnology in general, support for GM food and crops has simply stabilised across Europe. The majority of Europeans do not want GM food and support for GM crops is variable (Gaskell, Allum & Stares, 2003).

Additionally, largely instrumental research seeks to determine whether publics place more emphasis on the potential *benefits or risks* of GM, with ambivalent findings. Some research demonstrates that consumers are risk-averse in relation to GM foods, and that risk perception is more important to consumers than benefit perception (Gaskell, Allum, Wagner, Kronberger, Torgersen, Hampel & Bardes, 2004; Moon & Balasubramanian, 2001; Rowe, 2004). However, other research indicates that consumers are more influenced by the potential benefits of GM foods (Frewer, Howard & Shepherd, 1995, 1996) and that supermarkets in the UK could successfully sell GM foods (Moon & Balasubramanian, 2003). Miles and Frewer (2000) additionally attempted to identify the specific concerns associated with particular food hazards (BSE, GM, high fat diets, pesticide residues in food, and salmonella). They found that although health concerns were common to all food hazards, most hazards had other unique concerns, for example, animal welfare

concerns were associated particularly with BSE. However, concerns about pesticide residues and GM foods had similar risk profiles, with some indication that benefits such as cheaper food and less wastage offset risks such as unknown long-term effects and adverse effects on nature and the food chain.

Concern about the low level of support for GM has prompted more *qualitative interpretive* research aimed at understanding the underlying factors in public perceptions of GM, which recognises the need for reflexivity, pays attention to context, and seeks multiple understandings of phenomena. Fischhoff and Fischhoff (2001) concluded that people distinguish among biotechnologies, and have different means of evaluating them. They have different, strongly-held views, despite recognising their own limited knowledge. Research findings have also indicated, for example, that source credibility and trust are important determinants of consumer support for GM products (Frewer, Howard, Hedderley & Shepherd, 1999; James, 2003; Hornig-Priest, 2001), and that perceptions of the accountability of government, industry, and the regulatory process are important in determining peoples' knowledge and attitudes to applications of GM in plants (Irani, Sinclair & O'Malley, 2002). Research additionally demonstrated that negative consumer attitudes towards GM are embedded in other attitudes towards nature, technology, and alienation from the marketplace, and, therefore, not easily changed (Frewer, Scholderer & Bredahl, 2003; Glick, 2001; Grunert, Bredahl & Scholderer, 2003).

In other research exploring changes in GM risk perception in Europe, Gaskell, Allum, Bauer, Jackson, Howard and Lindsay, (2003) found that three factors contributed to risk assessment: questions about moral hazards—is it right?—democratic hazards—who is funding and controlling it?—and uncertainties—are consequences yet unknown? They suggested that trust seems to have increased, particularly for consumer groups, doctors, and farmers, since the debate has focused more strongly on the human genome, and activism against field trials may have alienated some publics, particularly those sympathetic to the recent tribulations of farmers. The discrepancies in international support for GM have also prompted research aimed at understanding, for example, why US and European Union (EU)

policies on GM foods are quite different from each other. For example, Paarlberg (2000) pitched the debate about the benefits and risks of GM as a conflict between “a cautious, consumer-driven Europe against aggressive American industry” (p. 24). Anderson and Jackson (2003) suggested that US farmers would benefit more from widespread acceptance of GM crops than EU farmers would, particularly if the USA is an early adopter, because of the greater cost of compliance in densely populated and heavily legislated Europe, and the higher levels of trust by US markets in regulatory bodies. Laget and Cantley (2001) explained that Europe, like the USA invests heavily in biotechnology research but that the regulatory environment is far more stringent in Europe, where food production is regulated throughout the entire system including farming, manufacturing, distribution, and retailing. In the USA, where regulation is primarily concerned only with the end consumer product, issues surrounding GM food production are represented by government as a trade issue. However, Laget and Cantley (2001) argued that despite the differences in US and European public opinion about GM, the differences between the two countries at a scientific level are minimal, and the differing regulatory and legislative environments are the subject of working groups, including lawyers, consumer representatives, farmers, environmentalists, scientists, industrialists, and ethicists aiming to “work out a common understanding of the definition of risk and how to regulate risk” (p. 42).

The ambivalent findings of this research literature are thus inconclusive as to the relative importance of risks and benefits in determining attitudes to GM foods and crops. They indicate that public perceptions about GM are based on multiple understandings of the issues; although there is some consistency in the importance attributed to trust in the institutions engaged in GM research and development.

Scientific Autonomy, Trust, and the ‘Deficit Model’ of Scientific Understanding.

Considerable research focuses on discourses of public understanding of science, and the history of public concerns about GM has been traced back to the time of the discovery of DNA in the early 1970s. Weiner (2001), a science historian who attended the Asilomar Conference in 1975, described the concern of biologists

at the time that the public's fears could lead to political interference, which would threaten funding and mean that scientists would lose scientific autonomy and control over research choices. Weiner commented that, at the conference, the "recombinant DNA issue was defined as a technical problem to be solved by technical means" (2001, p. 211); larger ethical issues were excluded. Although various public bodies argued for legislation to *enforce* guidelines for research, scientists argued that they had overstated the risks and eventually no legislation was passed (Weiner, 2001). Wade (1984) predicted that the early public trust in scientists evident after the Asilomar Conference would dissipate, as public debate about the ethics of biotechnology increased.

Yet, given the ideological dominance of scientific rationalism in the Western world, pro-GM scientific perspectives are still frequently privileged over lay understandings of controversial policies and public issues, and scientists have largely retained autonomy over their research. One discourse of science constructs public understanding and public knowledge of science according to a 'deficit model' which assumes that lay publics do not understand the scientific 'facts' about GM. There are arguments that if publics were given more information, they would understand the facts, then the issues would not be contested and concerns would disappear (Dutton, 1999; Johnstone, 1999).

Rabino (1994), for example, reported that German scientists perceived that negative public perceptions and strict government regulations governing GM might restrict their competitive edge in the field. He called for German scientists to "make a long-term commitment to communication and education about all aspects of their field" (p. 365). Research has called for "enhanced" risk communication between biotechnology industries and the public on the role of biotechnology in food (Wohl, 1998, p. 387), and discussion of GM technologies in crops and food has frequently focused on *explaining* GM in positivist scientific terms (Aldridge, 1996) or on strategies to *educate* consumers more effectively (Wansink & Kim, 2001).

However, Frewer, Hunt, Brennan, Kuznesof, Ness and Ritson (2003) found that scientific experts believing in the 'deficit model' of science perceived the

general public as *unable* to conceptualise uncertainties associated with risk management processes. Hines (2001), for example, commented that publics want to know scientific ‘truths’, but that scientific processes and the fragmentary, evolving nature of scientific knowledge are not well understood, resulting in a lack of trust of scientists. Frewer, Howard, Hedderley and Shepherd (1999) similarly found that credibility and trust in source institutions are important determinants of public responses to information about GM.

Blaine and Powell (2001) acknowledged that the leadership role of science might be challenged with more public education about new agri-food technologies. Yet Glick (1997) suggested that biotechnology industries’ pro-active stance in addressing the issues in the USA has resulted in greater public acceptance, despite public appreciation of both potential benefits and potential harms. Weiner critiqued scientists’ “dogma of inevitability” (2001, p. 217), calling for increased public participation to address social justice concerns, and effects on health and environmental safety. Calls for public participation in discussion of GM issues and the role of communication and dialogue in determining attitudes towards GM are still then somewhat ambivalently reported in the literature.

Public Dialogue and Participation in Decision-making about GM.

Marks (2001) commented that many scientists, industry, farmers, regulators, and policy makers were caught “off guard” by the negative European public reaction to GM (p. 152), because they continue to privilege technical and economic cost-benefit analysis of GM risks. Greenberg and Graham (2000) additionally reported growing confusion among US consumers at the proliferation of new food technologies, and recommended improved regulation and labelling of foods, particularly to clarify the disease-fighting properties of new foods, by increasing the level of disclosure of information to the public. They suggested that a common vocabulary of terms is needed, and that public information might be effectively provided through question/answer forums via the Internet. However, Scholderer and Frewer (2003) more recently found that technology driven information strategies in Denmark, Germany, Italy, and the UK have often decreased consumer preferences

for GM foods; they advocated “engaging consumers in the debate about innovation processes rather than attempting to align their views with those held by expert communities” (p. 125).

Increasingly, *critical* research perspectives focus on the politics of knowledge in debate and decision-making. In Germany, Bora (1998) pointed out that the Genetic Engineering Act (1990) originally provided for citizen participation at public hearings. However, since a 1994 amendment, decisions on release can now only be made from written submissions. Bora’s discussion theorised the difficulties in creating a *practicable* system for public participation which at the same time meets *political* expectations for participation. He concluded that decisions about how to deal with disputes about values remain unanswered and deserve further investigation.

Harvey (2004) commenting on the GM debate in the UK, suggested that technical and propositional (political and ethical) matters should be separated but *concurrent* in the debate about GM, because members of the public are out-manoeuvred by scientists on technical matters. In a similar critical vein, Rogers-Hayden and Hindmarsh (2002) critiqued the Royal Commission on Genetic Modification in New Zealand. They suggested that the processes of the Commission privileged modernist scientific perspectives, marginalising the submissions of environmentalists and the general public. Harvey (2004) suggested that the issue is partly one of problem definition; technical matters should feed into the wider debate and political decision making but not be the basis for that decision making. Yet, as Juanillo (2001) pointed out, the historical status accorded to science in defining knowledge is increasingly challenged by public perceptions about the risks of agricultural biotechnology, such that public opinion may “overwhelm the voice of science and become the principle basis for regulatory and policy decisions on agricultural biotechnology” (p. 1246). Juanillo advocated continuing dialogue between scientists and technical experts and the public, to appreciate the role of biotechnology in society and the social and cultural meanings attached to biotechnology.

There are increasing calls, then, for more public dialogue about GM, rather than simply the communication of more information (Braun, 2002; Ellahi, 1994; Gregory, 2003; Nelson, 2001; Reiss & Straughan, 1996). Tannen (1998), like Isaacs (1999), contrasted dialogue with debate and discussion, arguing that discussion seeks closure and fosters competition, while debate obscures overlaps in thinking, obscures complexity in research, implies only one framework can be applied, takes sides, and prevents paradigm shifts. This theoretical position suggests that constructing communication about GM as *debate* contributes to the polarisation of opposing positions on GM issues, narrowing discussion to a competition for the 'best' solution or public policy position. Such debate may occur between interest groups working within different theoretical paradigms, taking, for instance, scientific or socio-political approaches to the issues. In contrast, Isaacs (1999) defined *dialogue* in terms of relationships, as shared inquiry that not only solves problems, but dissolves them: "the intention of dialogue is to reach new understanding and, in doing so, to form a totally new basis from which to think and act" (p. 19). Dialogue, it is argued has the potential to inform GM policy through a consideration of multi-disciplinary approaches which more effectively respond to the complexity of the issues involved in the research and development of GM science and technologies. That is dialogue may facilitate approaches which address the concerns of, for example, business interests, scientific researchers, environmental groups, and consumer groups to find new solutions to problems surrounding the implementation of GM technologies.

Studies investigating possible models of dialogue-based decision-making are ongoing, and examples include citizens' juries and consensus fora, as suggested by Rose (2000) in relation to GM health issues. Recent research funded by the Ministry of Science, Research and Technology in New Zealand is currently exploring ways in which dialogue can be facilitated in the biotechnology/GM debate (Cronin & Jackson, 2004; Roper, Zorn & Weaver, 2004).

This discussion of research exploring the different discourses associated with GM has demonstrated how such research contributes to theoretical understandings of the practical issues that arise from the new technology. GM discourses that privilege

economic and technical/scientific perspectives of GM technologies are increasingly contested, as are technical assessments of GM risk. Socio-political critiques of GM discourses equally take a political economy perspective that examines how the commercialisation of GM marginalises the 'Other'. In Western nations, there are increasing calls for dialogue that fosters public participation in decision-making about GM and acknowledges the diverse understandings of GM that represent multiple value systems.

Further literature considers how meanings about GM are rhetorically constructed to understand the role of persuasion and influence in the construction of contested GM issues. Katz (2001), for example, argued for more rhetorical and qualitative analysis of communication about GM. The next section discusses literature exploring media representations, and public relations and issues management campaigns in the context of GM.

Rhetorical Representations of GM

Media Representations

Media coverage of GM is of interest because of media's possible role in mediating understandings of GM issues. The literature discussing media representations of GM covers three distinct fields: the impact of media institutions and practices on coverage of GM issues, the impact of media coverage of GM on public understanding and attitudes to GM, and analyses of the actual rhetoric involved in media coverage.

Media Institutions and GM.

A number of researchers have highlighted the role of the structure and traditions of news media institutions in coverage of GM and biotechnology. An interpretive study by Logan (2001), for example commented that GM articles may be assigned to particular news 'beats'—routine areas that journalists normally cover—emphasising specific aspects of the issues. Logan argued that food biotechnology news has often been represented as an agriculture, food, or business story, and called for *more* coverage by science journalists. In contrast, Schenk and Sonje (2000) found

that journalists tend to report GM issues, largely from science perspectives, and positively, regardless of their own interest or expertise in the subject. Journalists' representations of GM were influenced by their positive perceptions of the scientific and social competence of their extensive natural science networks, a largely homogenous group of GM supporters. Yet, surprisingly, Schenk and Sonje noted that journalists still considered themselves "neutral conveyors" of information to the general public (p. 342).

Ten Eyck and Willimin's (2004) extended survey of journalism practices in relation to three food technologies, milk pasteurisation, food irradiation, and biotechnology, indicated a consistent journalism style, with similar experts quoted, similar underlying cultural resources, and similar storylines. Recurrent themes relied on frames of progress, highlighting benefits in terms of production efficiency, health benefits, and safer food; frames of consumer choice and consent, highlighting concerns about food sources and processing, and food taste; and frames related to legislation governing health and safety. Ten Eyck and Willimin theorised that journalists' interpretive frames both reflect and help to shape societal values about food technologies, and that these centre on the safety, flavour, origin, and handling of food.

Other research also emphasises the media's agenda-setting role. Palfreman (2001), for example, discussed the role of journalists as risk amplifiers and risk minimisers in the agricultural biotechnology debate. He found that journalists may 'sharpen' risk findings about agricultural biotechnology, and may 'level' the caveats in a report (Palfreman, 2001, p. 175). Similarly, in the GM debate in Europe and the USA, Marks and Kalaitzandonakes (2001) found that media frames such as biosafety and food safety were emphasised at different points in time, depending on concurrent events and risk management controversies.

Hornig-Priest (1994, 1995) suggested that information subsidies from scientific institutions (both research/universities and industry) may be more influential on journalists than information subsidies from other sources. Media then may over-represent the rationalist perspective of these institutions, framing their

accounts as the need to educate lay publics. Hornig-Priest (1995) criticised media accounts of biotechnology for being one-sidedly concerned with potential benefits, for example, for research institutions, or industries' economic bottom line, and argued for information equity and much broader debate. She commented that media influence results from the long-term framing of multiple issues surrounding science and risk, and theorised that media frames thus limited the terms of the public debate to science development issues (Hornig-Priest, 1994). Hornig-Priest's (2001) study of media coverage of the cloning of Dolly the sheep, however, indicated a shift in mainstream newspaper coverage to include ethical considerations of GM.

Nelkin (2001) also commented on the agenda-setting role of media, in acting as brokers between scientists and the public. She noted that the "extravagant headlines and promotional hype" (p. 200) used by media to report on gene therapy, and frequent reference to the genetic basis for behaviour was evidence of a bias towards biological determinism, and indicated journalists' tendency to cite a provocative theory as fact. Yet, she commented, journalists have also warned about the commercial drivers of biotechnology research, and report on commercial applications of the technology with growing cynicism.

News values also provide the theoretical perspective for Motion and Weaver's (2005b) critical analysis of media relations by the environmental activist group Greenpeace. Motion and Weaver noted that organisations such as Greenpeace have often succeeded in commanding media attention but have not always been successful in "claiming or securing legitimacy" in the resulting media coverage (2005b, p. 3). Their account of how Greenpeace attempted to mobilise consumer pressure by creating common knowledge about GM food in the New Zealand debate, indicated that media relations can be theorised as an epistemic struggle for credibility. Greenpeace had to understand and manage news values in order to balance their ability as an activist group to set agenda issues with their ability to establish the critical knowledge and dominant frame for those issues.

This literature suggests that media tend to privilege scientific perspectives of GM; that although there is some indication that media present critiques of such

perspectives, alternative viewpoints still struggle to gain credibility in media coverage of GM issues.

Media Coverage and Public Understanding of GM.

Hornig-Priest has contributed a significant body of interpretive research focusing on media influences on public knowledge and understanding about biotechnology. Her early work looked at audience and reader responses to science and technology stories, highlighting lay concerns about the impacts, control, and possible misuse of science and technology (Hornig, 1990, 1992). Hornig's (1993) analysis of lay perspectives of technological risk (that included GM) indicated that lay understandings went beyond numerical probability assessments. They were not 'misinterpretations' but resulted from "an expanded vocabulary of risk" based on social context and included ethical issues relating to the implementation and regulation of the technology (Hornig, 1993, p. 95). Hornig-Priest and Gillespie (2000) additionally commented that opposition in Europe and the USA to food biotechnology is often blamed on media accounts. They argued, however, that experts debate the issues, so public opposition cannot be attributed to poor understanding of the issues or "sensationalistic media accounts," particularly when media are more likely to over-represent mainstream stakeholder perspectives of the potential benefits of biotechnology (Hornig-Priest & Gillespie, 2000, p. 529). They raised important issues related to the ethics of objectivity in scientific journalism.

In a further study, Hornig-Priest (2001) noted that public opposition to biotechnology is less the result of misunderstanding or media representations of risk than a lack of faith in key regulatory, science, agriculture, and biotechnology institutions. From the perspective of media effects theory, she argued that, rather than a 'magic bullet'—that is an immediate and direct effect on public attitudes—media create a 'cultivation' effect that contributes to the social construction of reality, (Hornig-Priest, 2001, p. 105). In this sense, "cultivation analysis" is an attempt to assess the contribution of common and repetitive features of media representations of phenomena to public perceptions and knowledge over a period of time (Gerbner, Mowlana & Schiller, 1996, p. 30). However, Hornig-Priest cautioned that while trust

in institutions is important, it cannot be marketed, and suggested a watchdog role for science journalism that stresses “the public service obligation of the scientific community” (Hornig-Priest, 2001, p. 108).

The Rhetoric of Media Representations.

Studies of the rhetoric of media representations of GM demonstrate the range of strategies used to create persuasive appeals, and have argued, for example, for serious consideration of the contribution that entertainment (fiction) makes to public perceptions about GM (Gorke & Ruhrmann, 2003; Henderson 2001). Media often draw on fictional representations of GM, such as Gattaca, and Frankenstein—for example, in the use of the term ‘Frankenfoods’ (Douglas, 2000; Tait, 2001)—to highlight particular storylines about current issues. Henderson (2001) found that the general public drew on fictional representations of GM from entertainment media to highlight their own concerns and understandings of the issues. They viewed science fiction as a worthwhile source of information, since it presented a way of dealing with issues that were seemingly insurmountable. Henderson suggested that science fiction may assist in shaping understanding of future technologies, and ideologies in science fiction may legitimate particular GM discourses. Gorke and Ruhrmann (2003) additionally suggested that news media and entertainment may be complementary in their contributions to public communication about GM, while Hornig-Priest (1995) noted that the blurred distinctions between fact and fiction in docudramas and tabloid news indicate that science fiction may provide a social context for the interpretation of news about GM.

In a more critical study of media representations of the GM debate in New Zealand at the time of the general election in 2002, Ashwell and Olsson (2004) found that although public policy on GM was ostensibly the focus of debate, issues of political party credibility were in fact the main drivers of the rhetorical strategies in media comment on GM. They argued that the Government rhetoric of deliberation, balance, and partnership in managing the implementation of GM, combined with Act Party rhetoric constructing the Green Party as eco-terrorists, focused less on the

issues of the debate than on issues of the election. This highlighted the values and roles of the main political parties, rather than values associated with GM. Critical media research by Adam (2000a), from the perspective of the sociology of 'time,' additionally suggested that media arguments about GM issues are "time-blind" (p. 130). She argued that media reports ignored or negated time issues, and called for timescape analysis that examines how time enters our system of values. For example, Adam argued that the social construction of time is evident in phrases like 'time is money' and 'speed is of the essence' that may be used to support arguments for the rapid adoption of GM technology, and reflect neo-liberal managerialist discourses. Such managerialist discourses emphasise growth, productivity, quality, and continuous improvement in a fiercely competitive, market-driven environment, and, it is argued, prioritise profit at the expense of other values (Capelli, Bassi, Katz, Knoke, Osterman, & Useem, 1997; Henderson, 2003). Time, Adam argued, provides a context for social analysis of the values associated with GM in terms, for example, of timeframes, temporality, tempo, timing, duration, and sequence.

Although it is not comprehensive, this literature suggests that media rhetoric draws on a limited variety of strategies to represent GM. In addition to favouring scientific perspectives of the issues, media construct GM in terms of fictional and political 'stories', and may privilege managerialist rhetoric.

The final section of this discussion of the GM-specific literature examines how particular interest groups have attempted to influence debate about GM issues. This includes a discussion of reputation management, public relations and issues management campaigns, and activist campaigns in relation to GM.

Public Relations, Issues Management and GM

GM issues are not only debated in the media, they are communicated through public relations activities and controlled media, as interest groups including government, industry, and activist groups attempt to influence debate about GM issues. Rakow (1989) argued that organisations, institutions, and interest groups

control information, competition for resources is not equal, and experts have taken over the role of deciding the direction of social reform. As Leitch and Neilson (2001) also noted, 'expert' organisations have opportunities to lobby government, government advisory bodies, and regulatory authorities directly. They act as consultants, conduct research, and provide reports which impact directly on government decision making about public policy. Decision-making on public issues may then reflect the opinion of the most influential and involve a re-shaping of the 'truth' through the shaping of the majority public opinion (Carey 1995) and the provision of 'information subsidies' (Gandy, 1992). Gandy suggested that powerful social actors can provide information to support their claims through intermediaries such as the media, scholars, and scientists. Such information is often presented as in the public interest and may frame initiatives in ways that reduce the perceived value of alternatives.

Reputation management.

Research examining reputation management in biotechnology companies confirms the importance accorded to source credibility in establishing consumer trust in GM (Frewer, Howard, Hedderley & Shepherd, 1999; James, 2003; Hornig-Priest, 2001), but is largely instrumental in approach, examining industry initiatives from a functional rather than a critical perspective. Kato and Macer's (2002) interpretive study found that biotechnology companies were concerned about possibly distorted views of the industry in the media, and were therefore keen to provide information to the public, but not all companies were as ready to address bioethics issues within the industry, for example, by setting up bioethics committees or educating their employees about bioethics issues.

Instrumental approaches to reputation research recommend particular reputation management strategies for biotechnology companies. Moon and Piper (2001), for example, constructed reputation management as *risk* management for biotechnology companies, noting companies' responsibilities to identify the organisation's values and stakeholder expectations, and to encourage responsible business practice by expecting minimum standards of behaviour from *employees*.

Gurau and McLaren's (2003) study noted the dual role of company websites in marketing and public relations; that is, in presenting a particular series of images to consumers and establishing particular identifications of employees and other stakeholders. They recommended the projection of a positive corporate image which at the same time presented the possible risks associated with the biotechnology.

Grupp and Gaines-Ross (2002) noted that biotechnology companies' focus changes as they move from research and development into production. They recommended that companies build and manage corporate reputation at every stage of the industry value chain, by being sensitive to, and responding to, shifting perceptions within and outside the industry, at the level of CEO, senior management, sales and marketing, research, and product development.

Although such studies often seek to maintain the influence of corporate business, this literature suggests an awareness of the role of values, both values within the organisation and values held by key publics, in determining corporate reputation in biotechnology companies.

Public Relations and Issues Management Campaigns.

The significance of public relations campaigns in influencing debate about GM issues is evident in literature discussing public relations initiatives by both supporters of GM and activists concerned about GM. Indeed, Partch (2000) described consumer activist demonstrations at US supermarkets calling for testing and labelling of GM foods as "the public relations disaster of all time" for GM science (p. 98).

The *strategies* used by biotechnology industries to promote their GM product development effectively are the subject of increasing research and comment aimed at recommending best practice public relations for biotechnology companies. Jones (2000), for example, highlighted attempts by high-profile pro-GM supporters in public institutions and government roles in the UK and USA to foster support for GM foods by *attacking* the thriving organic food industry, in an attempt to counter increasing public suspicion of GM foods. In contrast, Kilman (2000) commented that a similar advertising campaign by the US biotechnology industry used *soft-focus*

pictures to illustrate the benefits of biotechnology. However, he suggested that this campaign still risked alienating consumers because it was funded by biotech companies deemed to have a vested interest in GM. Another study by Monbiot (1999) critiqued the efforts of the UK Government and scientific community to convince consumers of the safety of GM foods. Monbiot suggested that the flaw in biotechnology companies' public relations campaigns was their reliance on negative claims. For example, the campaigns represented GM as *not* affecting human health or the environment, rather than citing positive benefits. This, he argued, compounded consumers' negative perceptions of GM.

Other analysis of GM public relations campaigns takes an interpretive or critical perspective, rather than an instrumental perspective, both of biotechnology companies and other interest groups participating in public debate. Weaver and Motion's (2002) critical public relations case study of the King Salmon company, in New Zealand, suggested that the public relations practices of corporate businesses and governments are political strategies, underpinned by neo-liberal ideologies, in an attempt to influence consumer perceptions. Weaver and Motion commented:

In a neo-liberal political economy, public relations may be used to promote wealth creation as a public interest priority above and beyond the public's right to be informed about the possible negative consequences of wealth creation initiatives. (Weaver & Motion, 2002, p. 325)

However, in this particular case, Weaver and Motion commented that media coverage of the events eventually increased public knowledge, public debate was enhanced, and the need for more democratic decision-making practices about GM was highlighted.

In another critical analysis, this time of the public relations initiatives of a science/industry front group in New Zealand—the Life Sciences Network (LSN)—campaigning for commercial development of GM, Motion and Weaver (2005a) suggested that public relations practitioners play the role of discourse technologists. In doing so, they shape 'regimes of truth'—particular taken-for-granted meanings that privilege the institutions, rules, and practices of the organisation in a struggle for legitimisation and power. Motion and Weaver commented that a key strategy in the LSN campaign was articulation, disarticulation, and rearticulation—the linking of

ideas that had no previous connection—to encourage acceptance of ideas that might otherwise have been rejected. For example, the possibility of establishing GE-free zones in New Zealand, advocated as freedom of *choice* by anti-GE groups, was rearticulated by the LSN in an information kit for farmers as requiring ‘border control’ that would *restrict* farmer’s choice of crop (Motion & Weaver, 2005a, p. 62).

As a major biotechnology organisation actively promoting the benefits of commercial GM crops, Monsanto’s public relations strategies aimed at gaining acceptance for GM technologies have also gained significant attention, and generated considerable critique. Researchers have critiqued Monsanto, for example, for its mixed messages in purporting to support sustainability despite its wholesale endorsement of biotechnology (Frankel, 2001), and its failure to take note of public attitudes towards new technologies (Vellema, 2004). Pelaez and Schmidt (2004), also described the successful actions of a state in Brazil, Rio Grande do Sul, to block the introduction of Monsanto GM soy to Brazil. The state used arguments based on the ‘precautionary principle’ to successfully mobilise organised resistance, despite the fact that at a federal level, Brazil supported the introduction of GMOs. Pelaez and Schmidt described Monsanto as overconfident, and commented that Monsanto was inexperienced in dealing with resistance because of the relatively easy acceptance of its products in Canada and North America. Bruno (1998) critiqued Monsanto’s public relations strategies as “greenwash³”—that is corporate environmental advertising or political campaigns designed to position the company positively in terms of the environment (p. 287). Bruno pointed out, for example, that Monsanto

3 ‘Greenwash’ is the term given to a strategy that evolved as a backlash to the environmental movement. It describes organisations’ attempts to position themselves as philanthropic, and interested in protecting the environment, when in reality they may simply re-define the issues in ways more favourable to the organisation. To avoid being directly associated with such persuasive attempts at influencing public opinion, organisations may, additionally, set up ‘think tanks’—the support of scholars with compatible ideas in research—or ‘front groups’—private interest groups posing as public interest groups (Beder, 1997; Bruno, 1998; Ehrlich & Ehrlich, 1998; Rowell, 1996).

promoted their environmental stance as “Responsible Care,” (1998, p. 289), redefining environmental pollution in terms of the need to self-regulate and recycle. They positioned GM crops as “GE-improved”, as progress, and as the future way to feed the world (Bruno, 1998, p. 292).

Further critique of the potential impact of a multinational corporation’s public relations activities is provided by Durham’s (2005) case study of Aventis CropScience. Durham’s research is a critical exploration of the functional public relations strategies Aventis used in relation to GM corn production. Durham took a post-structural perspective, using Giddens’ theory of structuration to argue for a dialogue-based approach to public relations, rather than seeing public relations as a “terrain of struggle” (2005, p. 43). Durham explored the power invested in the structuring contexts of public relations in relation to Aventis’ cover-up of the global contamination of corn by the GM hybrid, StarLink. He argued that Aventis’ functional public relations approach meant that communication practices were ‘top-down’ and prevented effective communication with farmers to ensure the segregation of the GM corn from other crops. This resulted in StarLink corn being mixed with normal corn after harvest, thus contaminating the global supply of corn. Durham’s case study seeks to theorise public relations in a way that will enable corporations such as Aventis to participate more effectively as social actors involved in change and social debate about controversial issues, instead of assuming a self-interested, dominant perspective. He suggested that structuration theory provides a theoretical bridge between postpositivist, interpretive, and critical perspectives of public relations.

The potential impact of controlled media on the course of GM debate was also evident in New Zealand. Hager (2002), an investigative journalist, initiated a significant campaign to discredit Government policy on GM, with the publication of a book immediately before the 2002 general election. Hager exposed Government attempts to cover up the GM contamination of corn seed imported into New Zealand at the time of the Royal Commission in 2000. He argued that the Government initially planned to pull out the planted seeds and destroy them, but that over a period

of weeks this opportunity to act with integrity and build public trust was lost. Hager pointed out that as farmers were not told of the contamination, organic farmers had no opportunity to ensure there were buffer zones between these crops and their own.

New Zealand has strict biosecurity border controls because of its reliance on primary production, and has implemented a regulatory framework for GM that has been described as one of the tightest in the world (“Scientists’ big fears vanish”, 2001). Hager argued that the Government changed the acceptable contamination threshold from zero tolerance to 0.5% (in line with the US standard) and then reported that contamination was detected in negligible quantities, if at all, at this level. By May 2002, however, this threshold had again been recommended to be zero tolerance within the technical limits of Ministry of Agriculture and Forestry surveillance.

Hager argued that because the contamination occurred while the Royal Commission was sitting, the cover up was to prevent embarrassment and to avoid affecting the hearing. He suggested that the Prime Minister, Helen Clark, wanted to keep business groups happy because of business concerns about her economic leadership at the end of her first year in Government.

These critiques of public relations and issues management strategies by biotechnology companies and governments involved in GM indicate the strategies used to influence public attitudes and foster support for GM, and the ways in which such interest groups struggle for legitimation and power. However, although they comment on the *political* nature of the campaigns, they do not examine specifically how such public relations activities seek to influence *public policy* about GM.

Activist Campaigns and the Role of Social Movements.

At a political level, activist campaigns and social movements have the potential to influence which issues become significant in the public domain (Castells, 1997; Reisner, 2001). Social movements transform alternative discourses into action and have the potential to create dialogue that will change existing social values by *resisting* taken-for-granted social meanings about controversial issues. For example, the mobilisation of consumer campaigns against GM (Henderson, 2005), and the role

of some supermarkets in banning the sale of GM products in Europe (Collins, 2003, August 23) indicate the extent to which activist groups and social movements now set the context within which biotechnology stakeholders must negotiate their positions on GM.

As Reisner (2001) argued:

Genetic engineering in agriculture touches on the core concerns of many different types of [social] movements: protecting human health, protecting the environment, and the dangers of monopoly capital controlling a public good such as food. (p. 1389)

Reisner suggested that the narratives of social movements set frames used to interpret the issues, defining the problem, suggesting a solution, and legitimating action. She explored the breadth of social movement resistance to GM in the USA among very different social movements such as environmental groups, anti-corporate groups, science-based groups, worker-based groups, animal rights groups, and identity movements. Reisner found that GM in agriculture was a “unifying” narrative resonating with a wide variety of movement groups. Groups were likely to draw on arguments typical of other groups, adopting them as their own, and making the possibility of joint action more likely.

Henderson’s (2005) interpretive study explored the diverse identities represented in the rhetoric of a grassroots, activist campaign against GM in New Zealand. In this campaign, electronic communication technologies played an integral role in facilitating the organisation of the campaign, the sharing of information, and the repositioning of the discourse (see Kent & Taylor, 1998; Taylor, Kent & White, 2001; Roper, 2002 for examples of other campaigns supported by electronic communication). Henderson (2005) argued that the campaign represented a site of resistance to normalised political and economic discourses in New Zealand. It effectively contested the dominant discourses about GM through the construction and management of multiple national and political identities to create overlapping ‘zones of meaning’ (Heath, 1997) for multiple publics in the debate.

Anderson (2000) similarly characterised “new social movements” (NSMs) as “organised forms of collective action representing a broad mobilisation of interests around a specific goal” (p. 93). She suggested that NSMs have access to formal

channels of influence through lobbying, increasingly have staff with public relations backgrounds, but at the same time are composed of grassroots activists outside of formal political structures and exist as informal, relatively unstructured, networks. Like Castells (1997), Anderson emphasised the focus of NSMs on collective identity and lifestyle politics, as well as direct action, arguing that NSMs provide new sources of identity through the establishment of informal networks alongside more established pressure groups.

This discussion of literature examining rhetorical representations of GM has highlighted how media representations mediate understanding of GM issues. It has also indicated some of the strategies used in public relations efforts to influence GM debate, and has suggested that the public relations initiatives of biotechnology companies and governments privilege self-interested instrumental perspectives of GM. These pro-GM perspectives marginalise the values and participation of lay publics in debate about GM; although, there is evidence to suggest that the activism of groups against GM, and social movements such as environmentalism, may have influenced which issues become significant in the public domain.

The first section of this chapter additionally examined different theoretical perspectives of GM, ranging from functionalist, to interpretive and critical analysis of GM issues. It highlighted the range of different socially constructed meanings about GM that result from the underlying discourses, and the ways in which these have been represented. Yet, there are few critical studies of corporate GM discourses, of how meanings about GM are negotiated; and how interest groups attempt to exert influence on public attitudes and particularly on public policy. As yet, there are no studies that do justice to the complexity of strategic positioning about GM. It seems that despite calls for public dialogue about GM in New Zealand, finding ways for both key interest groups and lay publics to participate equally in dialogue about GM, in ways that acknowledge the validity of both technical issues and other value systems, is still problematic. The second section of this chapter presents a case for including additional theoretical propositions drawn from the literature on identity and rationality in the analysis in this study.

Theorising Identity and Rationality

This section of the chapter examines how theoretical perspectives of organisational identity, identity management, and rationality have been explored, to demonstrate how focusing on the interplay of aspects of identity and rationality can facilitate a theoretical understanding of how organisations use rhetorical strategies to manage meanings about controversial public issues.

The section begins with a brief historical overview of the development of identity-related perspectives in organisational communication and public relations, and the limitations imposed by the separate research traditions developed within organisational communication, public relations, and marketing (Cheney & Christensen, 2001a). This sets the foundation for a discussion of the strategic role of rhetoric in identity management, and recent theoretical understandings of organisational communication that blur the boundaries of internal and external communication. Finally, theoretical perspectives of rationality are discussed in the context of identity, sense-making, strategic decision-making, and positioning.

Organisational Identity, Image, and Identity Management

Theoretical understandings of organisational identity and image have developed historically from individual perspectives rooted in psychology, to functional approaches viewing an organisation as having a single integrated organisational culture or identity, and recent poststructural and postmodern perspectives that theorise organisations as a collective of dynamic, multiple, often paradoxical or ambiguous identities. Given the vastness of the literature on organisational identity, the next sub-section only briefly discusses examples of different theoretical perspectives that highlight diverse representations of organisational identity respectively as an enduring character, as dynamic, and as political. Such perspectives provide alternative ways of theorising about organisational identity and image.

Enduring, Dynamic, and Political Perspectives of Collective Identity and Organisational Culture.

Early theoretical perspectives on organisational identity drew on psychological approaches to theory distinguishing between ‘I’ and ‘me’ to theorise identity and image. For Mead (2004), ‘I’/identity was the organisational response to the attitudes of others, while ‘me’/image was the organised set of attitudes assumed by the organisation. So ‘I’/identity was conceived as *dynamic* and uncertain, responding to a situation with all of the attitudes of ‘me’ but still contributing something unique in that context. However, neither concept addressed the construction of organisational images by *external* stakeholders.

Like Mead, Albert and Whetten (2004) theorised organisational identity as formed through interaction with others, but they referred to both the self-reflective identity of an organisation and the identity ascribed to the organisation by others as ‘identity.’ Albert and Whetten conceived of organisational identity as the *essence* of an organisation—the distinctive features which endure over time in the context of a goal or purpose. This perspective failed to account for the dynamic nature of identity and image. Yet, Albert and Whetten defined identity as a political and strategic act, and considered that there could be multiple equally valid statements of organisational identity depending on which stakeholders defined the identity.

The term organisational *culture* is sometimes also used to theorise collective, self-reflective perceptions of organisational identity. However, Schein’s (1985) assumption of an integrated culture, a *single* essence or understanding that unifies all members of an organisation, is again overly simplistic. Argyris and Schon (1978, cited in Schein, 1985), more usefully, suggested three levels of organisational culture to distinguish between employees’ underlying assumptions, espoused values, and actual behaviour, particularly in relation to levels of participation and empowerment. They argued that individuals may simultaneously hold views that represent multiple, distinct constructions of reality, despite a *belief* that they share a common organisational culture. This is consistent with three possible styles of organisational culture described by Meyerson (1991): an *integration perspective*—strong integrated

cultures where members share consistent values, a *differentiation perspective*—different subcultures exist within organisations, and a *fragmentation perspective*—ambiguity is the norm and consensus and dissensus co-exist dynamically (p. 131). A core set of ideologies, sub-values, inconsistencies, and conflicts may then coexist in organisations, representing, for example, the dynamic tensions that exist as organisational sub-groups balance multiple managerial and individual values. If organisational culture is defined as, “A system of meaning that guides the construction of reality in a social community” (Cheney, Christensen, Zorn & Ganesh, 2004), organisational members appropriate and commit to that culture through processes of identification with multiple organisational value-premises (Cheney, 1983b).

Ashforth and Mael’s (2004) representation of organisational identity, based on social identity theory, suggested that social identification with an organisation, or with sub-units within an organisation, occurs simply through the manipulation of myths and symbols or logos. They recognised that individuals may identify with others in similar distinctive social categories, such as organisational membership, religious affiliation, or age, but not internalise or share *all* of the same values. Implicitly, then, multiple identifications are possible. However, this theoretical understanding is again a *reification* of organisational identity (see also Keller, 1998).

Mackenzie (1978) traced the history of the word ‘identity’ to explore theoretical understandings of collective identity in an attempt to answer the question: “In what context do ‘I’ properly use the word ‘we’?” (p. 12). He noted ‘identity’ has privileged various understandings in different time periods, drawing variously on discourses prevalent at the time of Aristotle, medieval Christianity, the Enlightenment, existentialism, and modern bureaucracy. These understandings include: ‘shared identity,’ meaning ‘the same as’; three persons who are one, the divine trinity; enduring consciousness; the equation $a = a$; the isolation of a unique individual, nihilism, and alienation; and the identity tag, file, DNA, or passport. Meanings associated with ‘identity’ have thus shifted over time from ‘personal identity’ to ‘identification with’ to ‘a common sense of identity.’ Mackenzie noted

that, more recently, understandings of personal identity suggest people shape their own identities within the constraints of birth, upbringing, and experience, and cultural influences shape both collective identity and personal identity.

Mackenzie (1978) concluded that the concept of 'we' is *political*, involving a dialectical tension between individual and social identities. 'I' is linked to 'we' through the process 'identification with' when it is possible to realise a "common purpose" (p. 109). Communication—the exchange of symbols—can be used to share values, to persuade, and to exert power. To say 'we', as in the collective identity of an organisation, is then a dynamic rhetorical device to indicate shared meaning—shared interests, shared space, shared intent—and shared identity (Mackenzie, 1978, p.165).

Within the organisational communication literature, the term *image* is often used to describe a temporary perception of the organisation that is very specifically situated in time and space. Yet, as Dutton and Dukerich (1991) have shown, organisational members may be highly motivated to maintain or restore the organisation's image, and may seek to be actively involved in decision-making, especially when issues are seen as important (see also Dutton, Dukerich & Harquail, 1994).

Organisational communication perspectives of *identity* thus alternatively represent the enduring or dynamic character of an organisation that is socially constructed over time. Organisational identity is frequently represented in terms of *organisational culture*, and multiple identities are recognised as co-existing dependent on the different values held by stakeholders, and their consequent *identification* with the organisation. Indeed, tensions may exist between the individual and social identities of organisational members, and the construction of organisational identity is thus seen as a political act. In the organisational communication literature, however, identification is largely considered in relation to organisational members, rather than to external stakeholders. The next section explores theoretical perspectives of identity and image within public relations and

marketing literature which take greater account of the construction of organisational images by external stakeholders.

Perspectives of Corporate Identity, Corporate Image, and the Corporate Brand.

Within the public relations and marketing literature, there is a particular focus on representations of the organisation to external stakeholders, and on perceptions of the organisation by external stakeholders. This includes a conceptualisation of the 'corporate brand'; that is a particular package of values and images developed by the organisation to represent and promote both the organisation and its products or services. The term 'corporate identity' was first used by Margulies in the 1950s to distinguish his graphic design depicting a visual identity which could stand in the place of the organisation, representing its values (Olins, 1994). Olins (1989) conceptualised three styles of corporate identity, *monolithic*—where one name and a single visual style are used consistently, *endorsed*—where a group of activities or companies are given a group name and identity, and *branded*—where a company has a series of brands which may be unrelated to each other or to the organisation. (p. 115). Olins' (1994) conception of corporate identity encompassed not only visual imagery, but products, services, buildings, and organisational behaviour. The term 'identity' then acknowledged the increasing complexity that large organisations face in managing their identity but, like other early public relations theory, it represents an instrumental approach to identity that privileges managerial perspectives.

The term 'image, as in organisational communication theory,' also originally drew on psychological theory, and was used by Boulding (1956) to refer to perceptions of an organisation by society. Commonly, then, in public relations literature, 'image' may refer to the perception of an organisation by publics and 'identity' to the more enduring visual communication and behaviour *projected* by the organisation, the vehicle by which the organisation's vision, or essence, of itself can be understood (Chajet, 1989; Grunig & Hunt, 1984; Grunig, 1993; Meech, 1996; Selame & Selame, 1988; Selame, 1997).

As in the organisational communication literature, 'image' is conceptualised as fleeting; van Riel (1995), suggested images of an organisation held by stakeholders may change over time: "People form a picture of an object by means of chains of or networks of associations, which are built up over a period of time as a result of slowly accumulating stimuli" (p. 75). In this sense, the *image* of the organisation can be said to dynamic, and must be managed over time. Fombrun (1996) discussed this in terms of corporate *reputation*, which he defined as the strategic manipulation of identity through corporate practices of image making and identity shaping. Fombrun defended this reification of corporate reputation by suggesting that there is a net reputation even when fragmented images are held by different groups. However, this seems to be largely because of his functional approach and a desire to measure the success of reputation management.

Public relations and marketing perspectives focus on the enduring qualities of organisational and brand identities. Although, they recognise the dynamic nature of stakeholder images of the organisation, their largely instrumental perspective highlights external stakeholder perceptions, and fails to acknowledge the dynamic nature of internal stakeholder identities.

However, conceptualisations of identity and image in organisational communication, public relations, and marketing communication more recently focus on the *interrelationships* between aspects of identity and image, and between internal and external communication. This recognises that regardless of the terms used, both 'identity' and 'image' describe the identification of organisational stakeholders with organisational values in some way. An examination of the communication *processes* involved in the management of *values* can highlight the rhetorical and discursive construction of meaning by multiple stakeholders, and the strategic nature of identity management evident, for example, in organisations' positioning on public policy issues. Theoretical perspectives of strategic identity management need to account for communication occurring both within and external to the organisation, and conceive of identity on multiple levels, including individual, small group, organisational, and inter-organisational levels to do justice to the complexity of the processes involved.

Theorising the Links between Identity and Image, and Internal and External Communication

This section examines the increasing focus on the communication processes linking aspects of organisational identity and image. Van Riel's (1995) functional model of the corporate strategy/corporate identity/ corporate image triad emphasised the *strategic* importance of communication in relation to corporate identity. Van Riel, like Gorb (1992), Jeffkins (1994), Meech (1996), Moffitt (1994), and Williams and Moffitt (1997), acknowledged that different publics may hold a range of images of an organisation, images which will also be in a continuous state of evolution. However, van Riel focused not only on how external communication influences identity and image but on the role of internal audiences in influencing corporate identity. He argued that organisations could strategically harmonise all internal and external communication by focusing on "common starting points" (CSPs), central values used to underpin all aspects of public relations or marketing communication (p. 128).

Stuart's (1999) model of identity also attempted to integrate internal and external organisational communication. Her understandings of image, identity, culture, and reputation built on work by Abratt (1989), Dowling (1993), and Kennedy (1977), and described corporate *personality* in terms of core values contributing to corporate strategy, which is then translated through both internal and external communication as corporate identity.

Stuart suggested that stakeholders and publics perceive this identity to be the organisation's image(s), which over time consolidates to form the organisation's reputation, and she defined corporate personality, strategy, and identity as falling within the broader category "organizational culture" (1999, p. 206). Stuart's interpretive model recognised the role of both organisational values and environmental influences on identity and image, and accounted for multiple publics and for changes in image over time, but did not adequately account for Moffitt's (1994) findings that audiences or publics may be comfortable with *simultaneously*

holding multiple and even contradictory images of the same organisation.

As Leitch and Motion (1999) pointed out, theories of corporate identity are changing from the functionally-oriented monolithic consistency, preferred by Olins (1994), to theories that take account of postmodern perspectives, which suggest that knowledge and understanding is relative, that there is no single meaning or truth. Audiences or publics may then be comfortable with holding multiple and even contradictory images of the same organisation (Moffitt, 1994). Leitch and Motion built on van Riel's (1995) concept of CSPs to emphasise the plurality of possible meanings in a *meaning-centred* view of corporate identity, rather than a *message-centred* view (p. 194), accounting for Moffitt's (1994) notion of multiplicity within the corporate identity mix. An organisation, Leitch and Motion argued, may then successfully maintain concurrent multiple images as long as each of these images is consistent with the CSPs of the organisation's strategic communication, and the organisational identity may have multiple facets as long as these are internally logically co-ordinated and consistent. Several perceptions of organisational identity may then be articulated together as demonstrated by Leitch and Motion's (2000) study of the co-branding of the All Blacks and Adidas in 1999, which relied heavily on the association of Adidas with perceptions of national identity and the accepted status of New Zealand rugby as a quasi-national religion.

Linstead and Grafton-Small (1992) also argued for a postmodern approach to understandings of organisational culture, drawing on the work of Derrida and Foucault to conceptualise the plurality of organisational culture and focus on culture as discourse. Usefully, they distinguished between *corporate culture*—the culture constructed by management and imposed on the organisation; *organisational culture*—recognising the organic creativity of organisational members enacting the organisational culture; and the *cultural organisation*. The latter concept recognised that cultural processes from both within and outside the organisation impact on organisational members, rather than defining culture simply as a product of the organisation. This theoretical perspective argued that fragmented, multiple, and constantly negotiated images and identities exist within an organisation. Both Leitch

and Motion (1999) and Linstead and Grafton-Small (1992) usefully draw attention to the *discourses* underpinning aspects of organisational identity but their work is limited by their separate respective public relations and organisational communication perspectives.

Balmer (2001) attempted to cut through the ‘fog’ of multiple terms and multiple definitions in relation to organisational identity and image in a move to integrate theoretical understandings from the perspectives of marketing, organisational communication, and public relations. However, Balmer struggled to synthesise the vast disarray of meanings associated with much of the identity and image terminology. He distinguished between *actual identity*, *communicated identity*, *conceived identity*, *ideal identity*, and *desired identity*; although, the term *actual identity* might be contested epistemologically, and seems to suggest a realist ontology at odds with the other terms used. However, importantly, his comprehensive article does recognise the multidisciplinary foundations of identity concepts, the existence of multiple identities, and the contributions that functionalist, interpretive, and postmodern perspectives have very obviously made to the discussion of corporate identity. Balmer’s definition of business identity integrates many of the important concepts of earlier theorists (for example, Abratt, 1989; Dowling, 1993; Kennedy, 1977; Stuart, 1999). He defined “business identity” as the summation of these identities:

An organisation’s identity is a summation of those tangible and intangible elements that make any corporate entity distinct. It is shaped by the actions of corporate founders and leaders, by tradition and the environment. At its core is the mix of employees’ values which are expressed in terms of their affinities to corporate, professional, national and other identities. It is multidisciplinary in scope and is a melding of strategy, structure, communication and culture. It is manifested through multifarious communications channels encapsulating product and organisational performance, employee communication and behaviour, controlled communication and stakeholder and network discourse. (Balmer, 2001, p. 280)

Despite recognising the multiple ways in which conceptualisations of identity and image might be inherent in organisational behaviour, however, Balmer prescribed these as categories, rather than recognising that they may exist simultaneously in multiple forms, and did not recognise that each identity may be dynamic and mutually inform each other. The concept of an ‘actual’ identity is problematic; the

'communicated' identity may not be consistent over time and place; and there may be multiple groups contributing to a 'conceived' identity, a 'desired' identity and an 'ideal' identity, as well as multiple images of the organisation held by publics.

Ultimately, Balmer's theoretical understanding assumes an essentialist view of identity. It still privileges a functional marketing perspective and prioritises the role of senior managers in developing a brand identity; surprisingly, he underestimates the role played by stakeholders and publics in informing an organisation's identity. This highlighting of brand identity narrows the contribution of this important work.

As Gioia, Schultz, and Corley (2004) have argued, previous conceptualisations of identity have failed to keep up with or account for the changing nature of organisations. In responding to the paradox that increasingly organisations need a sense of stability through maintaining a consistent identity, but need to respond to changing environments by changing their identity (Cheney & Christensen, 2001a), Gioia et al. concluded that identity and image are both dynamic and interrelated, allowing the organisation to be adaptive in times of intense change. Gioia et al. distinguished multiple aspects of image and identity: *construed external image, projected image, desired future image, corporate identity, transient impression, and reputation*, explaining that:

Organizational identity forms the basis for the development and projection of images, which are then received by outsiders, given their own interpretations, fed back to the organization in modified form, and subsequently affect insiders' perception of their own identity. (Gioia et al., 2004, p. 366)

In these terms, both identity and image are conceptualised as dynamically constituted in organisational behaviour and communicative action, rather than being reified, prescriptive, and measurable. Social meanings associated with the identity and image of organisations can then be said to be socially constructed. This conceptualisation introduces the possibility of *strategic responsiveness*, where organisational members collectively manage the identity and projected image of the organisation. Gioia et al. (2004) argued that the instability of identity and image can be positively *adaptive* for the organisation as it copes with a changing environment. They defined

organisational identity as “a negotiated, interactive, reflexive concept that, at its essence, amounts to an organizational work-in-progress” (p. 369).

Hatch and Schultz (2004) similarly discuss organisational identity as both constitutive of organisational culture and image, and constituted by that culture and image. Their model effectively focuses on the *processes* in organisational identity and image formation. They argued that when there is a discrepancy between the meanings associated with identity and image, the organisation is motivated to respond by changing the identity in some way, through processes of self-reflection and mirroring. Hatch and Schultz’s model represents identity as an interplay between the organisational culture and the organisational image:

At any moment, identity is the immediate result of conversation between organizational (cultural) self-expressions and mirrored stakeholder images, recognizing, however, that whatever is claimed by members or other stakeholders about an organizational identity will soon be taken up by processes of impressing and reflecting which feed back into further mirroring and expressing processes. This is how organizational identity is continually created, sustained and changed. (Hatch & Schultz, 2004, p. 390)

The authors’ argument for the management of this process through a continuous conversation between organisational members and external stakeholders emphasises relationship-building, echoing the recent emphasis on relationships and dialogue called for in public relations (see for example, Botan, 1997; Cheney & Christensen, 2001b; Grunig, 2000; Taylor, Kent & White, 2001).

While hinting at an awareness of the increasingly complex communication environment, Hatch and Schultz’s (2004) model, however, still fails to theorise adequately the influences on the *multiplicity* of identities and images that may exist simultaneously in the organisation and external to the organisation (see Cheney, 1991; Leitch & Neilson, 2001; Linstead & Grafton-Small, 1992; and Moffitt, 1994).

Increasingly, theoretical perspectives on identity and image focus on the dynamic and multiple organisational identities and images that result from the multiplicity of meanings held by stakeholders; and the strategic and adaptive nature of the interplay between identity, image, and culture is emphasised. This interplay of organisational identity and image is effectively theorised as involving the

management of multiple identities and identifications as discussed in the next section.

The Role of Rhetoric and the Management of Multiple Identities

Cheney (1991) usefully elaborated on how organisational identity may be linked to theoretical understandings of communication. He described the nature of organisational *rhetoric* as the management of multiple identities, both individual and collective, and suggested that “similarity and difference mutually implicate one another, exist in ongoing dialectical tension, and provide the formative context for what we call our ‘identity’” (1991, p. 13). In organisations, collective identity refers to shared interests; individuals seek to belong—to identify—as a way of coping with the divisions within society. As Cheney (1991) argued:

Much of what organizations do is rhetorical. Further, much of contemporary rhetorical practice is organizational, within complex organizational settings. Thus, organizational and rhetorical theory converge. The nature of organizational rhetoric is . . . the management of multiple identities, both individual and collective. (p. 2).

For individuals and organisations, then, identity is a unique combination of socially constituted aspects of identity that may sometimes be conflicting (see also Burke, 1973; Mackenzie, 1978).

Scott, Corman and Cheney (1998) further theorised the duality of identification in terms of Giddens’ (1984) structuration theory. According to Giddens, institutions can be represented as a duality whereby the elements of the system (rules and resources) are at the same time the means by which the system is reproduced and exists as a structure. Three elements: signification, domination, and legitimation govern the ways in which structures are continued or transformed, and communication is integral to each of these processes. Broadly speaking, these three terms refer to the creation of texts and coding; power and resource allocation by institutions; and social sanction, or normative regulation by legal institutions.

Scott, Corman and Cheney (1998) argued that identification may then be both a process of belonging or attachment to an organisation and an outcome of that process: a set of rules or structures that represent the identity of the organisation and

a way of organising. Identity may also involve representation, how organisations present a *face* to publics and stakeholders. Identity is thus conceived as the construction of a series of multiple positions, constantly negotiated through identification occurring within social interaction in the dynamic structure of the organisation. Individuals may hold multiple, possibly competing, identities of an organisation depending on their different organisational roles, involving multiple processes of identification (Scott, Corman, & Cheney, 1998). The identity of an organisation may be in a constant state of negotiation rather than existing as a stable entity. Larson and Pepper's (2003) case study of organisational change management drew on Scott, Corman & Cheney's (1998) model to theorise the sensemaking processes by which organisational members accounted for operational changes. They found that organisational members used eight different communicative tactics, creating multiple identifications to manage the change process.

In line with this perspective, Cheney and Christensen (2001a) discussed the role of communication in organisations as “a set of processes through which organizations create, negotiate and manage meanings” (p. 234). They pointed out that the recent managerial orientation of organisations is concerned with satisfying target audiences—with building relationships—and that an organisation's audiences and stakeholders are increasingly located both within and outside the formal boundaries of the organisation. Internal stakeholders have become part of the general audience for the organisation, and public relations activities directly affect the strategic communication of the organisation. Organisations may have employees who are also consumers of their products and services, and they may have external stakeholders (for example students at a university) who are also part of the organisational community (Cheney & Christensen, 2001a).

Furthermore, Cheney and Christensen (2001a) suggested that as marketing discourses have become normalised, the marketing orientation of organisations, as well as being a relatively reactive process which looks to satisfy the needs and wants of the customer, sets out to be seen as participatory, responsive, and democratic so that the concept of citizen is conflated with that of consumer. Advertising, too,

frequently highlights social issues to increase the identification of audience members with products and services. For example, television advertisements for pain relief in New Zealand use images that reinforce current discourses related to health—a social issue—highlighting the importance of exercise to well-being, by depicting sports injuries requiring pain relief, rather than, for example, over-tiredness or stress. In this sense, organisational communication, public relations, and marketing now share an *expectation* of two way communication. The organisation marketing a product as a remedy for pain relief is responding to public discourses surrounding health, and participating in a public conversation with consumers and other health professionals which encourages consumers/citizens to take responsibility for their own health.

At the same time, organisations find it increasingly difficult to maintain a distinctly different identity in an increasingly complex and cluttered communication environment (Cheney & Vibbert, 1987; Cheney & Christensen, 2001a). Cheney and Christensen (2001a) argued that organisations may draw on common values, for example, freedom or environmental risk management, but must make them distinctively their own; more communication seems necessary but more communication also exacerbates the problem so that the interdependence of symbols in the communication environment may limit the meaning of the actual message conveyed. Furthermore, “communication is continuously challenged and the *conditions* for communication are in constant change” so the need for flexibility in responding to the needs of the consumer may mean that it is hard to maintain an established identity (Cheney & Christensen, 2001a, p. 242).

Christensen and Askegaard (2001) argued that this may mean that advertising and public relations activities help legitimate the organisation for its internal stakeholders. Although organisations may seek feedback from their publics, they may fall into the trap of auto-communication. This involves communication becoming self-referential such that “the communicator (person or group) recognizes itself, chiefly in terms of how it wants to be seen by others” (Cheney & Christensen, 2001a, p. 247). Cheney and Christensen suggested that organisations may become insensitive to some areas of information, and effectively create the opinion they seek.

They argued that being proactive then involves being at the forefront in responding to the market that organisations not only expect but have helped to create, as they communicate to maintain their own sense-making and identity.

In such situations, organisations have been critiqued for misrepresenting information to publics (Baker & Martinson, 2001), using strategic ambiguity (Eisenberg, 1984) to mask risk situations (Ulmer & Sellnow, 1997), or omitting important information that does not support their own organisational arguments, and failing to make the sources of their information transparent (Nelson, 1994). Cheney and Vibbert (1987) pointed out that organisations increasingly act in a political manner but need to communicate politically without being identified as political groups in the discourse to avoid being seen as self-interested. When they attempt to achieve this by defining public policy issues as social issues, this may mean managing both a political identity and a traditional non-political identity.

Cheney and Christensen (2001a) argued that organisational identity and image are shaped by organisational communication, public relations, and marketing activities, requiring a conceptualisation of communication that transcends these theoretical barriers:

We see communication as a metaconcept that refers broadly to constructions and deconstructions of meaning at many different levels, including not only explicit communication campaigns but also the strategic planning process, the process of monitoring and analyzing issues, and corporate efforts to comply with changing norms and standards of social responsibility. (Cheney & Christensen, 2001a, p. 239)

In fact, as Christensen and Cheney (2005) pointed out, there is a trend for organisations to increasingly manage all their corporate and strategic communication (and their internal communication) as one in the practice of 'integrated marketing communication'. Christensen and Cheney (2005) suggested that this may create a tension with an organisation's stated practice of being responsive to consumers, because organisations tend to privilege their own vision of the organisation and, in a globalised world, to increasingly deliver one homogenised brand globally, regardless of local differences. Despite a marketing orientation, organisations may fail to consider that audiences' reception of this corporate/brand identity may not be as they believe it to be. Christensen and Cheney (2005) suggested a further tension may exist

internally with an organisation's oft stated privileging of managerial perspectives that suggest efficiency is created, for example, through autonomous teams, a flatter organisational structure rather than a hierarchical one. In fact, as Christensen and Cheney argued, such integrated communication suggests increasing attempts to control both employees and external images by the organisation.

These theoretical perspectives on the role of communication in the management of multiple identities facilitate complex understandings of how organisations manage the dynamic organisational communication environment. In highlighting the blurred boundaries between 'internal' and 'external' communication, they emphasise the strategic nature of organisational communication and the links between organisational decision-making, strategic planning, specific communication campaigns, and the management of controversial issues.

The next section of this chapter discusses how such theoretical perspectives can be further augmented by examining the interplay of identity and rationality evident when organisations strategically position and enact policy on public issues.

Issues Management and Strategic Positioning: The Interrelationships between Identity and Rationality

In this section, I make no attempt to survey the diverse literature on issues management and rationality. Instead, I focus on the particular theoretical perspectives and research literature that inform the theoretical framework for this study. The literature on issues management examines the priorities accorded to policies in relation to particular issues, how these priorities are justified, and the discourses that underpin the strategic decision-making of interest groups. This section highlights particular theories of issues management, sensemaking, decision-making and rationality which contribute to an understanding of the interrelationships between identity and rationality in the strategic positioning of organisations on controversial issues.

Strategic Issues Management.

Issues management and values advocacy have evolved from earlier publicity- and propaganda-oriented styles of communication in the 1920s and 1930s. Since the 1960s and 1970s, when public relations increasingly became part of government and business strategy, organisations have moved away from a dependence on public media to an emphasis on controlled media, and increasingly present a business story in an attempt to influence their operating environment. Heath (1997), defined issues management as:

. . . the strategic use of issues analysis and strategic responses to help organizations make adaptations needed to achieve harmony and foster mutual interests with the communities in which they operate (p. 3). For an issue to exist, we need at least two parties with different points of view regarding how an issue should be resolved. (p. 44).

Traditional perspectives of issues management prioritise a functional approach arguing for the anticipation of issues and the resolution of conflict, preferably, *before* a problem acquires the status of a critical, current, or even a potential issue (J. E. Grunig, 1992, Pratt, 2001). Crable and Vibbert (1983) argued for “catalytic” issues management strategies to set the agenda for public discourse before issues arise (p. 9). However, significant issues may also be *defined* by an organisation’s publics or audiences (Crable & Vibbert, 1985) and involve reactive communication strategies. Cheney and Vibbert (1987) implied that both pro-active and reactive issues management may be appropriate; they pointed out that issues are:

. . . focal points in public discourse that never get ‘solved’ in the sense of absolute termination of discussion, but they do become ‘resolved’ or ‘managed’ . . . While issues can always be linked either implicitly or explicitly to values, occasionally *values* are at issue themselves. (p. 175)

When ongoing values are at issue, either an organisation or its publics may initiate further ‘discussion’.

Heath (1997) acknowledged the difficulty of communicating successfully with multiple publics if there is no shared understanding or “zone of meaning”. By this Heath meant:

. . . the shared information and opinion that members of organizations and publics understand and hold dear. Zones are expressions of the meaning, the interpretation and judgement, groups and publics believe to be true representations of reality. Through their zones, groups and publics view reality. (1997, p. 192)

Heath (1997) suggested that zones of meaning may be established through focusing on *fact*, *values*, and *policy*, and suggested that the key elements of any issues management campaign will include: *differentiation*, establishing unique attributes or positions on an issue; *association*, establishing positive attributes or positions by alignment with existing positive attributes; *identity*, creating a persona characteristic of the organization; and *goodwill*, establishing that policies benefit others (p. 203). However, despite the emphasis on shared zones of meaning, the campaign elements advocated by Heath appear to privilege the facts, values, and policy constructed by organisational members, rather than seeing issues management as a dynamic process of interaction between organisational members and publics.

In contrast, Sethi (1977) explicitly linked organisational communication strategies and substantive organisational action to the values held by *stakeholders*. He theorised the discrepancy between business performance and societal expectations created by business actions or changing stakeholder expectations as a “legitimacy gap” (Sethi, 1977, p. 58). Sethi suggested three ways to reduce this gap: changing public *perception* of business performance through education and information, changing the *symbols* used to describe business performance, or changing business *performance* to align it with society’s expectations.

In issues management communication, organisations often use competing rhetorical strategies that emphasise particular values and marginalise their opponents’ values (Bostdorff & Vibbert, 1994; Crable & Vibbert, 1983; Heath, 1997; Kuhn, 1997; Smith & Eisenberg, 1987). As Kuhn (1997) suggested, a rhetorical perspective of issues management allows an examination of the *process of influence*—the struggle over meanings—including the “characteristics of the rhetor and relationships to the rhetor’s audiences . . . [and] the use of symbols to create identification” (p. 192).

As Cheney and Frenette (1993) pointed out, corporate organisations may perform a legitimisation function creating “diffuse mass loyalty, and sanctifying the existing social order” by establishing particular value premises, for example, production growth and efficiency, as “common sense” (p. 68). They argued that

organisations use processes of identification to establish a set of values which serve as the foundational premises from which other argumentative communication can result. The resulting “unreflective cooperation” (Cheney & Frenette, 1993, p. 55) often results in hegemonic support for the status quo, that favours the organisation.

Organisations may position themselves as major spokespersons on public values, and engage in *epideictic values advocacy*—a way of arguing that focuses on increasing the intensity of values already held by publics, so that these key values withstand conflict with other values (Cralle & Vibbert, 1983). Organisations then seek to enhance their own image and deflect criticism by being associated with goals, products, and activities which echo commonly-held cultural values (Cheney & Vibbert, 1987; Bostdorff & Vibbert, 1994). This strategy often helps to keep values important to an organisation visible in the public arena.

The rhetoric used by an organisation in its issues management may impact not only on specific bounded messages to external publics but also on the daily working life of the organisation. Recent research suggests that organisations need to focus their issues management strategies as much for internal audiences as for external audiences (Tilson & Stacks, 1997). Cheney & Lair (2005), for example, argued that organisations are constituted by rhetoric in the sense that rhetoric plays a part in persuasion and identification at both a micro and a macro level in organisations, in the process of organising, as well as in the management of issues.

An examination of an organisation’s rhetorical positioning in issues management communication thus involves discussion of the discursive, strategic premises for that positioning; that is, how values are represented and expressed as the organisation attempts to influence both internal and external stakeholders.

Sensemaking and Strategic Positioning.

Yet, the role of values in organisational decision-making is problematic (Conrad, 1993). As Conrad argued, individual, organisational, and societal values mutually influence each other, and may be markedly and uncritically aligned. However, they may equally be so differentiated that organisations mobilise a range of strategies to manage the resulting issues. Ginzler, Kramer and Sutton (2004)

described organisational impression management as *sensemaking*: “A process of reciprocal influence in which the presence of the organizational audience affects both the initial attempts to explain an organization’s actions or performance, as well as ongoing attempts to resolve interpretive conflicts” (p. 225).

Weick (1979, 1995, 2001) viewed language as constituting organisational actions through processes of collective and retrospective sensemaking which purposively reduces equivocality and ambiguity in the organisational environment. Weick (1979) noted that an ambivalent stance makes adaptive sense for organisations; both believing in and doubting past experience ensures a flexibility of response that may prevent the establishment of privileged ways of viewing experiences, and maintains multiple possibilities for future actions. He argued that there may retrospectively be many competing explanations for actions, and suggested we make sense of actions that create value and meaning through language; so people act out values, groups act out identities, and organisations act out their purposes (Weick, 2001).

However, Ginzel, Kramer and Sutton (2004) suggested that audiences may challenge the truthfulness of management accounts if they are inconsistent or misleading, or if audiences hold diverse values making a single acceptable management account problematic. They argued that audiences have power: that “an organization’s image represents a collaborative social construction between an organization’s top management and the multiple actors who comprise the organizational audiences” (Ginzel, Kramer & Sutton, 2004, p. 242).

In a major study on the influences on health care public policy in the USA, Conrad & McIntush (2003) noted that interest groups may sustain policy monopolies through the strategic management of three factors: “the cultivation of images of expertise, the structure of public policymaking, and the articulation of a supporting ideology” (p. 410). This implies that interest groups need legitimation for the values inherent in their identity management and their institutional role in public policymaking, and additionally need a compatible discourse environment.

Conrad and McIntush explained the importance of rhetoric in framing issues: “All forms of political organization have a bias in favour of the exploitation of some kinds of conflict and the suppression of others because *organization is the mobilization of bias*” (2003, p. 406). They emphasised that organisational rhetors can use strategic ambiguity (see also Eisenberg, 1984; Ulmer & Sellnow, 1997) to reconcile ambivalences in policy—for example, the role of citizens can be ambiguous, constructed in terms of individual choice or individual rights: “Policy is a web of dilemmas and paradoxes, enigmas that are constructed, revised, and reconstructed through symbolic processes” (Conrad & McIntush, 2003, p. 409). Such ambiguity may enable the development of ad hoc forms of decision making that rely more on retrospective rationalisation of decisions than on the definition of problems and the attachment of solutions.

Conrad and McIntush (2003) suggested that power elites may find it threatening to negotiate public policy development *in public*; sometimes keeping issues *off* the public policy agenda is as important as getting them implemented. Interest groups may act to block proposals from being implemented, because it threatens their interests, as well as exerting pressure through insider lobbying. As Cheney and Vibbert (1987) commented, organisations may then communicate politically without being identified as political groups in the discourse. However, Conrad and McIntush argued that even if other interest groups succeed in making policy issues public, elites can still contest the policy agenda and divert conflict to other issues.

Conrad and McIntush’s (2003) study highlights how an organisation’s rationalisation of its priorities, and implicitly its identities, might impact on its strategic positioning on a particular issue. It suggests that organisations often rationalise their strategic positioning retrospectively to reconcile ambivalences created by the management of multiple priorities.

Rationality and Decision-making.

Rationality can be defined as the connection between ends and means in motivated action (Giddens, 1972). Since the time of Aristotle, the term ‘rational’ has

been associated with actions that demonstrate a sensible, systematic approach to achieving a goal, and the ability to reflect on those actions (Cheney, Christensen, Zorn & Ganesh, 2004). The organisational communication literature draws strongly on concepts of rationality derived from the work of Max Weber, in particular Weberian and neo-Weberian perspectives that distinguish between formal or means-centred rationality, and substantive or ends-oriented rationality (Giddens, 1972; Weber, 1978). Means-centred rationality is also described as ‘purposive’ or ‘instrumental’ and often privileges technical perspectives that involve the precise calculation of specific means to achieve a given objective. In contrast, substantive rationality is more concerned with the values associated with particular goals (Giddens, 1972; Weber, 1978). Despite suggesting that technical/instrumental rationalities would progressively tend to dominate industrialised society, and result in increasing bureaucratisation, Weber (1978) suggested that actions rarely demonstrate fully purposive rationality. Weber thus introduced the idea of multiple rationalities, showing how dominant types pervade organisational practice.

As Simon (1976) pointed out, decision-making involves the selection of an alternative from several other alternatives and rarely simply involves “factual propositions” (p. 46). The rationalities for decision-making involve a series or hierarchy of means selected for various ends and involve a web of interconnections rather than a linear means-end chain. Simon commented that means may have multiple ends, involving different values, means may be ends in themselves, and ends may be means to new ends. It is therefore hard to separate formal rationality (based on factual information) from substantive rationality (based on values). In the case of GM, for example, growing GM crops (a technical means or process) may increase crop yields (the end or objective). However, this end is not value-free, since improved crop yields may themselves be the means to a goal of efficiency that privileges the financial returns of GM crops (and economic values) over their impact on local biodiversity (and environmental values). ‘Objective’ decisions may then rest on the prior value assumptions that are made. Simon (1976) defined rationality as

“concerned with the selection of preferred behavior alternatives in terms of some system of values whereby the consequences of behavior can be evaluated” (p. 75).

Simon (1976) argued that organisational decision-making is based on multiple decisional *premises*. Objectives form the basis for value premises for organisational decisions, and factual premises believed to be true for any given objective are associated with means (Tompkins & Cheney, 1985). Simon thus argued that organisational value premises provide a frame of reference for organisational decisions. Organisational members make decisions, or accept organisational decisions, through processes of identification which lead to the prioritisation of one alternative over another; and decisions may be made as a result of multiple identifications with value premises at an individual or personal level, at a group or organisational level, or because they are socially desirable (Cheney, 1983b, Simon, 1976; Tompkins & Cheney, 1985). An individual or a group may then literally ‘see’ the alternatives most closely associated with their identifications, and may fail to ‘see’ other equally valid alternatives. For example, a conventional farmer might ‘see’ GM crops as a way of reducing the use of pesticides, while an organic farmer might ‘see’ GM crops as disrupting the natural life-cycle of the soil.

Karpik (1978) suggested that organisations demonstrate a range of “logics of action” (p. 46) as a way of establishing principles for action that acknowledge the similarities and differences between the multiple forms of rationality of multiple individuals or groups. He suggested that disparate objectives may be re-constructed in terms of a common logic of action—a ‘quasi’ analysis—that may unite groups with divergent visions and preferences. Karpik proposed that organisations draw on seven different logics of action: adaptive, prestige, technical, production, profitability, puissance, and innovative; and that organisational strategies “are defined by the association of an area of activity, a logic of action, and a level of reference” (1978, p. 49). An organisation involved in the production of GM foods might then draw on a production logic of action in relation to its economic success in the international marketplace, or a technical logic of action in relation to its need to audit its manufacturing process to satisfy the demands of risk-averse consumers. In

each case, such logics may foster identification with this strategy by disparate organisational stakeholders.

However, Hindess (1987) critiqued Weber for defining rationality in terms of individual behaviour, arguing that the social relationships inherent in organisational decision-making make this problematic. Hindess suggested that Weber's location of rational and irrational behaviour at the level of the individual fails to recognise that rationality may be dependent on the discursive environment. Particular discourses, such as neo-liberal discourses that privilege values associated with the efficiencies of the free-market, may, for example, be normalised to the extent that an individual assumes her decisional premises about business efficiency are value-free. The discursive environment may then construct what is seen as rational as a master-premise.

Albrow (1987) additionally argued for an extension of Weberian theories of rationality, suggesting that value-premises may become increasingly systematised, becoming both more general in principle and more specific in their application such that, "It is the system as a whole that is rational" (Albrow, 1987, p. 171). Albrow suggested that this facilitates the purposive ordering of complex situations but commented that the resultant increasing systematisation of knowledge means that formal rationality is becoming embedded in institutional life. Such systematisation has the potential to usurp individual freedom when it is enshrined in state-regulated institutions. In this vein, it might be argued that ERMA in New Zealand privileges particular knowledge systems in approving applications for the release of GMOs into the environment.

Douglas and Wildavsky (1982) drew on cultural theory to suggest that organisations adopt styles of decision-making consistent with their organisational structure, and may be analysed as *hierarchical*, *individualist*, or *border/sectarian* organisations (p. 101). They suggested that hierarchies—for example, many corporate organisations—often limit their framework for decisions and tend to work with known processes; a very bounded rationality. Hierarchical organisations may have multiple goals, rationalise decisions after the event, and have long timeframes

reflecting their history and perceived future. In contrast, Douglas and Wildavsky (1982) suggested that individualist organisations—for example, supporting a free market—work to maintain the exchange system. Their time frames tend to be shorter, more opportunistic, and more future-oriented, but not necessarily more risk-oriented because current market values determine decisions. However, Douglas and Wildavsky argued that particular values, such as, “human goodness,” “equality,” and “purity of heart and mind”, which they identified as “sectarian”—typical of social movements and voluntary organisations—are increasingly prevalent in Western societies (1982, p. 10). For these groups, Douglas and Wildavsky suggested:

Nature in the wild, uncorrupted by social artifice, equivalent to a society without social distinction, is their preferred emblem of godliness and symbol of unworldliness. (1982, p. 11)

In the rationalities associated with these values, the associated dangers, “worldliness” and “conspiracy,” are often seen as linked with corporate organisations and corporate power.

Douglas and Wildavsky (1982) suggested that organisations make strategic assumptions: “patterns of shared values and beliefs, which are part of the everyday justifications sustaining each type of organisation” (p. 139), based on the cultural assumptions implicit in their organisational structure. Douglas (1986) argued further that institutions to a large extent determine how we think, our knowledge, and our conceptions of what is ‘natural’ in the sense of what is justice:

Each kind of community is a thought world, expressed in its own thought style, penetrating the minds of its members, defining their experience, and setting the poles of their moral understanding. (p. 128)

So individuals make decisions that are influenced by the values of the multiple networks and institutions which they identify with.

Organisational communication perspectives on participation in decision-making suggest that recent managerialist values have favoured the importance of individualist approaches, establishing self-managing teams, for example, with flatter, rather than hierarchical, management structures in attempts to increase motivation, innovation, and efficiency (Capelli, Bassi & Katz, et al., 1997; Deetz, 1995; Hammer, 1999; Stohl & Cheney, 2001). It might be expected that such organisations,

and those based on cooperative styles of management, will involve organisational members in communication and decision-making about important issues more than organisations with strictly hierarchical management structures. However, as Stohl and Cheney (2001) explained, there may be clashes between ideals and practice in terms of worker participation in organisational decision-making.

Indeed, as Cheney (1999) has demonstrated in his comprehensive study of the Mondragón cooperatives in the Basque region of Spain, even well-established cooperatives are subject to increasing external pressures as they compete in global markets, with a consequent possible reduction in the level of member participation in strategic planning, debate, and decision-making. Who gets to speak in an organisation will thus be dependent to some extent on the management structure. The ‘marketisation’ of cooperatively owned industries refers to a trend in discourse for the discussion of values to become increasingly ritualised in terms of a market justification, with ambiguous meanings which subordinate other social values—such as employee participation—to external concerns, such as how to serve the customer better or compete in the marketplace. As Cheney (1999) argued, ethical reflection may be abandoned and decision making is then increasingly the prerogative of an executive group within the organisation.

In the case of decision-making and strategic positioning related to risk, Beck (1996) argued that where pre-industrial societies were “societies of catastrophe,” and industrial societies were societies of “calculable risk,” currently society negates its own principles of rationality because risks are now incalculable (Beck, 1996, p. 40). Beck (1992) argued that reflexive modernisation—the questioning engendered by scientific industrialisation—has created a *risk society*. Risks can no longer be quantified in time or space, and no one can be held accountable (Beck, 1992). Instead of factory based, occupational hazards in industry, we now have irreversible, less visible, global, environmental risks, not limited in space or time or to particular occupational groups (Beck, 1996). As Beck commented:

In the risk society, the recognition of the unpredictability of the threats provoked by techno-industrial development necessitates self-reflection on the foundations of

social cohesion and the examination of prevailing conventions and foundations of 'rationality.' (Beck, 1994, p. 8)

So the categories of risk now being articulated question the instrumental rationality of modernity but arise from the organisation of a society dependent on that system of rationality. There is conflict over the foundations of rationality and of the industrial society; and uncertainty becomes dominant. However, Beck (1994) suggested that new rationalities may emerge when different communicative codes are assembled together, juxtaposing different realities and sub-rationalities to bring new perspectives to problem issues.

As a consequence of the risk society, Jones (2002) suggested that, "Traditional institutions: government, business, science, etc. face a crisis in their legitimacy. The individual reassesses, and critically questions these institutions of society" (p. 50). Jones argued that legitimacy increasingly centres around the individual, or a collectivity of individuals, in public opinion. This facilitates the emergence of the "sovereign" consumer and consumer activism (Jones, 2002, p. 51). Jones commented that issues provide a complex interplay of identities for individuals, constituted through their association with multiple networks and groups and sustained by shared discourse arenas.

This discussion of theoretical perspectives of issues management, strategic decision-making, and rationality, suggests that new understandings of controversial public policy issues may result from examining the value-premises, identities, and rationalities expressed by key interest groups seeking to influence public policy decisions.

The Theoretical Framework for the Thesis

The final section of this chapter draws together particular concepts from this literature review to identify the main theoretical propositions that are central to this study. It summarises arguments for a research approach that integrates organisational communication and public relations research perspectives on identity, and highlights the interrelationships between organisational values, identities, and rationalities, as

an effective way of understanding the complexity of organisational communication about GM in the kiwifruit and dairy industries in New Zealand.

First, it is evident from the review of issue-specific literature in relation to GM that critical studies of the role of industries in contributing to this particular public policy debate are at present under represented. Research discussing current debate about GM issues has often been functionally-oriented, conducted from the perspectives of government, science, and business interest groups who seek legitimisation for the commercial development of GM, and marginalise the values and participation of lay publics. Such research focuses particularly on the benefits and risks of GM perceived by consumer groups, and aims to increase the understanding and support of these groups for GM. Despite calls for public dialogue about GM, finding ways for both key interest groups and lay publics to participate equally in such dialogue, in ways that acknowledge the validity of both technical issues and other value systems, is still problematic.

Second, there is a growing body of more critical research focusing on the strategies used in public relations efforts to influence the direction of GM debate, and on media representations of GM issues; however, the focus has largely been on the *political* nature of the campaigns at a discursive level. There is little discussion from an organisational communication perspective of specifically how and why the rhetorical and discursive positioning of particular interest groups is constructed as they seek to influence public policy about GM.

I suggest, in this study, that a theoretical perspective examining the role of communication in the management of multiple identities facilitates complex understandings of how organisations rhetorically construct meanings about controversial public issues. It is increasingly recognised that the boundaries between internal and external organisational communication have become blurred, such that aspects of identity and image need to be simultaneously considered from the multiple perspectives of all organisational stakeholders. It is also argued that it is unrealistic to separate theoretical understandings of organisational communication, public relations, and marketing, especially since concepts of *identity* and *image* are evident

in each theoretical discipline. A detailed study of the ways in which organisations rhetorically manage multiple identities, needs to draw on conceptual understandings at the intersection of these theoretical fields.

In this study, I take the perspective that organisational identity and image are dynamic, not static, and that individuals and organisations may simultaneously negotiate multiple, possibly conflicting organisational identities or images. Organisational stakeholders may, additionally, hold multiple conflicting positions on an issue. These multiple positions result from stakeholders' identification with the different value-premises espoused by the individuals, groups, and networks they associate with, and may exist in tension with each other. They consequently result in the use of multiple rationalities to justify an organisation's strategic positioning on controversial issues.

I suggest that how an organisation *rationalises* the multiple priorities of its stakeholders may thus be linked to how it manages its multiple *identities* and images. Organisational identities may be both constituted by and constitutive of organisational culture and structures, and may determine which organisational voices contribute to strategic decision-making. Additionally, organisations often rationalise their strategic positioning retrospectively to reconcile ambivalences created by the management of multiple priorities and identities. A communication perspective of strategic positioning on controversial socio-political issues thus demands consideration of the explicit and implicit value-premises inherent in the positioning, and the processes used to manage that positioning. Identity, rationality, and values are thus three reference points that provide a useful lens with which to examine an organisation's strategic positioning, as it negotiates with controversial public policy issues.

Since organisations frequently seek to influence the direction of public policy debate, an understanding of how issues are negotiated requires an examination of the rhetorical strategies of influence used by interest groups in the context of the negotiated meanings about the issues evident in the wider socio-political and economic discursive environment. An examination of an organisation's rhetorical

positioning in issues management communication thus involves discussion of the strategic foundational premises for that positioning; that is, the value-premises expressed by the organisation in its attempts to influence both internal and external stakeholders. The values-related tensions evident in the kiwifruit and dairy industries' social construction of the GM debate can then be usefully explored through a consideration of the multiple ways in which identification occurs as organisations rationalise their positioning on GM, and negotiate their relationships with multiple stakeholders.

The methodology chosen for this study of the kiwifruit and dairy industries is a combination of rhetorical criticism and critical discourse analysis, focusing on the social construction of meanings associated with GM. The following chapter explains the methodology and specific methods of data collection and data analysis used in this research.

CHAPTER FOUR

METHODOLOGY AND METHOD

Introduction

This chapter explains the epistemological foundations of the research, the theoretical rationale for the methods of data collection and analysis, and the design of the study. The first section outlines my personal, political stance on GM and the tensions this posed for the research investigation, and then develops the philosophy of method and methodological stance, including a discussion of rhetorical criticism and discourse analysis. The second section of this chapter explains the research design, including the rationale for the selection of the two case study industries, and the decision to access information from spokespeople with different functional involvement in the industries. The choice of a combination of document analysis, and interviews and focus groups with key spokespeople is also explained. The third section of this chapter describes the limitations and scope of the data collection, including the timeframes for the data collection and analysis, and explains the specific steps taken in the data collection. In the final section, the methods of data analysis, based on a combination of rhetorical criticism and critical discourse analysis, are described in detail.

Philosophy of Method

Reflections on my Personal Stance on GM

In line with the poststructuralist critical-interpretive position that I take in this thesis I adopt a reflexive stance both in my methodology and my personal stance on GM. Reflexivity is the conscious, critical questioning of the researcher's own role and the way that the self is created in the field, as well as the impact of the researcher's role on the participants and the participants' impact on the researcher (Calas & Smircich, 1999; Fine, Weiss, Weseen, & Wong, 2000; Richardson, 2000;

Tolich & Davidson, 1999; Wellman, 1994). Interpretive research recognises the need for reflexivity, to represent both the researcher's voice and the participants' voices:

If knowledge of the social (as opposed to the physical) world resides in meaning-making mechanisms of the social, mental, and linguistic worlds that individuals inhabit, then knowledge cannot be separate from the knower, but rather is rooted in his or her mental or linguistic designations of that world. (Lincoln & Guba, 2000, p. 176)

To this end, in this chapter I describe my research 'journey' in an informal, first-person, descriptive style, in acknowledgement that alternative styles of writing (rather than the traditional third person format of a thesis) bring new understanding to the context and process of research (Richardson, 2000). I explain the major influences on this personal stance, and the implications these had for my research.

First, I acknowledge particular attitudes towards the sciences. Even though I studied physics, maths, and chemistry in senior high school, by the time I completed my undergraduate degree in psychology, I found the emphasis on objective experimental methods in these sciences, at the time, rather sterile. I felt that they failed to account sufficiently for the complexity of human behaviour and the outcomes of social interaction. Consequently, I find that I am at heart critical of narrow scientific framing of GM.

Second, I acknowledge influences on my methodological approach. My BA honours dissertation was a literature survey exploring the relationship between language and the development of thinking, focusing particularly on the development of language in deaf children, so I had an early interest in the role of language in structuring thinking and meaning, and chose a qualitative approach to understand the myriad ways in which complex phenomenon might be related. I still prefer to conduct qualitative rather than quantitative research.

Third, I hold strong environmental values. I grew up in the industrial north of England, where my mother had to take in the washing if it rained because it got covered in black soot, and the buildings all looked like the inside of a chimney. New Zealand, in contrast, truly seemed like an unpolluted, environmental paradise when I arrived here, in 1970, so I am always particularly aware of the impacts of technology on the environment.

Fourth, I believe that we should always question whether new technologies are necessary at all. I worked briefly as a clinical psychologist in a mental health crisis unit where patients were so heavily sedated that any thoughtful discussion about the issues they were grappling with was impossible. Since this experience, I am wary of excessive medical intervention, preferring approaches which, where possible, work to balance physical, emotional, and spiritual needs. For me, GM technologies may represent a largely unnecessary interventionist approach to health, nutrition, and environmental issues.

My personal stance on GM is, then, one of extreme caution. I don't mistrust the science; I believe that the understanding that comes from the genetic sciences has the potential for positive outcomes. But, I believe that positivist scientific research methods fail to represent all the implications of genetic science or to acknowledge the interconnections between ecological systems and social systems. I have a strong mistrust of the motives of some scientists and industries that develop technologies, and believe that profit motives too often take precedence over a consideration of environmental and human interests.

I have tried to maintain an open-minded stance in this research to ensure that I engage with all aspects of the data collected, but I am aware that my personal experiences have contributed significantly to the framing of my initial research questions and to the philosophical stance I have taken in defining my research methodology. I am also aware that my research impacted on the research participants. In focus groups and interviews, participants often thanked me for giving them an opportunity to think about GM issues; one participant commented specifically that she would encourage further discussion among her staff. These participants made it profoundly clear to me that I have to acknowledge my own voice in this research, as well as their voices.

The Primary Research Question

Although personal experiences obviously influenced my approach to this study, the research design, and the decision to look at the GM debate from an

industry perspective, stemmed from an interest in why two such seemingly similar industries took such contrasting positions on the commercial release of GM in New Zealand. The main driver of the research methodology, then, was the desire to understand and explain how aspects of organisational identity are implicated in the positioning of the kiwifruit and dairy industries in relation to GM issues, through exploring the underlying value-systems. Specifically, the primary research question is:

What explicit and implicit values, and values-related tensions, are evident in the organisational communication of the kiwifruit and dairy industries, as they contribute to the social construction of issues surrounding GM foods and crops in New Zealand?

The following sub-sections of this chapter discuss each of the theoretical paradigms and perspectives that have informed the methodologies used to investigate this research question, and explain the specific understanding of each that has contributed to the ontological and epistemological positions taken in this study.

The Interpretivist Paradigm

In a playful, provocative essay about the nature of interpretivist research, Cheney (2000) presented 17 meanings for the term ‘interpretivism’ to demonstrate the diversity of possible research directions within this paradigm. He commented that the interpretive paradigm considers multiple voices and may focus on several possible areas of research: the social actor, the researcher, the situation, the ‘text,’ and the research process itself.

An interpretive approach to enquiry seeks to capture the detail of participants’ understanding of a situation, and the possible plurality of interpretations likely to be shown. Interpretive research emphasises the value of *thick description* to effectively represent the complex conceptual structures evident in data and the meanings embedded in symbolic actions; it recognises the importance of culture as a context for action. As Geertz (1973) commented:

Man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning. (Geertz, 1973, p. 5)

As Heracleous (2004) argued, interpretive research seeks understanding of an actor's frame of reference and for this reason focuses particularly on "in depth understanding of actors' first order interpretations" (p.187). In contrast, positivist traditions, Heracleous suggested, privilege *explanation*—"the search for causal, law-like deterministic regularities" (p. 175).

However, interpretivists themselves may differ in their ontological and epistemological research foundations. Potter (1996) described an *ontological* continuum ranging from *idealism* to *materialism* to demonstrate the range of ontological positions in terms of belief in an objective reality or a subjective reality. Within this continuum, interpretivists working within a modernist or post-positivist paradigm believe in *materialism*—*the objectivity of knowledge*. Researchers using traditional ethnographic methods, for example, try to step outside of their *own* reflexivity and accurately represent objective reality—what is going on in the field—from their empirical data, as represented subjectively by their *participants* (see, for example, van Maanen's (1988) discussion of realist tales). Yet, Berger and Luckman (1967) critiqued modernist and post-positivist epistemological approaches as *reifications* arguing that language provides the possibility of abstractions through the use of symbols, but also provides the possibility of bringing symbols back as reifications, so that the dialectic between man and his world is lost and the interpretation of the world is seen as fact. They defined reification as:

The apprehension of the products of human activity as if they were something other than human products - such as facts of nature, results of cosmic laws, or manifestations of divine will. (Berger & Luckman, 1967, p. 106)

Reification, they argued, may take place on a variety of levels; for example, a whole society/religion, an institution such as marriage, or a 'role' such as husband/father may be accepted as 'fact' instead of being seen as social constructions of reality. For instance, a husband may be seen as the family breadwinner, and the possibility of a father being the primary care-giver for children and remaining out of paid employment while the wife becomes the breadwinner may be inconceivable.

In contrast to modernist approaches, interpretivists working within a poststructuralist or postmodern paradigm take ontological positions closer to *idealism* or *relativism*—that is, knowledge is relative depending on the subjectivity of the knower. Towards this end of the ontological continuum, Potter (1996) described ideographic idealism as:

A belief that there is something that exists apart from the individual, but because that something can never be experienced objectively (outside the limits and influence of one's own perceptions) it is pointless to grant it a materialistic ontological status. (p. 37-38)

Potter (1996) additionally described an *epistemological* continuum ranging from *constructivism* (pure subjectivity) to *realism* (pure objectivity) to reflect the different ways in which researchers might find out about the world:

Constructivists believe that scholarly inquiry is conducted from within a global perspective or world view that shapes the process of research. They reject the logical positivist view of an objectively real world, believing instead that the world is subjectively constructed by the meanings that people assign to observations. (Potter, 1996, p. 40)

Social constructivism, involves a rejection of objective empiricism, and sees no reality other than that dependent on meanings constructed in language. As Schwandt (2000) commented: “Constructivism means that human beings do not find or discover knowledge so much as we construct or invent it” (p. 197).

Berger and Luckman (1967) provided an early understanding of an intermediate position between realism and constructivism, of the ways in which reality may be *socially constructed*. They defined *reality* as something that has “a being independent of our own volition” (p. 13) but distinguished the *social* relativity of reality—that what is real to one person may not be to another. For example, the associated concept of *historicity* suggests that perspectives on events are dependent on the historical context in which they are reported.

Berger and Luckman defined the social construction of reality as “the relationship between human thought and the social context within which it arises” (1967, p. 16). They argued that a sociology of knowledge must therefore deal with everyone's reality—common-sense knowledge—not just philosophical and theoretical enquiry about the nature of knowledge. Although Berger and Luckman believed that an objective reality exists, they commented that society is built on

activities that are underpinned by subjective understandings of reality founded in language.

In Orr's (1978) definition of social constructionism, knowledge is more clearly underpinned by values, as seen through consensually validated symbols:

Groups create and sustain their versions of reality through symbolic interaction; that is, consensually validated symbols define reality and truth for validating communities. Knowledge is, therefore, rooted within socially derived symbolic structures. Rhetoric as symbolic advocacy is a constituent element in the social construction of reality; even a scientific community's version of reality depends upon rhetoric. (p. 263)

Orr argued that we have to conceive of an objective reality as the basis for multiple interpretations of reality which are created in meaning by rhetoric.

Potter (1996) described an intermediate position between pure subjectivity and pure objectivity as *intersubjectivity*, where people may share perspectives that have been shaped by similar social norms, values, and goals, such that they co-create reality in meaning: the researcher and the research participants *together* create understanding. From this viewpoint, researchers are never able to be purely objective but neither are they limited to pure subjectivity. However, in Orr's (1978) view, ontological intersubjectivity is equated with constructivism, where "reality and truth are rooted solely in human authority" (p. 264). He argued that this position precludes the possibility of criticism; if every reality is different, others' experiences of meaning can never be sufficiently known to critique them. Orr also critiqued intersubjectivist definitions of 'truth' as simply "agreement" (1978, p. 267). By definition, he argued, if there is no objective truth, there can be no agreement.

However, Orr (1978) argued that reality is still always elusive in his alternative concept of *critical rationality*:

Reality is conceptually organised, and interpreted through communication; but whatever versions of reality result from this process are partial and contingent before that *reality* which eludes our understanding (p. 274).

Some researchers have pointed out that modernist (the idea that there is an objective reality to be communicated) and poststructuralist interpretive approaches (the idea that reality is socially constructed in meaning through communication) have much in common. Richards (2001), for example, suggested that issues of indexicality (situated context) and reflexivity are integral to both ethnomethodology and

poststructuralism, even though the traditions of ethnomethodology derive from modernism and scientism, and the traditions of poststructuralism derive from hermeneutic interpretivism. In the case of both methodological positions, the concept of a *hermeneutic circle* is useful, this means that there is constant movement between the detail of an investigation and consideration of the whole study, that there are no clear beginning or end points (Potter, 1996, p. 30). This provides a way of working at a micro level, with situated local understandings, and at a macro level, with, for example, whole cultural or social systems, to establish how each mutually implicates the other (Geertz, 1973, Potter, 1996).

Schwandt (2000) also commented that post-positivist philosophical hermeneutics and social constructivist interpretive positions are in some ways closely aligned. In philosophical hermeneutics:

Understanding is something that is *produced* in that dialogue, not something *reproduced* by an interpreter. . . meaning is negotiated mutually in the act of interpretation; it is not simply discovered. (Schwandt, 2000, p. 195)

Although social constructivists, Schwandt suggested, might use the word *constructed* instead of *negotiated*.

Critics of interpretivism suggest that interpretivism is only useful in determining subjective, situated understandings. Yet, as Heracleous (2004) argued, inductive generalisations and understandings can be inferred from an interpretivist approach, because it allows for an awareness of the constitutive role of language in ordering our world, for example at the level of both rhetoric and discourse. He commented that:

Language, in this perspective, creates conditioned (rather than universal) rationalities as widespread ways of thinking within particular social systems, which become elements of those systems' realities. (Heracleous, 2004, p. 178)

Cheney (2000) also critiqued interpretivism for its "parochialism" (p. 34), suggesting that by being so closely involved with the multiplicities and pluralities of the research situation, researchers may fail to see other important aspects (for example, the workings of power). They may introduce additional particular meanings derived from dominant discourses, may overestimate their own interpretations, or fail to make much-needed value judgements.

Cheney (2000) suggested that a number of questions need to be kept in mind while conducting interpretive research. Such questions include the limitations of the interpretation, the losses and gains in achieving only a fleeting and situated understanding, and the need to consider the actual physical constraints and constants that impact on a particular situation. A mitigating approach to such problems, Cheney suggested, is to consider paradigm integration, whether paradigms can work together, sequentially, or in parallel.

Mindful of Cheney's (2000) critique, in this study I overlay this interpretive approach with a poststructural critical perspective. I take a social constructionist approach, one of perspectivism without relativism, similar to that of Orr (1978). This suggests that we are continually seeking to redefine knowledge and truth, and recognises the importance of language in the production of meaning. This interpretive approach is particularly relevant for a study of industry meanings surrounding GM issues, since the contested nature of the issues means that 'knowledge' and 'truth' about GM are defined by these industries in their organisational communication.

The Implications of a Poststructural Critical-Interpretive Approach

In a general sense, critical theory can be used to refer to a range of theories which take a critical view of society or seek to explain the emergence of particular versions of knowledge (Calhoun, 1995; Hardt, 1992; Macey, 2000). They focus on issues of power and on explicit judgements of *values*, and seek to challenge established practices and institutions (Alvesson & Deetz, 2000). In this study, where the social construction of meanings about GM is a contested site, values are an inescapable part of the context in which the kiwifruit and dairy industries do business, and may be underpinned by particular institutional structures and discourses.

Critical theory also refers more specifically to the major focus of the Frankfurt School, particularly the writings of Adorno, Horkheimer, and Habermas (Calhoun, 1995; Hardt, 1992; Macey, 2000). It involves the critique of ideologies—

that is a system of thinking that defines the worldview or collective beliefs and attitudes of a particular group in society—what is normally taken for granted. Van Dijk (1995) defined ideologies as:

. . . basic frameworks of social cognition, shared by members of social groups, constituted by relevant selections of sociocultural values, and organized by an ideological schema that represents the self-definition of a group. (p. 248)

As Mumby (2000) commented, critical perspectives aim to understand, explain, and critique the political and ideological limits placed on social actors as they participate in “meaningful dialogue communities” (p. 72).

Critical theory draws on a number of separate traditions, including hermeneutic understanding, Marxian social theory and neo-Weberian analyses of rationality, and Freudian discursive intervention and psychoanalysis (Calhoun, 1995; Hardt, 1992; Mumby, 2004). That is it focuses on the conditions under which we understand things (linguistically, historically, and dialectically), how social dominance is constructed and maintained, and how taken-for-granted assumptions are often hidden from organisational members, in a process of discursive “closure” (Deetz & Kersten, 1983, p. 153). As Mumby commented, “Organizations are conceived as political sites where various organizational actors and groups struggle to ‘fix’ meaning in ways that will serve their particular interests” (2004, p. 237). Particular critical approaches will rely on different combinations of these traditions, and may focus on ideological critique and/or analysing sites of power and resistance (Deetz, 2005; Mumby, 2004).

Poststructuralism is a critical approach that challenges the relative certainties of modernist structuralist models. Where theoretical postmodernism is ontologically sceptical and pessimistic about the possibility of social transformation in an increasingly fragmented world (see Boje & Dennehy, 1994; Calas & Smircich, 1999; Nicholson & Seidman, 1995), poststructuralism acknowledges the possibility of contingent affirmative action: progress that is redefined through deconstruction and the liberation of marginalised ‘others’, while recognising the problems with absolute standards and with essentialised meanings:

Poststructuralism is, in general, a critique of Western epistemology as a system of exclusions . . . ‘The border’ and ‘borderlands’, both as geography and as metaphor,

have become productive spaces, rather than dividing lines, for theorizing complicated subjectivities and social relations in response to dominant ideologies. (Calas & Smircich, 1999, p. 661-662)

A poststructuralist perspective considers that when meaning is stabilised in a particular social context a system of power relations is evident (Calas & Smircich, 1999). Poststructuralist approaches then destabilise meaning and involve, for example, the close reading and deconstruction of texts such that what is unsaid or understated becomes a focus for analysis.

However, Cheney (2000) warned that critical analysis can be guilty of arrogance: “The critic always knows best” (p. 35). Value-based comments, attributions of power, and continuous questioning of the situation can sometimes bring the research itself into question; the analysis can be said to be monolithic and can mean that the researcher becomes distanced from the situation. Calas and Smircich (1999) argued, similarly, that researchers have a moral responsibility to be conscious of how they sustain power relations as they write, and to work towards opening up texts in this way.

In turn, Mumby (2004) argued that critical research can become too theoretical and should remain grounded in practical, everyday issues. A critical-interpretive perspective focuses particularly on practical and emancipatory interests. It seeks to challenge accepted viewpoints and critique ideologies in a self-conscious way to expose the ideological controls which are unobtrusive and unquestioned, both in terms of social systems (at a macro level) and in terms of individual action (at a micro level) (Macey, 2000; Mumby, 2000). Indeed, Deetz and Kersten (1983) suggested that critical organisational communication research should look at understanding on three levels: the social forces that shape organisations (a macro level), the organisation in its wider context in society and whose interests are served (a meso level), and coercive conditions and how these are maintained (a micro level).

A Bricolage of Approaches

In this study, I take up these challenges and use a poststructural critical-interpretive approach; that is, I overlay my social constructionist interpretive

approach with a critical perspective, informed by poststructural rather than modernist understandings, ensuring a methodology relevant for this particular research. This combination of approaches can be described as a montage or bricolage of research methodologies (Denzin & Lincoln, 2000). As Denzin and Lincoln commented, “A research design describes a flexible set of guidelines that connect theoretical paradigms first to strategies of inquiry and second to methods for collecting empirical material” (2000, p. 22). Deetz (2001) argued similarly that researchers should move between perspectives, rather than being purist, taking aspects of each to create the most relevant approach for each piece of research.

In this social constructionist interpretive approach, I explore the multiple meanings associated with GM, which are continuously negotiated. Epistemologically, I seek to understand the localised and contextualised meanings contained in subjective experiences, and see language as the major way of constructing our world in meaning. At the level of deep structure, I consider the ideologies and value systems explicitly and implicitly represented in the communication of the kiwifruit and dairy industries about GM issues, adding a poststructural critical perspective but, importantly, I additionally explore how these values systems are structured and maintained in the particular situational contexts of these two industry organisations. My focus in this study, then, is particularly on critically evaluating the communication processes of influence used by the kiwifruit and dairy industries as they negotiate their relationships with the practice of GM, rather than issues of dominance and exclusion for particular industry groups. To achieve this, I draw on the traditions of both rhetorical criticism and critical discourse analysis.

Comparing and Contrasting Rhetorical Criticism and Critical Discourse Analysis

Rhetorical criticism and critical discourse analysis (CDA) have emerged as two separate but related and complementary methods of data analysis, based on two distinct interpretive research traditions, with different emphases (Cheney, 2000; Livesey, 2002; Putnam & Fairhurst, 2001, Fairhurst & Putnam, 2004). Rhetorical

analysis developed from the insights of the ancient Greeks; it focuses on *persuasion*, and is more common in the North American tradition of rhetorical studies (Cheney, 2000, June 27). Aristotelian rhetoric was defined as “the faculty of observing in the particular case the available means of persuasion” (Foss, Foss & Trapp, 1991, p. 4). Rhetorical *criticism* highlights the ways in which discourse exists as both a field for, and expression of, the intentions of communicators. CDA is more commonly associated with European research traditions. It focuses on *power* and highlights the role of power and ideology in social institutions (Livesey, 2002). As Ryan and Bernard (2000) noted, the *linguistic* tradition (highlighted in rhetorical criticism) makes text the object of analysis itself, while the *sociological* tradition (highlighted in CDA) sees text as a “window into human experience” (p. 769).

Both approaches to analysis, however, draw on the rhetorical turn in twentieth century theory in the social sciences, and are concerned with how language shapes everyday meanings (Livesey, 2002). As Livesey (2002) concluded:

A rhetorical approach offers techniques by which to analyze features of language in detail and consider its immediate, often polarizing, effects in specific controversies. The Foucauldian [CDA] perspective, on the other hand, helps the researcher to understand the implications of local struggles and conflicts in terms of change at the social and institutional level. (p. 141)

The advantage of rhetorical criticism is its focus on the actual construction of language in texts. This ensures the analysis keeps very close to participants’ own understandings, focuses on the suasive elements of texts, and allows for the evaluation of the rhetorical elements used. Its limitations lie in its restriction to a micro-level focus, and its relative neglect of the material context of the rhetoric. CDA has the advantage of focusing at the macro level of society on the wider situated assumptions within which text is embedded, but can be guilty of making *a priori* assumptions in terms of power (over-determination), and of over-interpretation of texts (Cheney, 2000, June 27).

Organisations are increasingly conceptualised as having permeable boundaries and the management of meaning by an organisation can, then, impact on internal and external organisational outcomes at a micro level and contribute to macro level discourses and the production of societal trends (Cheney & Lair, 2005).

The struggle within New Zealand to define the terms of the debate about GM is, in these terms, a rhetorically contested site of power. A combination of rhetorical criticism and critical discourse analysis is thus very appropriate for this study. I therefore explore each method of analysis in more detail in the following sections.

Rhetorical Criticism.

In this study, 'rhetoric' is taken to mean the symbol systems constructed to create the reality of a specific situation (see Burke, 1966, 1973; Cheney & Tompkins, 1988; Livesey, 2002). Rhetoric is used as a means of persuasion and influence by, for and within organisations (Cheney & McMillan, 1990), as well as by individuals. It involves the use of symbolic resources when there are multiple possible outcomes that can be influenced through persuasive means (Cheney & Lair, 2005; Rybacki & Rybacki, 1991); although, as Foss (1996) pointed out, rhetoric can also be an invitation to understanding or a means of self-discovery. Cheney, Christensen, Conrad and Lair (2004) emphasised the strategic nature of rhetoric in both specific campaigns and wider debate. They suggested that organisational rhetoric may both draw on prevalent social meanings to gain support for and legitimise particular policies, and work to reinforce those social meanings.

The rhetorical analysis in this study draws strongly on Burke's theories of identification (see, for example, Burke, 1969). Burke suggested that identification occurs in our attempts to overcome our separateness as individuals, through the use of symbols in a complex dialectic where there is both commonality and difference that express, for example, interests and values (Burke, 1969; Livesey, 2002). Rhetoric, then, is understood as the use of language (symbols) to unite people or induce cooperation; it is purposive, has motive, and involves symbolic action (Livesey, 2002; Rybacki & Rybacki, 1991). Burke's conceptualisation of rhetoric and identification means that rhetoric involves self-persuasion, as well as the persuasion of others; the individual cannot be separated from the social: "The so-called 'I' is merely a unique combination of partially conflicting corporate 'We's'" (Cheney & Tompkins, 1983, p. 126).

Persuasion then takes place through identification, through *consubstantiation*, choosing to see something the same as something else, or recognising an association between two things. The concept of identification also recognises processes of *alienation* or *dissociation*. When you identify with someone, you are still uniquely yourself, not exactly the same, so identification involves sameness and difference. A rhetorical act is then a strategy for identification or persuasion; it provides an orientation to a situation and help in adjusting to it (Burke, 1969; Foss, 2004; Foss et al., 1991).

Identification functions in three ways: directly, as a means to an end, or persuasion; by antithesis, what something is not; and at an unconscious level, identification with the style or wider concepts embodied in the rhetoric (Foss et al., 1991). Rhetoric implies conscious planning—purpose and intent—but this conceptualisation of identification also allows for unconscious motivations and the unconscious effects of rhetoric.

Rybacki and Rybacki (1991) and Foss et al. (1991) noted other important facets of Burkean theory in rhetorical analysis. For example, symbols are used to recognise positions in social hierarchies, to persuade people to join or change positions in a hierarchy; though it is recognised that people have the ability to accept or reject the social order or hierarchy. As Cheney, Garvin-Doxas and Torrens (1999) argued, the concept of ‘hierarchy’ is important because it indicates how people and parts of the world are linked symbolically through language use; like Douglas (1986), Burke believed that we contribute to the creation of order by the symbolic process of categorising or naming things, creating ways of knowing.

Foss et al. (1991) commented that ‘hierarchy’ also demonstrates division. It means that things outside the hierarchy are imbued with *mystery*, and that people within a hierarchy view things from a particular framework, through the mystery of that hierarchy. Burke described such worldviews embodied in rhetoric as *terministic screens* (Burke, 1966; Foss, 2004; Livesey, 2002). Mystery may encourage obedience, and mean that differences cease to matter, as well as being a source of persuasion—uniting those with differences (Foss et al., 1991), and Cheney et al.

(1999) termed this Burke's "implicit theory of power" (p. 148). As Livesey (2002) noted, words become meaningful in context but are continuously negotiated rather than fixed in meaning.

Rhetorical criticism, then, involves both analysis and *evaluation* of rhetorical strategies, to appreciate why particular symbols become meaningful, and why one symbol is chosen over another (Rybacki & Rybacki, 1991). It facilitates an understanding of rhetors' motives and attempts to influence others' beliefs and perceptions (Foss, 1996). Cheney and Lair (2005) defined rhetorical criticism as, "the description, interpretation, analysis, and critique of organized persuasion—and by extension, identification" (p. 60).

Critical Discourse Analysis.

In contrast to rhetorical criticism, (CDA) is a critical discourse of suspicion (Mumby, 2004). Mumby described CDA as a "perspective that focuses on the relationships among discourse, ideology and deep-structure relations of power" (p. 251). CDA explores the relationships between discursive practices and texts, and wider social and cultural practices to make explicit the ways that power, dominance, and inequality are maintained and extended through ideology and discourse (Livesey, 2002; van Dijk, 1995).

CDA draws strongly on the work of Foucault, and emphasises that language constitutes knowledge, subject identity, and social relationships. For Foucault, discourse includes not just language but symbolic systems, institutional structures, social rules and practices (Fairclough, 1992; Foucault, 1988; Livesey, 2002). In his later work on genealogy, Foucault was particularly concerned with forms of power. He described the circular link between knowledge and power as a "regime of truth" (Foucault, 1991, p. 73; Livesey, 2002; p. 123) or a "truth game" (Foucault, 1988, p. 18) which privileges specific interests and marginalises others. Van Dijk (1995) concluded that the meanings associated with discourse derive from their underlying ideologies, and as Heracleous (2004) argued, CDA emphasises the legitimating function of discursive sensemaking:

[CDA] aims to demystify situations and perceptions that may be viewed as ‘natural’, but that have in effect been discursively constructed over time by groups in power aiming to skew social reality and institutional arrangements to their own advantage. (Heracleous. 2004, p. 186)

CDA, then, examines the role of *ideology* in sustaining power through discourse.

Ideologies are evaluative, organised, and define how individuals and groups perceive and interpret social reality (Foucault, 1991). The process of *articulation* has been suggested as one way in which this occurs:

Articulation links this practice to that effect, this text to that meaning, this meaning to that reality, this experience to those politics. And these links are themselves articulated into larger structures. (Slack, 1996, p. 115, citing Grossberg, 1992)

Ideologies, then, have a number of possible functions: to legitimate existing orders of social reality; to mask contradictions in the existing orders; to ‘mystify’ existing orders through cover-up, reification, or alienation; and to control, creating a consensus of what should be (Deetz & Kersten, 1983, p. 164).

Proponents of CDA emphasise that it is not prescriptive in method and must be individually tailored to the social issue in question (Fairclough, 1992; van Dijk, 2001). The resulting analysis can only ever be partial, since it involves the selection of which discourses and social structures are relevant (van Dijk, 2001). Fairclough conceptualised discourse analysis as three-dimensional, analysing any instance of discourse simultaneously as a piece of *text*, a *discursive practice*, and a *social practice*. Fairclough (1992) suggested that discourses display a number of features including manifest *intertextuality*—where texts are overtly articulated in particular ways with other texts, *colonisation*—where one discourse language transforms another (p. 117), *interdiscursivity*—where different types of discursive formations and practices may be linked together, and *textual transformations*—where the style of writing of a piece of text might be changed (1992, p. 133).

Van Dijk (2001) identified three similar levels of CDA analysis, describing these as *global meanings*—the ideological basis of discourse which has to be inferred, *local meanings*—the selection of words that explicitly or implicitly indicate mental models and shared beliefs, and *structures of text and talk*—the forms and genres that create mental models (p. 102). Van Dijk (1995) suggested that CDA may focus on word meanings; foregrounding and backgrounding of topics; allegations,

suggestions, and allusions; assumptions and taken-for-granted meanings; level of completeness of description; and the use of strategic language. CDA may also involve searching for themes derived from key-words, clusters of words that have related characteristics, a related underlying construct, or are related causally or hierarchically (Boyatzis, 1998).

Interestingly, at the level of text, the specific steps in data analysis for both CDA and rhetorical criticism begin to converge. For example, rhetorical strategies can also be identified from close analysis of the persistent patterns which pervade texts. Foss (2004) described rhetorical ‘cluster’ criticism as identifying the key terms in a text on the basis of frequency or intensity and then checking what terms congregate around those key terms either because of close proximity, or connected by cause and effect.

Heracleous and Barrett (2001) developed a specific discourse analysis methodology based on rhetoric and hermeneutics, to complement interpretive and critical perspectives on discourse. They conceptualised two inter-related levels of analysis focusing on the subjective meanings understood through social actors’ interpretive schemes, and the rules and resources which actors draw on. They suggested that discourses exhibit structural properties that are implicit, textual, trans-temporal, and trans-situational. Themes in communicative actions can influence structures over the long term, which then re-influence communicative actions.

Heracleous and Barrett (2001) argued that analysis needs to go beyond the actual communicative action and look at the values and beliefs underlying these, which influence them over time, and which constitute deeper structures. Their analysis searched for central themes, patterns in data, ordering of themes, use of enthymemes¹, interrelations of themes, and other rhetorical strategies such as metaphor, and iconicity. As Heracleous and Barrett (2001) explained:

¹ Enthymemes are rhetorical forms of argument which express comparison or similarity. However, unlike logical syllogisms, one or more of the premises of an enthymeme is taken for granted or assumed.

Identification and analysis of enthymemes and particularly their unstated and assumed premises, therefore, can enable researchers to uncover the taken-for-granted values and beliefs of actors in a particular social context. These values and beliefs are in effect structures of legitimation that underlie agents' interpretations and (communicative) actions and that are in practice inseparable from considerations of language and power, as structuration theory emphasizes. (p. 762)

A combination of rhetorical criticism and CDA, similar to that used by Heracleous and Barrett, is used in this study.

The Research Design

Research Questions and Data Collection Choices

The research design, and the decision to look at an industry perspective of the GM debate, as explained in Chapter One, stemmed originally from my concern that large corporations might be driving decision-making about GM for self-interested commercial gain. Yet, paradoxically, the dairy industry and the kiwifruit industry take differing positions in the debate about the commercial release of GM in New Zealand; although, both industries share some similar aspects of identity. As primary producers earning significant export incomes, both are seen as national icons as well as major institutions for New Zealand, and comprise cooperative export marketing organisations owned by growers/farmers. Additionally, both industries use imagery positioning their products as healthy and natural, and draw on New Zealand's status as a nation with a clean, green environment.

A comparison of the GM position communicated by each of these two industries thus became the basis for the first specific research question:

Research Question 1. *How do the kiwifruit and dairy industries express and explain their respective strategic positions, in relation to the genetic modification of foods, to both internal and external stakeholders?*

This research question focuses on the rhetoric used in representing industry positions on GM, and how this is linked to wider organisational values and strategies. It considers the rhetorical arguments used to justify the respective industry positions, and the wider discourses, values, and assumptions evident in these arguments. The chief data sources include each industry's submission to the Royal Commission,

mission statements, strategic planning documents, media releases, newsletters, brochures, and websites, as well as accounts from interview participants, as detailed later in this chapter.

Within any one organisation or industry, and within the myriad of interest groups in the GM debate, a wide range of values may be represented, some of which may be shared by several interest groups. Individuals may belong to more than one interest group, potentially with conflicting GM positions. For example, organic dairy farmers may share some values with the wider dairy industry and some values with organic interest groups like Bio-gro New Zealand. Kiwifruit growers with concerns about the use and impact of chemical sprays on crops may share some values with the wider kiwifruit industry and some values with, for example, the research institutes whose research seeks to reduce the number of sprays required on crops. In de-regulated, cooperative-based industries, such as the kiwifruit and dairy industries, it is additionally interesting to investigate how decisions are made and communicated about GM issues, and whose values are represented.

An exploration of identity on multiple levels is then relevant to this study, including the industry sub-group level, the wider industry organisation level, and a national level. For this reason, the research design identifies spokespersons with different functional involvement in each industry, and at different levels within each industry, including research, management, manufacturing and distribution, and production. This focus forms the basis for the second research question.

Research Question 2. *How are the kiwifruit industry and dairy industry policies on genetic modification related to aspects of each industry's organisational identity?*

This research question examines how each industry's position on GM 'sits' in the context of aspects of identity and organisational culture. The focus is an exploration of the interests, values, objectives, and tactics exemplified in the organisational communication and public relations communication strategies in these industries. The chief data sources are the accounts of industry members given in interviews and focus groups.

Given the complexity of the GM debate in New Zealand and the wide range of other groups represented, these industry positions do not exist in isolation, and need to be contextualised within the wider debate. In this study, I therefore note the extent to which the kiwifruit and dairy industries engage with key interest groups that take an active part in the GM debate; which groups they align their GM positioning with, and which they critique. For example, in the research interviews industry members referred to the two specific Crown Research Institutes most closely aligned with their industries—AgResearch and HortResearch—and Greenpeace New Zealand, the ‘GE-Free’ coalition (a coalition of anti-GE groups that emerged after the report of the Royal Commission), the Life Sciences Network (LSN), and Mothers Against Genetic Engineering (MAdGE).

An exploration of how the two industries engage with and manage their involvement in debate about GM became the basis for the third research question.

Research Question 3. *How do the kiwifruit and dairy industries engage with stakeholders and key interest groups that take an active part in the debate about genetic modification?*

This research question focuses on the rationalities used in the issues management communication by the kiwifruit industry and the dairy industry, in attempting to influence public policy in relation to GM in crops and foods. It considers how these strategies are related to other organisational communication and identity management practices, the implications for the industries concerned, and the implications for public policy decision making. The chief data sources include formal industry communication about GM to both internal and external key stakeholders in the form of submissions, reports, articles, speeches, media releases, and websites; and informal communication about GM in the form of interviews and focus groups. These are again detailed later in this chapter. Background data sources include communication about GM from identifiable representatives of key interest groups, including government, lobby groups, and research institutes, in the form of reports, speeches, media releases, and websites, as well as interviews with key interest groups members.

The next section explains the relevance of a case study approach for this research.

The Case Study Methodology

Case studies are bounded systems that are both the process and the product of research enquiry (Stake, 2000). Yin (1984) described a case study as an empirical investigation of “a contemporary phenomenon within its real-life context,” using “multiple sources of evidence,” when “the boundaries between phenomenon and context are not clearly evident” (p. 23). As Stake (2000) noted, case study research involves choices about participants and events, and where and how these will be observed. This may include:

1. The nature of the case;
2. The case’s historical background;
3. The physical setting;
4. Other contexts (e.g., economic, political, legal, and aesthetic);
5. Other cases through which this case is recognized;
6. Those informants through whom the case can be known. (p. 438-439)

Stake (2000) distinguished between three types of case study: *intrinsic*—to understand a particular case for its own sake, *instrumental*—to understand a particular case to provide insight into an issue, and *collective*—to investigate a phenomenon or question using several case studies as an illustration or focus (p. 437). According to Yin’s (1984) research design matrix, case study research can involve a single case or multiple case design, and an *embedded* approach—with multiple units of analysis related to specific projects or events in an organisation, or a *holistic* approach—with a single unit of analysis, for example, looking at the response of the whole organisation.

In this study, the research can be described as both intrinsic and instrumental with a multiple case design and an embedded approach: the position of the kiwifruit and dairy industries on GM is interesting for its own sake, but the research will additionally provide some new insights into GM issues. The case study compares the

kiwifruit and dairy industries on three levels: in relation to a *critical incident*, *processes*, and *issues* (Patton, 2002). It compares the *critical incident*—the people involved, the organisational structure, the background to the organisation and the two industry settings in relation to the introduction of GM technology; it compares the *processes*—the communication, decision-making, and strategic positioning on GM, and whether the GM *issues* are the same for both industries.

As empirical studies, case studies present particular ethical issues for the researcher; as Stake (2000) reminded: “Issues of observation and reportage should be discussed in advance. Limits to access should be suggested and agreements heeded” (p. 447). There is a possible need to protect, for example, the anonymity and the confidentiality of participants’ responses. However, Yin (1984) recommended as much disclosure of identity of the case, organisation, and the individual participants as possible, to ensure the credibility of the research findings, to encourage further contextualisation or further research, and to facilitate comparison with other case studies.

Case studies may involve a variety of data collection methods, including observation, document analysis, interviews, and focus groups. The following section discusses the rationale for the qualitative data collection methods chosen for this case study.

Qualitative Methodologies and the Choice of Semi-structured Interviews and Focus Groups

The qualitative, interpretive approach in this study presents an opportunity to explore the kiwifruit and dairy industries’ situated involvement in GM issues and recognises that participants’ own understandings of the world are important. Denzin and Lincoln (1994) likened qualitative research to:

... a starting point, a springboard for new thought and new work, work that is fresh and sensitive and that blurs the boundaries of our disciplines, but always sharpens our understanding of the larger human project. (p. xi)

Unlike quantitative research, which tends to focus on developing specific premises from probabilities derived from the study of large numbers of randomly selected

cases, qualitative research is largely inductive, committed to idiographic, situated research, which focuses on the specifics of particular cases.

However, qualitative approaches to research which emphasise the existence of multiple understandings preclude the establishment of absolute criteria for judging reliability or validity (Lincoln & Guba, 2000).

Issues of Reliability, Validity, and Objectivity.

Issues of reliability, validity, and objectivity were important in positivist and post-positivist paradigms as means of establishing the rigour of the data collected. More recently, terms like credibility, transferability, dependability, and confirmability replace these positivist terms (Denzin & Lincoln, 2000). In poststructural critical and interpretive paradigms, these positivist issues have been replaced by issues of voice, reflexivity, and textual representation to ensure that systems of data collection and data control maintain a rigorous approach but allow for transformation, emancipation, and change for marginalised groups (Lincoln & Guba, 2000). Lincoln and Guba (2000) recommended discussing validity in terms of *authenticity*, such that research is fair (all stakeholder views are represented), has ontological and educative authenticity (raising the level of awareness of participants and those around them for some social purpose), and has catalytic and tactical authenticity (facilitates an action outcome) (p. 180-181).

Similarly, triangulation is used in positivist methodologies as “a process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation” (Stake, 2000, p. 443). It can also be used in qualitative interpretive methodologies as a process of “identifying different ways the phenomenon is being seen” (Stake, 2000, p. 444). Triangulation is, then, a way of adding depth and richness to our understanding of data and in qualitative poststructuralist and interpretive approaches, this may involve *resistance*: exposing hidden assumptions, paradoxes, repressions, and marginalisations (Lincoln & Guba, 2000, p. 181).

Triangulation can comprise any or all of the following: data triangulation, investigator triangulation, theory triangulation, or methodological triangulation

(Janesick, 1998). However, Richardson (2000) recognised that struggling to present multi-voiced texts that question taken-for-granted truths is a huge challenge, particularly, for critical researchers. Richardson's conceptualisation of "crystallisation" (p. 934) is perhaps more appropriate than the term triangulation to indicate the multi-faceted sites, methods, and ways of writing about research which may contribute to new concepts of rigour and validity.

In this study, the methods of data collection include organisational documents, as well as interviews and focus groups with kiwifruit and dairy industry participants who have functionally diverse roles in the industries, and work at different hierarchical levels in the industry organisation. Attitudes do not necessarily have stable meanings that are shared widely or have universal acceptance. Opinions and beliefs may be relational, depending on social context, on the interactivity of a situation, and on the level of trust between participants, or between the participant and researcher (Brunt & Jordin, 1987; Waterton & Wynne, 1999). Interviews and focus groups provide rich qualitative data for the analysis of attitudes and beliefs. I chose semi-structured interviews and focus groups as methods of data collection suitable for the in-depth case-study approach of this research, and the combination of critical and interpretive approaches to analysis adds additional depth to the understanding of the data. In this way, the study aims to explore multiple, wide-ranging understandings of the kiwifruit and dairy industries' positioning on GM.

The following two sections further discuss the advantages and limitations of semi-structured interviews and focus groups.

The Choice of Semi-structured Interviews.

The major advantage of long, semi-structured interviews with participants is that they enable the researcher "to see and experience the world as they [participants] do themselves" (McCracken, 1988, p. 9). Semi-structured interviews avoid establishing any *a priori* categorisation of the data which might limit the field of research (as in a structured interview with fixed questions) but at the same time ensure that the issues under investigation are covered within the conversations

(Fontana & Frey, 2000). In this situation, participants are more likely to feel free to establish their own meanings about the issues discussed.

As Fontana and Frey (2000) commented, the nature of the interviewing process can impact on the outcomes of the interview: “Interviews are not neutral tools of data gathering but active interactions between two (or more) people leading to negotiated, contextually based results” (p. 646). Particularly when interview topics relate to sensitive or controversial topics, there is always the possibility that participants may provide responses that they think the interviewer may want to hear, or may choose not to disclose certain information (Fontana & Frey, 2000).

McCracken (1988) commented that, in this context, interviewing needs to be as little directive as possible using moderately scheduled open-ended questions, and following up on questions with active listening. Commonly, a “funnel” approach to questioning is used, such that the interview begins with general questions and later moves to more specific questions (Morgan, 1997, p. 41).

Indeed, managing the relationship with the interviewee, deciding how to present oneself as an interviewer, and gaining the trust of the participants is an issue for the researcher, (Fontana & Frey, 2000; McCracken, 1988). Gaining access to participants for interviews may also be an issue, particularly since the disadvantages of interviews are the length of time needed, and concerns about respecting the privacy of participants (McCracken, 1988).

Increasingly, researchers are encouraged to be reflexive, making the researcher ‘visible’ to the participants—that is, acknowledging a personal viewpoint and answering questions, being involved, and being reflexive about the ‘voice’ used to analyse, interpret, and write up the research (Fontana & Frey, 2000; McCracken, 1988; Van Maanen, 1988).

As Gubrium and Holstein (2001) pointed out, the traditional view of an interview where passive interview participants provide information to an objective interviewer has evolved to one recognising that interviewers and interviewees actively co-construct versions of reality. The research design, questioning and interpretation of data by the interviewer, and the interviewee’s sensemaking of his or

her experience both contribute to the overall research analysis as “research collaborators” (Gubrium & Holstein, 2001, p. 20). This enables a consideration of the multiple influences on the interviewee’s standpoint or voice.

In this study, interviews were chosen as ‘accounts’ of industry understandings of issues provided by the participants in a particular organisational context (Tompkins & Cheney, 1983). Accounts are examples of retrospective comment by those involved in a particular decision making event (Harre & Secord, 1972; Scott & Lyman, 1968), in which the organisational participants analyse conscious decisions made between alternatives on the basis of the premises for those decisions and their organisational identification (Tompkins & Cheney, 1983). Building on the work of Simon (1976) and Burke (1966), Tompkins and Cheney (1983) suggested that as we monitor our own actions, we can comment on our performances in anticipation of an event, while it is occurring, and retrospectively. Interview accounts indicate the social meanings given to the actions of participants themselves or others in the organisation, and are usually given as a justification for the decision or action.

Interviewees’ identification with particular alternatives limits the options for their analysis, and if they identify with the organisation this may ensure that decisions are in line with the organisation’s values. In a research interview, participants negotiate their accounts with the researcher in the context of the specific research study (Tompkins & Cheney, 1983).

The Choice of Focus Groups.

Kreps (1994) defined a focus group as occurring when, “A facilitator leads a relatively open, yet directed, conversation among a small group of respondents about a specific topic” (p. 180). Focus groups are increasingly used as ‘stand-alone’ methods of data collection, particularly in mass media and communication research, in contrast to their original supplementary use in quantitative methodologies (Lunt, 1996). The advantages of focus groups, it is argued, centre on their ability to generate diverse discussion, through the synergy of the group interaction, resulting in the collection of large volumes of rich data in a relatively short timeframe (Kreps, 1994; Lunt, 1996; Stewart & Shamdasani, 1990; Waterton & Wynne, 1999). New insights

may be expressed by group members as a result of the dynamics of the group discussion (Fontana & Frey, 2000; Hansen, Cottle, Negrine & Newbold, 1998; Kitzinger & Farquhar, 1999), particularly when the focus of the research is to explore a specific set of issues, where the collective activity facilitates an investigation of how opinions are constructed and discussed within a specific cultural or social setting (Kitzinger & Barbour, 1999; Waterton & Wynne, 1999). Focus groups are considered particularly effective when the research topic is controversial and the research purpose is to establish a wide range of meanings and interpretations (Fontana & Frey, 2000). By interacting with respondents, the moderator can ask for clarification, follow-up answers, and see non-verbal communication (Stewart & Shamdasani, 1990). As Lunt argued:

Focus groups can reveal underlying cognitive or ideological premises that structure arguments, the ways in which various discourses rooted in particular contexts and given experiences are brought to bear on interpretations, the discursive construction of social identities, and so forth. (1996, p. 96)

The active negotiated discussion in focus groups is said to reflect participants' own individual identities/identifications and meanings (Lunt, 1996; Waterton & Wynne, 1999), and facilitates understanding of the process of negotiation—how meaning is socially constructed through “everyday talk” (Lunt, 1996, p. 85). For example, participants use their own language as opposed to that framed by formal interview questions (Morrison, 1998). The flow of participants' own thoughts is, where possible, uninterrupted, with participants able to qualify, elaborate on, or modify their own or others' statements. Focus groups can then be a catalyst for the expression of ideas developed beyond the level of abstraction common in everyday living.

However, focus groups have, equally, been critiqued for generating idiosyncratic data which is difficult to analyse, and unable to be generalised to larger populations (Morrison, 1998; Stewart & Shamdasani, 1990). Additionally, a number of factors may affect the ‘natural’ setting, including the specific environment chosen, and the demographics of the participants (Stewart & Shamdasani, 1990). Participants often point out how unusual it would normally be to have such discussions; they are in fact structured events, and moderators may unwittingly provide cues for desirable

answers that lead to adjustments in participants' responses (Frey, 1994; Morrison, 1998; Stewart & Shamdasani, 1990). The group interaction may also limit individual responses, with some participants dominating the group, or may result in a false consensus—attitude polarisation—through either 'groupthink' or the development of attitude extremes (Carey, 1994; Lunt, 1996; Morgan, 1997; Morrison, 1998).

Waterton and Wynne (1999) agreed that the context of the group is important, but argued that it should be noted rather than controlled.

The research literature suggests that focus group participants should be selected on the basis of "purposive sampling" (Morrison, p. 198) such that they share characteristics relevant to the research topic (Kreps, 1994; Morrison, 1998), and a balance is attempted between participant interests and research interests (Lunt, 1996). Hansen et al., (1998) further suggested that as well as choosing categories significant to the research issues, researchers might choose participants with specialist knowledge or concerns, or choose participants from a pre-existing grouping. While the first two selection methods ensure that the data collected will be relevant to the research questions, the third method may increase the trust between group members and the likelihood that natural conversations will occur. Participants may gain support from being in homogenous groups, or with friends.

In the first sections of this chapter, I have discussed the theoretical rationale for the data collection—the *methodology* of the research. In the next section, I explain in detail the practical data collection *methods* used for this study.

Data Gathering and Collection Methods

The Scope and Limitations of the Data Collection

For practical reasons, there had to be time limits for this investigation; although, debate about GM is ongoing in New Zealand, as it is internationally. I chose a number of key moments in the debate to provide a series of 'snapshots' at particular points in time and capture any changes in communication occurring during the time period. These key moments represent points at which the debate gained particularly widespread public and media attention, and when organisations and

interest groups were most involved in both internal and external communication about GM.

The starting point for this investigation is the establishment of the Royal Commission on Genetic Modification on 8 May, 2000 and the endpoint is the lifting of the moratorium on applications for commercial field trials of GM products on 29 October, 2003. This time period represents an important period of public policy decision-making for New Zealand, from the point at which the debate first formally involved large sectors of the New Zealand community to the point at which government policy was finally established and implemented. Key moments in this time period comprise the publication of the report of the Royal Commission on 27 July, 2001, the announcement of a Government policy direction in September 2001, the general election in July 2002, and the publication of the Government's Biotechnology Strategy document on 26 May, 2003.

Since New Zealand is a bicultural society, the perspectives of Maori as well as New Zealand Europeans (*Pakeha* or *Tauiwi*) are extremely important, and the cultural beliefs in New Zealand are diverse. Those of Pakeha may be based, for example, on the values of the original colonial settlers, predominantly from Europe, and may reflect individualist values typical of Western societies. In contrast, Maori cultural beliefs may be grounded, for example, in the collectivist values and spiritual beliefs evident in other Polynesian societies. Although the two cultures have equal legal rights, the basis for constitutional values, the Treaty of Waitangi (*Te Tiriti o Waitangi*), is highly contested ("Made in New Zealand," 2005). Yet under New Zealand law, the principles of the Treaty have to be respected in public policy decisions.

A great deal of separate research exists regarding Maori perspectives on GM (see, for example, G. Roberts, 2000; R. M. Roberts, 2000; Roberts, Benton, Satterfield & Benton, 2004; Tipene-Matua, 2000a, 2000b). Culturally, such research is arguably best carried out by Maori researchers so that Maori retain control over their own development—this is known as *tino rangatiratanga* (Health Research Council of New Zealand, 1998). Additionally, Maori values were not highlighted in

the kiwifruit and dairy industries' positioning on GM. So, in this study, I only consider Maori perspectives where there has been specific comment in relation to Maori issues in the context of the kiwifruit and dairy industries' GM positioning. Since I did not specifically seek out Maori perspectives, Maori were not sought as participants in either focus groups or interviews.

I chose a combination of document analysis, interviews with key spokespeople, and focus groups to capture the complexity of the ways in which the kiwifruit and dairy industries affect and effect the rhetorical and social discursive construction of GM in New Zealand. This ensured both formal (goal-oriented/pro-active) and informal (reactive) contexts in which texts about GM have been produced were examined. It also facilitated an exploration of the industries' positioning on GM on multiple levels—including multiple texts and multiple functional viewpoints within each industry—as well as situating this communication within the discourses and institutions in New Zealand society. The next sub-sections look specifically at the details of the document collection, and at the interview and focus group procedures.

Document Collection

In the context of organisational communication and public relations, documents such as media releases, annual reports, and positioning statements on websites, as well as formal submissions and written speeches, demonstrate the substantive content of an organisation's communication. They also demonstrate the means by which the communication has been rhetorically constructed and communicated to internal or external stakeholders and publics, and the strategic priorities accorded particular communication (see Cheney & Tompkins, 1988). The analysis of documents produced by organisations at key moments in the debate, then, allows for a consideration of both the implicit values about GM that might reflect the organisational culture/identity and the explicit values about GM represented in the corporate/business identity. The documents additionally provide an opportunity to examine how these values were expressed.

The specific documents chosen for analysis comprise all of the communication about GM that is publicly available, and which were produced at the key moments identified previously, as well as a number of documents accessed through industry contacts. These documents are listed in Table 1.

Table 1. Documents analysed

Industry Organisation/ Author	Documents	Specific Title	Date
<i>Kiwifruit industry</i>			
Kiwifruit New Zealand	Media Release, published on ZESPRI website	Kiwifruit New Zealand says no to genetic modification	March, 1999
ZESPRI International	Submission to the Royal Commission on Genetic Modification		2000
Tony Marks, CEO, ZESPRI International	Witness Brief accompanying Submission		2000
Jane Lancaster	<i>New Zealand Kiwifruit Journal</i>	The genetic modification debate and our contribution to it.	November/ December, 2000
ZESPRI Innovation	<i>Kiwiflier</i>	Our position: No to GM – an update from ZESPRI Innovation	November, 2001
ZESPRI	ZESPRI website		2001
ZESPRI	Annual Report		2001
ZESPRI	Annual Report		2002
Sandy Hodge, ZESPRI International Communication Team	Letter sent to anyone enquiring about ZESPRI policy on GM		2003
ZESPRI	ZESPRI Brand video Zespri System video		2003
ZESPRI	ZESPRI Media Information Kit		2003
<i>Dairy industry</i>			
New Zealand Dairy Board (Also made on behalf of	Submission to the Royal		2000

New Zealand Dairy Research Institute, Livestock Corporation Limited, Dairying Research Corporation, ViaLactia Biosciences New Zealand Limited)	Commission on Genetic Modification		
Juliet MacLean, dairy farmer and Nuffield Scholar	Witness brief		2000
John Yeabsley, senior fellow of the New Zealand Institute of Economic Research	Witness brief		2000
New Zealand Dairy Board	Information booklet written for internal dairy industry staff	What is biotechnology? Biotech brief	2000
New Zealand Dairy Board	Information booklet written for dairy farmers	Biotechnology: Why we're investing in research	2000
New Zealand Dairy Board, in conjunction with the New Zealand Co-operative Dairy Company	Legal and concluding submissions to the Royal Commission		2001
Juliet MacLean, dairy farmer and Nuffield Scholar	Information booklet widely distributed to farmers	A brief guide to understanding biotechnology in New Zealand farming	2001
Fonterra	Media Release	Statement on genetic modification	September 14, 2001
Craig Norgate, CEO Fonterra	Speech given to the World Dairy Summit		October 29, 2001
Fonterra	Media Release	GM decision	October 30, 2001
Fonterra	Annual Report		2001/2002
Craig Norgate, CEO Fonterra	Speech given to the Fonterra Annual Meeting		September 12, 2002
New Zealand Milk Products	Website		2002
Fonterra	Website		2003

Preparing for the Interviews and Focus Groups

Before conducting the research interviews and focus groups, I ensured that I increased my own understanding of the background issues related to GM. I arranged to discuss GM with three scientists within the University of Waikato Science Faculty to ensure that I had a good understanding of the scientific processes and associated technologies involved. I also discussed the ethical issues related to GM with a staff member in the Philosophy Department of the University of Waikato, and I discussed marketing issues related to GM with a personal contact in a food manufacturing industry.

Additionally, I carried out a pilot study, comprising five pilot interviews. I interviewed a former employee of the Dairy Marketing Board, a local farmer, a kiwifruit grower, a former employee of the Kiwifruit Marketing Board, and a science teacher, all of whom were personally known to me. These interviews were solely for the purpose of refining my research questions and interview schedule, to ensure that my final interviews and focus groups would be structured in a way that allowed the participants to speak comfortably about GM, to ensure that the questions could be easily understood, and to ensure that the data collected would be relevant to my research questions.

I used a 'funnel' approach to questioning in preparing the interview and focus group schedules, beginning with broad questions and moving to more specific ones. Salient themes could then be identified by the participants before narrowing the discussion to specific details. Similar trigger questions were used for interview and focus group participants to ensure that a similar range of topics was covered and that there was some comparability of the data. The schedule of questions in each case aimed to ensure that participants' accounts would cover the broad areas of interest included in the research questions for the study; for example, focusing on values associated with GM, the relevance of GM for the organisation, and the communication practices related to GM.

Semi-structured Interviews

I used semi-structured interviews to provide ‘accounts’ of each organisation’s negotiation with the practices of GM over the time period of the research. I conducted interviews with spokespersons who had a particular involvement with GM in the organisation or interest group. This was to explore whether different *values*, or different aspects of *identity*, were privileged in the communication of spokespersons with different functional roles in each industry. It also enabled comment on the different communication *practices* used to engage with stakeholders within, and external to, the industry.

I used a series of open-ended and broad-based questions to trigger in-depth conversations with interviewees. This allowed the individual interviewees to establish their own meanings and focus the direction of the responses, and minimised the possible impact of my values or expectations on the participants’ comments. I encouraged interviewees to describe, and comment on, all aspects of communication about GM relevant to the organisation concerned, and tried to avoid openly taking a personal stance on GM issues in a way that might alter participants’ responses. I also assured participants of the confidentiality of their responses so that they would feel free to comment. Quotations have not been attributed to individuals in a way that would identify the participants concerned.

I approached participants either at the recommendation of the initial contact person in the industry, or because they were specifically mentioned as being able to provide a useful perspective on GM issues in relation to that particular industry. Additionally, I interviewed spokespersons from key interest groups to gain background information about their specific GM positioning so that I could better analyse references made to these groups in the kiwifruit industry and dairy industry member accounts. The accounts of the spokespersons in these background interviews do not themselves form part of the data analysed in this study.

Interviewees are listed in Table 2. Generalised position descriptions have been given to indicate the special interest or functional expertise of the participant, but further protect their anonymity.

Table 2. Semi-structured Interviews

Industry Organisations	Interviewees
<i>Kiwifruit industry</i>	
ZESPRI Innovation	Innovation team members A, B, C, D, and E.
ZESPRI International	Communication spokespersons A and B
Packhouse/Supplier	Spokespersons A, B, and C.
Kiwifruit NZ	Spokesperson
<i>Dairy industry</i>	
Fonterra/NZDB	Via Lactia spokesperson Communication spokesperson Marketing spokesperson Legal spokesperson Operations spokesperson Technical spokesperson Dairy Factory manager
NZDB	Media spokesperson
Dairy Workers' Union	Spokesperson

Background Interviews	Interviewees
Political parties	Labour party spokesperson for Ministry for Science, Research and Technology National party GM spokesperson Green party GM spokesperson Alliance party GM spokesperson
HortResearch AgResearch	Research Director Research Director
Greenpeace NZ Life Sciences Network MAdGE	GM spokesperson Spokesperson Spokesperson

I contacted interviewees within the dairy and kiwifruit industries through a liaison person within each industry, since I needed the support of the industry organisation to have access to staff and, if possible, to gain access to information not available in the public domain. In the case of the kiwifruit industry, very positive support for the data collection was given from the outset. Participants were both recommended by the liaison person, following discussion with the Director of the Innovation team, and identified by me as relevant staff names became apparent in other interviews.

In the case of the dairy industry, the data collection was somewhat delayed while the study was formally approved by the industry executive following an initial interview with the legal spokesperson for Fonterra. This more cautious approach to approving the research might have been because of the larger size of the dairy industry, or because the industry was in the midst of major re-structuring (as the NZDB and the two major dairy companies were merging to form a single organisation, Fonterra). Once a level of mutual trust had been established, however, participants were again identified by the liaison person within the industry and I identified further participants from comments made in initial interviews. Interviewees from other interest groups were contacted directly, individually, initially by email or telephone.

The difficulties I experienced in gaining access to a number of interview participants seemed also to be related to the sensitive, political nature of the issues surrounding the controversial topic of GM, and concerns that information might be used to support a particular case for or against the introduction of GM. In a number of cases, before being able to arrange interviews with participants, I had to explain the nature of the project in detail, and I had to establish my own credibility. Participants were cautious about the contexts in which their comments might be quoted, and in several cases, interviews were obtained with the proviso that I could only use quotes after checking the attribution with the participant. Participants were concerned that their comments would be reported accurately, and without bias. This cautious approach to the research meant that I could not be wholly true to my desire for a reflexive approach to the research. I felt that I had to appear objective, and unbiased, rather than stating my personal stance, so that I maintained access to the research organisations.

In the case of ZESPRI International, the industry organisation was particularly concerned about the sensitivity of the international market to issues surrounding GM and asked to check any articles (other than the actual PhD thesis) for accuracy of comments about ZESPRI before publication.

In the case of the dairy industry, the industry organisation (the newly formed Fonterra) was highly sensitive about both its own new organisational image and the market perceptions surrounding GM issues and initially requested that all research interviews should focus on the NZDB position and communication about GM (prior to the merger which created Fonterra). However, during the course of the research investigation, as further trust was established, and recognising the dynamic nature of the debate, an agreement was reached to attempt to bring the research up to date by including information about Fonterra's position on GM.

I conducted all interviews face-to-face at the interviewee's office or a location of their choice to ensure that the interviewees were relaxed and in a familiar environment. The range of questions asked in the interviews is indicated on the *Interview Schedule* (see Appendix I), and included, for example, "How is GM relevant to your organisation?" These questions were a guide to ensure that similar topics were covered with each interviewee and were not all asked in the specific format indicated. In many cases, the interviewee covered a range of topics within one answer. For example, one participant's description of dairy industry communication strategies in relation to new developments in biotechnology also included comments about the international perceptions of the industry, and the viability of organic production methods. Overall, I attempted to create *conversations* with the interviewees so that, as far as possible, they set the parameters and direction of the interview, and used their own language for their answers.

Most interviews lasted between one and two hours; although, the interview with the spokesperson from Kiwifruit New Zealand lasted only 15 minutes. This participant was particularly concise, and my encouragement for him to expand on topics was to no avail. All interviews were recorded in full on audiocassette, and later transcribed, and I also took additional note of interviewees' non-verbal communication; for example, any hesitancy or strong feelings expressed.

Focus Groups

At the grower/farmer level within each industry, I aimed to capture the understanding of participants who did not necessarily have a role as spokespersons on GM and might not previously have specifically been asked to comment on the issues involved. All participants were growers/farmers in one of the two case study industries but they did not necessarily have any particular expertise or special knowledge in relation to GM issues. Each group was industry-specific.

As primary producers, dairy farmers and kiwifruit growers were groups with specialist knowledge and concerns about each industry, significant to the research. I further distinguished particular groups within this producer category; for example, farmer groups were distinguished on the basis of the size of their farms, and whether they owned the farm or were sharemilking, while kiwifruit growers were distinguished on the basis of the specific kiwifruit crop grown, or geographical area. In each case this method of sampling was then purposive, and the selection of categories was determined by the possible relevance of these categories to the study.

I chose focus groups as the method of data collection for the primary producer and grower groups within each industry to encourage participation and because focus groups might facilitate natural conversation about this controversial issue—albeit within the artificial situation of the focus group. Many participants initially commented that they might have little to contribute to a discussion about GM. So, focus groups were established where possible from already existing functional industry groups, and were a means of encouraging these individuals to participate in the study, a way of stimulating discussion (see Hansen et al., 1998; Morrison, 1998). As Lunt (1996) argued, focus groups prompt participants to speak from socially identified positions, facilitating the exploration of the complex relations between discourse, group, identity, and community.

The accounts of participants again enabled an exploration of whether different *values*, or different aspects of *identity*, were privileged, this time by producers in the kiwifruit and dairy industries. They also enabled further comment

on the different communication *practices* used to engage with stakeholders within, and external to, the industry.

Table 3. Focus Groups

Initial contact person	Group	Group contact person	Location of focus group	Number of participants
<i>Kiwifruit industry</i>				
Zespri Innovation team liaison person	ZespriGreen	Fruitgrower's Federation member	University of Waikato campus	Seven
	ZespriGold	Grower	University of Waikato campus	Eight
	ZespriOrganic	Grower	Community hall	Six
	Whangerei, Northland	Packhouse contact	Packhouse	Eight
<i>Dairy industry</i>				
Waikato Federated Farmers contact	Large farms	Farmer	Farmer's home	Seven
	Small farms	Farmer	Community hall	Five
	Organic farms	Farmer	Farmer's home	Four
	Sharemilkers	Sharemilker	Farmer's home	Five

The focus group participants were informed beforehand that the project focused on GM since+ it was felt that knowledge of the issue concerned would not subject them to extra influences that might change their natural opinions. In fact, because the research involved no payment to the participants, it was felt that they would be more willing to volunteer if the research topic were known. Opportunities were created in the interviews and focus groups for participants to acknowledge any

occasion when there had been prior discussion related to GM and, indeed, participants were encouraged to provide information about such discussions.

In the case of the kiwifruit industry, I contacted four participants in the ZESPRI Green kiwifruit grower focus group at a Fruitgrowers' Federation seminar on kiwifruit growing, and found additional participants through a snowballing technique (Krueger & Casey, 2000), where participants were asked to contact another possible participant, making seven participants in all. I contacted the initial participants in the ZESPRI Gold kiwifruit grower focus group through a contact person suggested by the ZESPRI Innovation Sustainability Team leader, again using a snowballing technique to form the final group of eight participants. These two focus groups were held on the local campus of the University of Waikato, which was conveniently located for all participants. I contacted the six participants in the ZESPRI Organic kiwifruit grower focus group through an existing organic growers' group and the focus group was held following the groups' regular meeting at the normal location for their meetings, in a local community meeting room. Each of these three grower groups was located in the Bay of Plenty, the main growing area for kiwifruit in New Zealand. A fourth group was located in Whangarei, Northland where there is a further concentration of kiwifruit growers. I contacted these eight participants through a packhouse representative and the focus group comprised volunteers who stayed for the discussion following a field-day organised by the packhouse on an orchard in Northland.

In the case of the dairy industry, I first contacted the Chairperson of New Zealand Federated Farmers to discuss possible options for contacting dairy farmer participants. Following this discussion, I decided to select participants on the basis of four different categories of dairy farmer: organic dairy farmers, sharemilkers, farmers owning large dairy farms (over 300 cows), and farmers owning small dairy farms (circa 100 cows). The Chairperson advised that these four groups of farmers were well-represented within the Waikato, one of the largest dairy farming areas in New Zealand. Since this study makes no attempt to access a fully representative sample of dairy farmers from which to generalise the findings, but instead aims to

sample the range of meanings constructed about GM within the dairy farmer group, the focus groups were all held in the Waikato region.

The Waikato branch of Federated Farmers invited me to their monthly meeting to present the research to members. From this meeting, I established contact people for each of the four dairy farmer categories explained above, who volunteered to contact up to eight other dairy farmers within the same category, again following a snowballing technique for contacting participants. Focus groups were subsequently held in Morrinsville (smaller farms), and in Tokoroa (larger farms), and two were held in Te Aroha (organic dairy farms and sharemilkers).

The range of questions used in the focus groups is indicated on the *Focus Group Interview Schedule* (see Appendix II) and included, for example, “What future direction would *you* prefer for the kiwifruit industry/dairy industry in relation to GM?” The questions on the schedule were again only a guide to ensure that similar topics were covered with each focus group and were not all asked in the specific format indicated. I attempted to create an atmosphere where the conversation between participants flowed naturally, with minimum intervention from me, so that, as far as possible, the participants set the parameters and direction of the discussion, and used their own language for their comments. Each focus group discussion lasted between one and two hours. All focus group discussions were recorded in full on audiocassette, and later transcribed, and field notes were also taken. I made a complete transcript of the tape available individually to the participants in each group for verification before the transcripts were analysed.

Given the controversial nature of the GM issues involved, I was careful not to make comments to participants that might privilege my own opinions so that I minimised the impact I might have on the meanings constructed by participants about GM issues. At times, I had to be extremely careful not to join in the debate, particularly when discussion was one-sided or when my comment was specifically invited.

Timeframes for the Data Collection

The timeframes for the data collection were to a large extent determined by the commitments of the industry participants, and my teaching commitments.

Table 4. Timeframes for Data Collection

Date	Industry	Contact established	Type of data collection
March 2002			Pilot interviews
June 2002 – August 2003			Background interviews
August 2002	Kiwifruit industry	Liaison person	
September 2002	Dairy industry	Liaison person	
August 2002 - March 2003	Kiwifruit industry		Interviews
September 2002 – November 2003	Dairy industry		Interviews
October/November 2003	Kiwifruit industry		Focus groups
February/March 2004	Dairy industry		Focus groups

The data collection process took place over an extended time frame that commenced in March 2002 with the pilot interviews aimed at confirming the research design. The first background interviews with different interest groups commenced in June 2002. Interviews with the industry participants commenced once a working relationship had been developed with a contact person within each industry, in August 2002 for the kiwifruit industry and in September 2002 for the dairy industry. The timeframes for these interviews depended very much on the availability of the personnel concerned, according to the production demands of each industry (including, for example, seasonal activity and staff commitments overseas).

The timeframes for the dairy industry personnel proved particularly difficult; some staff who were involved in the strategic communication about GM at particular points in the research timeframe either left the organisation or moved to new

positions as the result of the intensive restructuring following the formation of Fonterra. Industry interviews were finally completed in November 2003.

Focus groups were organised with growers and farmers following the individual interviews, with kiwifruit growers in October and November 2003, and with dairy farmers in February and March 2004. I made final contact with the main contact person in each industry before the completion of the data analysis to ensure that the analysis included the most recent perspective on GM issues for each of the industries concerned.

The following section explains the steps taken in the analysis of the documents, and interview and focus group transcripts.

Methods of Data Analysis

Inductive and Deductive Analysis

The critical-interpretive approach, taken in this study, meant that both inductive and deductive methods of data analysis were appropriate—that is methods which involve foregrounding the full range of detail in the data, and methods which involve looking for particular perspectives important to the research questions.

In line with the interpretive perspective, my analysis attempted to keep close to the actual situated language used by the kiwifruit and dairy industries in their communication about GM, to ensure that industry members' and stakeholders' own meanings were captured. This represents an inductive approach to the analysis. In the course of the analysis, I realised that the *rationalities* evident in communication about GM were of particular relevance for this study.

At the same time, the critical perspective meant that I paid particular attention to aspects of the data which indicate explicit or implicit value-related assumptions, relationships of power, or specific socio-political meanings. The study additionally takes the position that new understandings of industry perspectives on GM in New Zealand can be gained from an exploration of the role played by *identity* and *identity management* in industry positioning on GM. This represents a deductive approach to the analysis.

Steps in the Data Analysis

I analysed the documents and interview and focus group transcripts in this study using a combination of techniques based on rhetorical criticism and CDA. In the case of rhetorical criticism, this involved drawing on Burke's theory of the index (Cheney & Tompkins, 1988), Foss's (2004) method of cluster criticism, and Heracleous & Barrett's (2001) combined rhetorical criticism and discourse analysis. In the case of CDA, this involved drawing on Fairclough's method of CDA and Heracleous & Barrett's (2001) combined methodology.

I analysed all of the documents, interview transcripts, and focus group transcripts at the level of *text*—that is, I paid attention to the rhetorical features, for example, what was present and absent in the texts, what was highlighted, and what was implicit or assumed. I also analysed the three sets of data at the level of *social practice*—that is references to underlying value systems, institutions, ideologies and practices that indicated relative levels of power, taken-for-granted meanings, or particular socio-political tensions. I additionally analysed the documents in terms of the *discursive practices*—their production, consumption, and distribution, and noted references to the organisational discursive practices in relation to GM in the interview and focus group transcripts.

Initially, I examined the full set of data for the kiwifruit and dairy industries separately for each industry, then I re-examined them to note comparisons and contrasts between the two industries. The detailed method of analysis of the documents, interview transcripts, and focus group transcripts is explained separately in the next sections.

Document Analysis.

I gave each document multiple close readings. At the level of *text*, phrases referring to GM, or where GM was implicit were initially highlighted, as were phrases referring to biotechnology. I particularly noted words that were treated as similar, words fostering ambiguity, words indicating antithesis, and words used in place of GM, such as metaphors, enthymemes, and similes. This involved recognising sameness and difference—strategies for identification or persuasion (see

Burke, 1969; Foss, 2004; Foss et al., 1991); or orientations towards GM. For example, in the dairy industry documents, the terms *GM* and *biotechnology* were confusingly sometimes used interchangeably.

I then looked at the context of the references, what other phrases accompanied them, what came before and afterwards. This involved noting the beginnings and endings of texts, the presence or absence of words or phrases, relationships between words or phrases, recurrent ideas, words or phrases that were repeated, and words or phrases which were emphasised or clustered together. For example, in Lancaster's (2000) article in the *Kiwifruit Journal*, a scientific definition of GM was given first, but GM was also identified at other points in the article as a "market risk," and as likely to have "benefits" following long-term research and development (p. 24).

Additionally, I noted references to names or titles within documents, the title of the document, and the first introductory sentences of the document, which might indicate the priority accorded to particular ideas, and the foregrounding and backgrounding of topics. For example, the ZESPRI media release about GM highlighted the importance of the KiwiGreen integrated pest management system (Kiwifruit New Zealand, 1999).

Given the focus for this study, I looked particularly for references to aspects of identity, at the level of the individual, industry groupings, the industry organisation, and national and international identities. For example, one dairy industry media statement on GM highlights the *competitive* identity of the industry internationally (Fonterra, 2001, September 14).

At the level of *discursive practice*, I looked at the style and tone of writing, and the genre of the document, who it was intended for (audience), and how it was distributed. Finally, at the level of *social practice*, I looked for recurring themes, repeated use of words or phrases, and phrases suggesting particular emphasis, to examine possible underlying value-systems, discourses, and ideologies (see Fairclough, 1992). For example, all kiwifruit industry documents indicated strong environmental concerns.

Throughout, I checked whether the references to GM; ‘the flavour’ of the documents, and the substantive content; the style and genre, and distribution methods; and the underlying themes were consistent or different across texts. I also tried to note anything ambivalent, hesitant, not stated, implicit, hedged around, or paradoxical, that might indicate particular tensions in the communication.

Interview Transcript Analysis.

For the interview transcripts, the approach was similar, except that the schedule of questions ensured that topics of relevance to the study were covered. At the level of the *text*, I highlighted the interviewees’ initial representations of GM, their expressions related to GM, and how GM was stated to be relevant to the industry/organisation. I again also highlighted phrases referring to biotechnology, or where GM was implicit, and looked at the context of the references, what other phrases accompanied them, and what came before and afterwards. For example, the legal spokesperson for the dairy industry represented GM as “extremely important for New Zealand” (NZDB/Fonterra legal spokesperson).

In the same way, I highlighted how and when the following topics were covered in the interviews: issues considered important, the relevance of GM to the organisation, the position of the organisation on GM, comments about communication practices in relation to GM, and decision-making in relation to GM. Additionally, I noted comments about government policy on GM; the relevance of GM to the organisation internationally; and any comments on the public debate, public policy decision-making, and the Royal Commission.

As for the document analysis, I noted any names or titles referred to, as well as any events, projects, positions, or documents considered significant by the interviewees. Given my interest in the organisational communication associated with GM, I also paid attention to any references to roles, hierarchies, and institutions that might indicate particular ways of knowing and understanding. I again looked for themes relevant to aspects of identity and also to identity management by the organisation. For example, the dairy factory manager focused particularly on technical processing issues associated with GM, but was also concerned about the

image of the factory in the local community. At the level of *social practice*, I looked for recurring themes, repeated use of words or phrases, and phrases suggesting particular emphasis to note possible underlying value-systems, discourses, and ideologies.

For the interview transcripts, I checked whether the references to GM; the ‘flavour’ of the interview, and the substantive content; and underlying themes were consistent or different across different interviewees, according to their functional role in the industry.

Focus Group Transcript Analysis.

The approach for the analysis of focus group transcripts followed a similar pattern to that of the interview transcripts. However, I noted throughout whether similar comments were made by all group members, whether one voice dominated, whether anyone was left out, and whether there were ambivalences, divergent opinions, arguments, or strongly held views. I paid attention to the cohesion of the group, the tendency to build on each others’ viewpoints, and how the comments were created in the group discussion. For example, the organic dairy farmers’ group was particularly cohesive, with no dissenting voices, but in the ZESPRI Green kiwifruit group, one participant was more in favour of developing GM technologies in the kiwifruit industry than the remainder of the group; yet he did not significantly change the attitudes of the other participants in the course of the discussion.

The steps in the analysis were very similar to those in the interview transcripts. However, I noted in these transcripts whether the references to GM, the ‘flavour’ of the discussion and the substantive content, and the underlying themes were consistent or different across different focus groups, according to the different affiliations of the group.

Interpreting the Data.

In this analysis, then, I took careful note of similarities and differences between the meanings attributed to aspects of GM issues by industry members with different functional responsibilities, or different positions within the industry

organisation, to see whether patterns of understanding (and identification) emerged for different industry groups within or between the dairy and kiwifruit industries.

I mapped expressions and examples of key terms, phrases, concepts, and patterns of understanding onto a spreadsheet for each industry, in the participant or rhetor's own words, together with a record of the document, interview or focus group where the example occurred.

From this process, I was able to identify thematic elements that were rhetorically constructed within the texts that were common to a number of texts, or particularly highlighted. I was then able to identify any material and contextual assumptions or implications associated with these elements. For example, reference to the difficulty in accessing international markets was linked with reference to the provision of quality products by kiwifruit participants. I thus developed a situated understanding of the participants' meanings. In each case, these references were mapped onto the relevant industry spreadsheet.

From these understandings, I identified the specific rhetorical strategies used by each industry. For example, the kiwifruit industry highlighted the importance of environmental values in its positioning on GM, and this was consistent with being proactive in implementing EureGap auditing systems to ensure quality production met European standards. I was then able to identify the most important overall themes in each industry's communication about GM. For the kiwifruit industry, one important theme centred on 'integrity.'

I then re-examined these rhetorical strategies and themes in terms of the overall discursive practices used in the communication, to explore the hierarchical relationships existing within each industry and between industry stakeholders. In further examination of the texts, I also identified the overall implicit social practices, and evaluated which discourses (and ideologies) were most commonly represented in the industry communication.

Conclusion

This chapter has discussed the methodological design of the research, and presented a theoretical rationale for the methods of data collection and analysis. Additionally, it has discussed the combination of rhetorical criticism and critical discourse analysis that underpin the data analysis and suggested why this form of analysis was chosen for this research. It has explained in detail the methods of data collection, and, finally, it has identified the specific steps undertaken in the data analysis in this particular study.

The following three data analysis chapters are organised around each of the three research questions presented in this methodology chapter. A critical consideration of the implicit and explicit values and assumptions evident in the rhetorical strategies of the kiwifruit and dairy industries forms the basis for Chapter Five, the first of the data analysis chapters. Chapter Six highlights how aspects of identity were represented in the texts. It considers the roles played by identity, identification, and identity management in the negotiation of the kiwifruit and dairy industries with issues and practices associated with GM. The third data analysis chapter, Chapter Seven, focuses on issues management, and the engagement of the kiwifruit and dairy industries with multiple stakeholders and other interest groups involved in the GM debate. It highlights the particular rationalities used by each industry organisation to justify their positioning and considers their attempts to influence the public policy debate. This focus on rationalities emerged during the data analysis.

CHAPTER FIVE

A RHETORICAL AND DISCOURSE ANALYSIS OF INDUSTRY POLICY ON GENETIC MODIFICATION

Introduction

This chapter focuses on the communication rhetoric of the kiwifruit and dairy industries in their positioning of GM policy; that is, the ways in which the policy is expressed and explained by the industries. The use of rhetoric involves “the uses of symbolic and non-symbolic resources for persuasion in instances where more than one outcome is possible and the outcome can be effected through persuasive means” (Cheney & Lair, 2005, p. 9). The rhetorical construction of texts that express industry policy on GM thus provides an indication of the meanings the industries attribute to GM, as they make sense of, and attempt to influence, the policy environment.

The chapter considers the particular language and symbols used to represent the kiwifruit and dairy industry positions on GM; and how these are linked to organisational values and strategies, to values prevalent in New Zealand society, and to current discourses related to biotechnology and GM. It analyses what is present and absent in the two industries’ GM communication, what has been highlighted, and what underlying concepts are implicit or assumed. The chapter identifies the range of rhetorical strategies employed by these industry organisations as they foster identification (see Burke, 1969) with their policies by different stakeholders.

Given the disparate positions on GM taken by the kiwifruit and dairy industries, my particular focus is on the differences between the respective rhetorical positions and discursive strategies of each industry. A further interest is in whether GM policy is expressed consistently within each industry. Different rhetorical arguments may be presented to particular internal and external industry stakeholders if those stakeholders hold multiple, varied perspectives of GM.

As discussed in Chapter Four, the analysis combines both inductive and deductive methods. It focuses on themes which have been established inductively

from the data gathered on each industry and at the same time takes particular note of references to aspects of organisational identity and image, and references to current discourses of GM. The analysis focuses on a range of documents in which the industry policies on GM have been explicitly stated, or the industry position on GM issues has been implicitly referred to.

The chapter is divided into three main sections. The first two sections focus respectively on the New Zealand kiwifruit industry and the New Zealand dairy industry. Each of these sections first identifies the documents that were analysed, before exploring in depth how the industry position was rhetorically expressed and explained as the policy was established. The final section in this chapter discusses similarities and differences in the kiwifruit and dairy industry policies on GM.

The Kiwifruit Industry Policy on GM

Documents Selected for Analysis

The documents analysed were written for a variety of audiences over the research time frame, as discussed in detail in Chapter Four. In order of publication, the first document analysed is a media statement issued by Kiwifruit New Zealand, published on the industry website in March 1999, as GM was becoming a public issue in New Zealand and the Green Party was calling for its public debate. This media statement entitled *Kiwifruit New Zealand says no to genetic modification* was a positioning statement relevant for multiple publics both internal and external to the industry, including both consumers¹ in New Zealand and customers internationally.

The second document is the submission and witness brief made to the Royal Commission by the ZESPRI Group on behalf of the kiwifruit industry. The primary

¹ In the following chapters, the term ‘customers’ is used to refer to the wholesalers and retailers to whom the industries sell their products, whereas the term ‘consumers’ refers to the final buyers of the product. In contrast, ‘markets’ is used when the industry engagement with stakeholders is general but product-related, and ‘publics’ is used when the engagement is general but a relationship is implied. ‘Audiences’ refers to particular groups that receive specific messages.

audience for this thirty-one-page submission was the commissioners, but since all submissions were publicly available on the Commission's website, larger audiences included New Zealand citizens and consumers, and potentially international audiences, markets, and customers interested in the kiwifruit industry policy on GM.

The third document is a four-page article written by Jane Lancaster for the *New Zealand Kiwifruit Journal* in November/December 2000, at the time that the Royal Commission was considering submissions. The title of the article, *The Genetic Modification Debate and Our Contribution to it*, indicates a more specific audience. The use of the pronoun "our" personalises this communication and suggests that the primary audience is the wider kiwifruit industry comprising, for example, Kiwifruit New Zealand, ZESPRI Innovation, ZESPRI International, suppliers, and growers. Publics associated in some way with fruit growing or with the kiwifruit industry, or those interested in the kiwifruit industry policy, might be expected to read the *Kiwifruit Journal*.

The fourth document is a half-page article by the ZESPRI Innovation team published in November 2001 in the *Kiwiflier*, a monthly industry newsletter which focuses particularly on financial and market information for kiwifruit growers in New Zealand. In this article, the focus is on technical information supplied by the ZESPRI Innovation team. The title of the article, *Our position: No to GM – an update from ZESPRI Innovation*, again uses the personal pronoun "our" to demonstrate inclusiveness in the kiwifruit industry; the author of the article is identified as ZESPRI Innovation—technical experts; and the word "update" is indicative of previous sharing of information about GM policy. The update was timely given that the Royal Commission's report was made in July 2001, and Government policy was announced just prior to the publication of this article.

The final document analysed in depth is a letter sent by ZESPRI International Communication staff to anyone enquiring about the ZESPRI policy on GM. This letter was made available to me by the ZESPRI Media Relations Adviser in 2003.

The ZESPRI website (ZESPRI, 2001a), Annual Reports (ZESPRI, 2001b, 2002b), the ZESPRI Brand video (ZESPRI, 2003a), and ZESPRI media information

kit (ZESPRI, 2003c) contained brief references or contextual information about GM and are also referred to in the analysis in this and subsequent chapters.

While the overall GM policy is consistent throughout these documents, the rhetorical strategies change, drawing on a variety of discourses to emphasise different arguments for particular target publics, for instance growers and/or international customers. The kiwifruit industry positioning of GM policy is explored in the following document analysis.

The Market Context of the Policy: The Primacy of the Customer and Consumer

Both the formal communication about GM, expressed in kiwifruit industry documents, and the informal communication of industry members, recorded in interviews and focus groups, refer to the industry GM policy as largely *market-driven*—that is, determined by the preferences of customers and consumers. In an industry reliant on international sales of primary produce, the importance accorded to the market is hardly surprising; after all, the economic benefits accruing to industry members are of major importance for business success. However, analysis of the social meanings implicit in the rhetorical construction of GM policy statements, and the arguments supporting the policy, contributes a more complex understanding of the organisational values represented.

All of the documents outlining industry policy on GM refer to major international kiwifruit markets as GM risk-averse, such that consumers will not purchase GM foods. Indeed, the GM policy draws on neo-liberal political and economic discourses that emphasise rational choice theory and public choice theory. Rational choice theory argues that in a free-market consumers will make choices based on self-interest, using the instrumental rationality of cost/benefit analysis (Aune, 2001), and public choice theory further argues that public policy decisions should be made with the least possible violation of individual self-interest (Aune, 2001; Devine, 1998). In this way ‘consumers’ become conflated with ‘citizens’ (Cheney & Christensen, 2001a; Devine, 2001). However, the kiwifruit industry

policy emphasis on market choice is contextualised differently in different documents.

The submission and witness brief presented by ZESPRI to the Royal Commission in 2000, provides the most detailed explanation of the industry position, and was referred to by the Communication Manager and by members of the Innovation team as the benchmark statement of GM policy. Submissions were required by the Commission to follow a specified template; therefore, the content, order and wording of the submission was to some extent constrained by this format (see Rogers-Hayden, 2004; Rogers-Hayden & Hindmarsh, 2002). However, the ZESPRI submission is notably shorter than many submissions made by other industry organisations and research institutes (for example, the dairy industry, AgResearch, and HortResearch submissions). A number of sections in the specified template were not completed, presumably because these sections were not considered relevant to the kiwifruit industry's argument or areas of expertise. The submission is notable for its *single* focus on market issues, and the *repetition* of key terms representing the importance of the markets. The sections left incomplete included, for example, international legal obligations; liability issues; intellectual property issues; responsibilities under the Treaty of Waitangi; global developments and issues; and areas of public interest such as human health, environmental matters, and cultural and ethical concerns.

Interestingly, comments from an Innovation spokesperson involved in preparing the submission identified the deliberate simplicity of the ZESPRI policy as a rhetorical strategy that was less likely to be critiqued, and more likely to be understood unequivocally by international consumers. This spokesperson stated:

It's important that we have a simple, clear statement of policy. . . . It was important to us that we influenced the Royal Commission . . . but I don't know that we want to be out there banging a drum on a global basis because all banging drums does is draws more attention to potential flaws in your argument. (Innovation spokesperson D)

This strategy of not drawing attention to the kiwifruit industry position on GM becomes increasingly evident and important in the data analysis.

The ZESPRI submission, then, has a single focus. It uses a market rationality to justify its position on economic grounds, in terms of the value of the kiwifruit industry to New Zealand and the potential loss of export earnings not only to the industry, but to New Zealand, if New Zealand develops GM food products commercially:

Our marketing evidence is that the perception of GM status of New Zealand food production will influence the buying behaviour of consumers for all New Zealand products. Adverse consumer opinion caused by the perception of New Zealand as an exporter of GM foods could jeopardise a significant proportion of the kiwifruit industry's contribution to the national economy. (ZESPRI, 2000, Executive summary, 4.4)

This rhetoric articulates (see Slack, 1996) the kiwifruit industry market identity with New Zealand's market identity to add to the industry argument. The iconic link between kiwifruit and their country of origin is also clearly identified as significant in international markets in the *New Zealand Kiwifruit Journal* article, where it is suggested that GM commercial production in New Zealand might adversely impact on sales of kiwifruit because of "guilt by association" (Lancaster, 2000, p. 24).

The neo-liberal political and economic discourses drawn on by the kiwifruit industry GM policy are those that already dominate New Zealand's social culture (Dalziel, 2003; Devine, 1998, 2001; Kelsey, 1997; Scott, 1997). The kiwifruit industry policy is thus strategically positioned as politically credible, likely to find favour with Government because it is consistent with current Government policies, and likely to foster identification with the policy by industry stakeholders, because of business self-interest. By drawing on these normalised discourses, the policy is also strategically positioned to influence the attitudes of the voting public, and other corporate, industry, and science interest groups.

As Albrow (1987) suggested, rationality can be clearly linked to the framework of knowledge and belief evident in the symbolic systems of a particular culture and time. The kiwifruit industry GM policy privileges an instrumental, market rationality that is purposive. It presumes that outcomes are logically predictable, and involve the methodical attainment of a goal through precisely calculated means (see Giddens, 1972; Simon, 1976). In this case, the submission

relies significantly on quoting statistics and surveys in support of the kiwifruit industry argument, with the goal of retaining their market share. For example, the submission quotes the dollar value, \$700 million turnover per annum, and the employment value, 25,000 jobs, of kiwifruit exports to New Zealand (ZESPRI, 2000, Section B (c), summary). It also refers to both international consumer research and research carried out by ZESPRI marketing staff as evidence of consumer perceptions about GM. Considerable detail taken from a market survey carried out by ZESPRI marketing staff in Europe and Japan is presented in Tony Mark's witness brief to the Royal Commission, since the results demonstrated particular risk of GM products alienating the kiwifruit market in Europe. The survey asked the specific question: "Could a New Zealand Government policy permitting commercial quantities of GM crops to be grown in New Zealand adversely impact our existing global sales of kiwifruit" (Marks, 2000, Section B (j) (iii).5). Further research is quoted in the second half of the letter explaining the kiwifruit industry GM policy. It cites the Business and Economic Research Ltd./Agribusiness Economics Research Unit (BERL/AERU) report, (BERL/AERU, 2003), and positions the kiwifruit industry policy "not to develop or market any GM product" as a "response to consumer and customer requirements" (Hodge, 2003, original emphasis). These documents thus rely on the credibility of the research, and the credibility of a market approach to decision-making about GM.

Similarly, the *Kiwifruit Journal* article indicates that international market perceptions of GM were the main driver of the industry policy, and supports this argument with references to the ZESPRI survey, but it additionally quotes a Eurobarometer survey in 1997 and HortResearch survey in 2000 to demonstrate that markets are cautious about the benefits of GM foods. Lancaster also comments that global food retailing companies are avoiding purchasing GM products because of the uncertainty of consumer demand and the potential loss of consumer brand loyalty in intensely competitive markets. The article identifies government policy as "critical to prevent potential severe erosion of the New Zealand kiwifruit export market through barriers to market access from adverse consumer opinion" (Lancaster, 2000, p. 24),

calling for New Zealand's current status—as a country where there is no GM food production—to be maintained through Government policy. This can be seen as an attempt to rhetorically transform the instrumental rationality of the marketplace into the formal rationality of institutionalised government policy (see Albrow, 1987; Douglas, 1986; Lash, 1987).

There is some tension evident in these arguments. The free-market rationality is used to justify the cost-benefits to the *kiwifruit industry* and to the *New Zealand* economy. However, the substantive evidence is based on the concerns of *international* kiwifruit markets, rather than the concerns of New Zealanders. As Aune (2001) argued, rational choice/public choice theory denies its own rhetoric and denigrates public debate—in this case, public debate in New Zealand about GM policy—by creating *efficiency* as the default norm and assuming that everything is to be decided on the basis of individual benefit. This denies the power of normative behaviour and the role of persuasion in creating this; it also denies the possibility of acting for the 'public good' (Aune, 2001), in this case, for New Zealand. Yet, the kiwifruit industry documents clearly intend to persuade their audiences in terms of the New Zealand public good, and draw on other discourses to add additional persuasive elements to support their position on GM.

Words or paragraphs positioned first or last in a document, according to Cheney and Tompkins (1988), can be seen as a rhetorical strategy indicating the *essence* of an argument. Although the media statement giving the first public indication of kiwifruit industry GM policy is market-driven in that it comments at length on consumer concerns in international markets, the *first paragraph* clearly aligns the industry's caution over GM with its commitment to safeguarding the *environment*:

Kiwifruit New Zealand has aligned its research and development policy with its strong industry *environmental philosophy* and production practices by rejecting any involvement in genetic engineering. (Kiwifruit New Zealand, 1999, emphasis added)

The statement thus draws on environmental discourses to facilitate identification with this anti-GM policy by consumers concerned about environmental issues. This is consistent with the industry commitment to sustainability—ZESPRI is a member

of the Sustainable Business Network—and acknowledges growing concerns about sustainability and environmental issues in New Zealand and internationally (Allen, 2004; Elkington, 2001b; Hajer, 1997; Hart, 2001; Moser & Miller, 2001; Peterson, 1997).

In the following two paragraphs of this media statement, the *food safety* concerns of global consumers are also highlighted and articulated with *not* producing GM kiwifruit, for example:

As part of our commitment to further strengthening food safety practices, Kiwifruit New Zealand has resolved not to fund research, include within its inventory, or market genetically modified kiwifruit (Kiwifruit New Zealand, 1999).

The kiwifruit industry sees the introduction of GM foods as a potential risk in losing market share because food safety is a major concern in Europe and Japan, major markets for New Zealand kiwifruit. In these countries the handling of food scares has created significant consumer distrust of both industry and government and frequently increased support for policies which minimise damage to the environment (Allan, Adam & Carter, 2000; Marks & Kalaitzandonakes, 2001; Murcott, 2001).

The media statement can be seen as a tactic to reassure these major international markets that New Zealand kiwifruit are not GM, and to retain their trust. This was particularly important since, following the introduction of the brand name *ZESPRI* for New Zealand kiwifruit, and the release of the new fruit variety *ZESPRI Gold* in 1997, both international customers and New Zealand consumers were frequently concerned that the new cultivar was the result of GM. This concern was highlighted in two out of the four focus groups conducted with growers, and by one of the *ZESPRI* Communication spokespersons; for example, “We’ve had to state time and time and time again that it [*ZESPRI Gold* kiwifruit] is not genetically modified, there’s no genetic engineering involved” (*ZESPRI* Communication spokesperson A).

The kiwifruit industry documents thus demonstrate a complex construction of the market rationality for GM public policy decision-making. They prioritise a macro economic approach which privileges the economic value of New Zealand’s primary production industries and draw on neo-liberal discourses emphasising public choice

and rational choice to highlight the importance of international customer perceptions. The historical value of New Zealand's primary produce exports is emphasised in the submission to the Royal Commission and in the article in the *Kiwifruit Journal*, arguing that GM policy should not be at the expense of existing successful export earnings. This rhetorical positioning suggests that market values are prioritised above other concerns, and when market values are taken for granted Cheney (1998, 2004) suggested that the market might be termed 'amoral'—that is, exempt from moral judgement. Yet, the kiwifruit industry additionally acknowledges food safety and environmental concerns that suggest some ambivalence about the primary role of a free-market approach to GM policy.

During the period of this research investigation, the kiwifruit industry has achieved record returns in international markets and the New Zealand ZESPRI brand has become the kiwifruit market leader internationally. In the documents referring to the industry position on GM, this hard-won status is specifically identified, valued and respected, highlighting an overall theme associated with this trust and confidence that centres on the integrity of the industry. The importance of source credibility and trust in consumer attitudes to GM has been highlighted by considerable research (Frewer, Howard, Hedderley & Shepherd, 1999; James, 2003; Priest, 2001). This theme of integrity is apparent in three different contexts: managing the environment, managing the respect of stakeholders, and managing uncertainty and safety. These three themes will be discussed in the following three sub-sections of this chapter.

Managing the Environment with Integrity

The primary emphasis in the media statement on GM was, as discussed above, a concern for the environment, and the existing environmental integrity, reputation, and brand identity of the industry. Indeed the term "integrity" occurs four times in the closing paragraph of the statement, and is also linked with the terms "quality," "loyalty," and "safety":

We work hard to ensure that all New Zealand grown kiwifruit meets consumer and customer demand for *integrity* and we would never jeopardise our position, or our reputation for quality and *integrity*. We also would not risk losing customer loyalty

and confidence in the *integrity* of the ZESPRI brand and system. In fact, we want the words environmental *integrity* and food safety to become synonymous with the ZESPRI brand system. (Kiwifruit New Zealand, 1999, emphasis added)

Environmental concerns are specifically referred to in five of the eight paragraphs in the media statement, including the lead paragraph, where the environmental philosophy and GM are explicitly linked. Environmental integrity is further defined through explanations of the KiwiGreen integrated pest management system, aligning sustainable management practices with “natural production technology options” to produce “high quality fruit with minimal residues while sustaining the natural environment” (Kiwifruit New Zealand, 1999). The strong rhetorical emphasis on the environmental integrity of the industry indicates a strategy aimed at gaining the *trust* of audiences which include international customers and consumers with particular environmental concerns. The media statement was widely distributed through the ZESPRI website from March 31, 1999 until July 2001.

Recent interviews conducted by New Zealand researchers with key suppliers and ‘gatekeepers’ to the European food sector, suggest that:

Favourable perceptions of New Zealand as a country-of-origin for food products are dependent mainly on confidence and trust in production, hygiene and quality control standards, rather than diffuse images of ‘clean, green’ landscape. (Knight, Holdsworth, & Mather, 2003, p. 3)

The implementation of the ZESPRI System by the kiwifruit industry, with its focus on transparency, *trust*, and accountability would seem to be a highly successful strategy in line with the findings of this report by Knight, Holdsworth and Mather.

Currently, in 2005, the ZESPRI website omits mentioning GM at all, but in 2001, it featured a similar general positioning statement about GM to the media statement:

ZESPRI International has said no to genetic modification, acknowledging the importance of food safety to consumers. We are already acknowledged as a world leader in environmental integrity with the award winning KiwiGreen environmental pest management system. We have a policy which states that all export quality ZESPRI Kiwifruit must be grown using the KiwiGreen system which maps, monitors & measures the entire production process, producing a high quality fruit of minimal residues while sustaining the natural environment. (ZESPRI, 2001a)

Here, the phrase “natural environment” used in conjunction with the phrase “maps, monitors & measures” draws on Western discourses of ‘natural’, which construct

nature (and science) as an objective reality (Latour, 2004) that can be technically managed (Hajer, 1997), in this case with “environmental integrity” (ZESPRI, 2001a).

The first three paragraphs of the letter explaining the kiwifruit industry GM position again emphasise that the industry focuses on *natural* production practices— as opposed to GM, which is thus implicitly positioned as ‘un-natural’.

One hundred percent of ZESPRI’s kiwifruit have been grown under *natural* breeding programmes . . . All of our kiwifruit are products of *natural* programmes using traditional propagation and growing methods – No genetic modification is involved. (Hodge, 2003, emphasis added)

Here, *traditional* growing methods are implicitly constructed as safe (having integrity) in contrast with the implicit uncertainty of the outcomes of *new* GM technologies. This is a further appeal to familiar, *trusted* primary production practices, and historical constructions of New Zealand as an unpolluted, pastoral land of plenty (see Archives New Zealand, 2002; Mitchell, 1972). ‘Natural’ values are *privileged*, and ‘natural’ is constructed as a moral imperative, as an ideal, pristine, pastoral paradise (Cronon, 1996), without acknowledgement that concepts of nature may be politically and culturally constructed (see, for example, Cronon, 1996; Douglas & Wildavsky, 1982; Hajer, 1997; Macnaghten & Urry, 1998).

This moral imperative discourse of ‘nature’ is additionally implicit in rhetoric associated with international perceptions of New Zealand’s ‘clean, green’ image. In the *Kiwifruit Journal* article, for example, it is articulated with both health and safety, and lifestyle, through use of the words “healthy, enjoyable food” and “safe,” to strategically position this New Zealand identity as an imperative for GM policy:

Kiwifruit are purchased and consumed because they are a healthy, enjoyable food. The image of New Zealand as clean and green and therefore perceived as safe is considered to be a benefit to kiwifruit sales particularly in Europe, but also in Japan. (Lancaster, 2000, p. 23)

New Zealand’s ‘clean, green’ image is explicitly linked with safety. Safety is then rhetorically attributed not only to the unadulterated ‘naturalness’ of the environment *per se*, but also to the integrity with which New Zealand (and the kiwifruit industry) manages its products and the environment. Implicit in this statement, is an assumption that New Zealand’s ‘clean, green’ image would be damaged by

commercial GM food production, and that GM kiwifruit would consequently be perceived as a risk to the environment, rather than healthy and safe.

New Zealand's 'clean, green' image has been discussed at length, and critiqued as a myth in the sense that New Zealand's environment is not as unpolluted as this image would suggest (Brown, 1997; Henderson 2005; True 2003; Weaver, 2001). The potential importance of this traditional identity to New Zealand trade was, however, acknowledged in the commissioning of a report by the New Zealand Ministry for the Environment (BERL/AERU, 2003). Yet, the findings have been conflicting, indicating the complexity of possible impacts of GM on this New Zealand image (BERL/AERU, 2003; Knight, Holdsworth & Mather, 2003).

A similar link to a 'clean, green' image is evident in the submission to the Royal Commission, where the term "food safety and environmental integrity" is explicitly used:

The perception of New Zealand in the mind of many consumers is that of a "clean and green" environment with a high degree of food safety and environmental integrity. (ZESPRI, 2000, Executive summary, 4.4)

Concerns for the environment are constructed by governments and corporate business in terms of discourses of sustainability and corporate social responsibility; that is by articulating business concerns with sustainable environmental practices, and sustainable social practices (Elkington, 2001a, 2001b; Frankel, 2001; Hajer, 1997; Hediger, 1999; Moser & Miller, 2001). True (2003) has, additionally, argued that global interconnectedness makes image and reputation an important part of competitive advantage, and this means that industries have to take seriously both sustainability and a national identity based on environmental reputation.

The ZESPRI submission commented that food retailers increasingly demand standards that monitor these concerns (ZESPRI, 2000, Section B (n).3), and the industry faces increasingly rigorous technical production specifications from European and Japanese retailers, with the introduction, for example, of regulatory systems such as Euregap by European customers.

The highlighting of environmental concerns by the kiwifruit industry is then a somewhat self-interested strategy, articulating wider environmental and

sustainability discourses with economic arguments for caution on the commercial release of GM food products. The representation of the industry as having environmental integrity is designed to protect its own pragmatic interests in the marketplace. In the witness brief supporting the submission, there is a reference to crops being “suspended from sale, sometimes for years” in response to “errant growers or processes” (Marks, 2000, Section B (j) (iii) 2.). Considerable detail in the submission focuses on the increasing number of food retailers in both Europe and Japan who will not stock GM food products.

In the next section of this chapter, the theme of integrity is used in slightly different terms. The rights of stakeholders to individual choice are respected, for example in terms of GM food labelling, and the respect of stakeholders is sought through the use, for example, of transparent information systems and production processes.

Managing the Respect of Stakeholders – Integrity, Transparent Systems, Choice, and Diversity

Integrity in this context, represents providing transparent, ‘honest’ systems for consumers and customers. This includes acknowledging consumer concerns about food safety, and adhering to the monitoring systems customers impose in the production of kiwifruit, for example, through the KiwiGreen pest management system and Euregap regulations. It also includes providing informed choice to consumers about GM products through the introduction and regulation of labelling.

Labelling is a costly reality for industries struggling to comply with increasingly varied and demanding auditing, tracking, and tracing requirements imposed by international importing authorities. This was acknowledged by both the kiwifruit industry and the dairy industry members in focus groups and interviews in this study. However, the primacy of the market in determining kiwifruit industry policy on GM, and the industry reliance on arguments based on public choice theory, meant that moves to standardise the labelling of food products were seen very

positively, even possibly creating a change in consumer attitudes to be more supportive of GM products, and an eventual change in kiwifruit industry policy to use GM technologies. This emphasises the strength of the market rationality for the kiwifruit industry position.

However, labelling is additionally constructed in terms of *integrity*. The ZESPRI submission argues that “the *integrity* of labelling is paramount” (ZESPRI, 2000, Section B (h) 4, emphasis added), and Lancaster (2000) represents labelling as providing “full and *honest* disclosure at point of sale” (p. 24, emphasis added). The submission additionally explicitly links “respect” with “information and choice”:

In the introduction of new, and often misunderstood, technologies such as GM it is important that consumers are treated with respect and given information and choice. (ZESPRI, 2000, Section B (h) Summary)

The linking of “misunderstood,” “information,” and “choice,” is, however, an interesting tactic that enhances the industry credibility by rhetorically aligning the kiwifruit industry with other industries and corporate groups, whose pro-GM arguments draw on a ‘deficit model’ of scientific understanding (see Irwin & Wynne, 1996), and assume that consumers have *misunderstood* GM issues but that if given more *information* they might be *less* risk-averse (Dutton, 1999; Hines, 2001; Johnstone, 1999). However, the ZESPRI argument ambiguously re-articulates this position, so that in the context of the ZESPRI position on GM, the implication is that information equally creates the choice *not* to support GM products. As Slack (1996) commented, articulation can be a strategic intervention that shapes a social context, and Eisenberg (1984) pointed out that strategic ambiguity can be a way for organisations to manage multiple and conflicting goals.

The ZESPRI discussion of the importance of labelling is thus simultaneously constructed as likely to increase feedback to retailers that might reduce retailers’ “precautionary avoidance strategies,” “an essential step in the process of consumer acceptance” (ZESPRI, 2000, Section B (h) 4), and providing the choice *not* to consume GM foods. This indicates a middle ground position, rather than a radical position on GM; one that suggests the kiwifruit industry might change their GM policy should market acceptance of GM become widespread. The reference to

labelling as “an essential step in the process of consumer acceptance of this technology” is repeated in the *Kiwifruit Journal* article (Lancaster, 2000, p. 24), and there is an explicit comment that consumers could, in time, accept GM foods:

We believe that adverse consumer opinion about GM will modify substantially in time and the technology will become more acceptable to consumers provided the technology is responsibly developed and real benefits are clearly communicated. (Lancaster, 2000, p. 24)

Implicit in the use of the words “responsibly developed” is the belief that consumer trust of the technology is paramount, and will determine consumer acceptance, and this has been borne out by recent research (Frewer, Howard, Hedderley & Shepherd, 1999; James, 2003; Hornig-Priest, 2001). However, Lancaster’s comment on the need for “real benefits” suggests that perceived benefits are more important to consumers than perceived risks in determining consumer attitudes. Yet, although benefits to food producers have at this stage been more clearly communicated than benefits to consumers (Krueger, 2001), recent studies exploring consumer perceptions of GM demonstrate ambivalent findings on the relative importance of benefits and risks (Frewer, Howard & Shepherd, 1995, 1996; Gamble, Muggleston, Hedderley, Parminter, and Richardson-Harman, 2000; Gamble & Gunson, 2002; Gaskell, Allum, Wagner, Kronberger, Torgersen, Hampel & Bardes, 2004; Moon & Balasubramanian, 2001, 2003; Rowe, 2004).

Certainly, food labelling may give consumers the power to avoid GM food products at the point of sale. Labelling of GM foods became mandatory in New Zealand with the introduction of Food Standards Australia New Zealand (FSANZ) labelling requirements on December 7, 2000, through the Food Standard 1.5.2 – foods produced using gene technology. Division 2 of this Standard specifies labelling and other information requirements for foods, including food additives and processing aids, produced using gene technology (FSANZ, 2005).

However, labelling regulations in Australia/New Zealand do not address other GM regulatory issues. There is continuing international debate over the acceptable minimum percentage of contamination allowed by various nations in relation to the GM content in food products, and the lack of fully international food

labelling standards. In the most recent Codex Alimentarius Commission report, the Taskforce on labelling of GMOs noted:

. . . that the issue of labelling of genetically modified organisms [was] under debate in many countries and in the Codex Committee on Food Labelling, therefore it agreed that it was premature to include a provision to this effect in the code. (Codex Alimentarius Commission, 2004, Paragraph 11, 22, p. 9)

It is interesting that this United Nations body, part of the World Health Organization, has failed to take a leadership role on the controversial issue of labelling GM foods. This emphasises the contested nature of the scientific and political economy issues surrounding GM.

In this uncertain regulatory environment, the kiwifruit industry recognised that, globally, retailers—for example, Sainsburys and Tesco in Europe, and Jusco Co. Ltd. and Daiel Inc. in Japan—are extremely powerful and act as gatekeepers for the food industry (Lancaster, 2000, p. 23). And, in the submission, the conditions necessary for global retailing of GM foods are clearly stated:

If food retailers can be assured of public confidence, food and environmental safety then technical standards will be adopted to reflect this and global retailing of GM food will occur. (ZESPRI, 2000, Section B (h).3.)

However, there is no discussion of the potential difficulties inherent in reaching international agreement in identifying technical standards, or in having confidence that these have been rigorously implemented. Concerns about GM contamination of imported corn seed to New Zealand and bread dough from New Zealand imported into Japan, (Beston, 2002; Hager, 2002; Walsh, 2003), even though these were accidental, have highlighted the potential difficulties in reaching international agreement on specifications for GM food production and supply. In this dynamic context, the timeframes for any change in consumer and customer attitudes to GM foods are emphasised as uncertain:

In the meantime consumer and retailer distrust and avoidance of GM food are increasing. It is difficult to predict how long this will continue. (ZESPRI, 2000, Section B (j) (iii) 8)

The emphasis on respect for the choices of consumer and customer stakeholders through providing transparent information systems positions the GM policy in terms relevant for *international* stakeholders. It again draws on current neo-liberal political

and economic discourses informed by rational choice theory and public choice theory that assumes that everything can be decided on the basis of individual benefit through rational calculations, and communication costs are framed as information transaction costs (Aune, 2001).

The *Kiwifruit Journal* article introduces additional concerns for integrity in relation to *New Zealand* stakeholders. It identifies that credible research needs to be substantial and longitudinal to ensure that information about possible risks and benefits to both health and the environment, as well as to the economy, are clearly able to be identified. Decision making and analysis are implicitly represented as needing to fairly serve the interests of diverse interest groups in the kiwifruit industry and in New Zealand.

This article also sets the context of the industry GM policy in terms of the current *global* debate, and the role that the kiwifruit industry took in making a submission to the Royal Commission.:

There are issues from science, ethics, culture, business, and politics, which jostle for power and influence. Finding ways to even carry out this debate has not been easy. But there are encouraging signs of greater dialogue between these groups.
(Lancaster, 2000, p. 22)

The kiwifruit industry position on GM is implicitly represented as being part of a plurality of possible contested positions, but, interestingly, there is no attempt to declare that there is a 'right' decision to be made. This demonstrates a respect for diverse perspectives and for the complexity of the range of issues involved in making public policy decisions about GM (see Ho, 1999; Rifkin, 1999; Shiva, 1997, 2000). It reflects an approach to decision-making at a public policy level which acknowledges that the outcomes of the debate are unpredictable and echoes other calls for dialogue about GM issues (see Braun, 2002; Ellahi, 1994; Gregory, 2003; Juanillo, 2001; Nelson, 2001; Reiss & Straughan, 1996). However, this positioning may also be a strategy to ensure that the kiwifruit industry is not aligned with more radical interest groups who argue against the commercial release of GM in New Zealand, and it avoids a head-on confrontation with pro-GM government, industry, and science interest groups.

An emphasis on democratic debate and decision-making as a way of resolving the conflict of interests evident in debate about GM also draws on political discourses of democratic electoral rights to protect the *right* of the kiwifruit industry to take a cautious approach towards the introduction of GM to New Zealand. Yet, the need for transparent decision making on the part of policy makers is articulated with “the best scientific analysis of the risks and benefits of the new technology” (Lancaster, 2000, p. 22). This, paradoxically, predicates public policy decision making with an assumption that technical/scientific analysis of risks and benefits serves all interest groups equally, and should be prioritised over cultural, ethical, or spiritual concerns (see Latour, 2004).

The kiwifruit industry policy then clearly indicates a middle ground position, demonstrating possible *support* for GM if consumer opinion changes, but the GM policy of *caution* draws on particular understandings of risk and uncertainty which deserve further discussion, and are explored in the next section.

Uncertainty and Safety – Discourses of Risk, and GM Technology Outcomes

The kiwifruit industry position on GM is represented as one of integrity, which responsibly recognises the *uncertainties* associated with the new technology by its cautious approach. This is evident in both the opening and closing paragraphs of the *Kiwifruit Journal* article. In the opening paragraph, Lancaster positions GM technologies as “new” and uncertain in outcome:

Genetic knowledge has given us the means to intervene in life in ways that are quite new. We can change and reconstruct forms of life, we can manipulate and rearrange, and we do not yet know if there are any limits to that. (Lancaster, 2000, p. 22)

The recognition of ongoing uncertainty is consistent with current discourses of risk that highlight the impossibility of quantifying risks associated with modern technologies (Adam, Beck & van Loon, 2000; Beck, 1992; Perrow, 1984).

In the closing section of the article, this position is given scientific and economic credibility by the use of a sub-heading: “Is there a mainstream science view about safety of GM food?” (Lancaster, 2000, p. 25) which quotes a seven-point summary of the findings presented at an Organisation for Economic Co-operation

and Development (OECD) conference on “GM Food Safety: Facts, Uncertainties and Assessments”. No specifically pro-GM evidence is presented. Four of these points focus on *uncertainty* associated with the outcomes of current research. A further point reassures the readers only through the *absence* of evidence, that there is no peer-reviewed scientific article indicating adverse effects on humans from eating GM foods; and the remaining two points focus on the need for consumer choice (through labelling) and open citizen engagement in decision making and discussion about GM. This scientific evidence does *not* highlight technical discourses of risk which suggest that risk can be assessed and managed (Burke, 2004, Tait, 2001; Wilkins, 2001).

However, the *Kiwifruit Journal* article equally suggests that the industry sees a positive future for GM science and technology:

World initiatives currently underway such as food labelling legislation, improved food safety testing, and greater environmental risk understanding will provide more certainty about the technology. Substantial research over a long time-frame provides reliable information that will give assurance of the safety and benefits of GM technology. (Lancaster, 2000, p. 24)

The rhetorical use of the active tense in the phrases “will provide and “will give,” linked with “reliable information” suggests a confidence that brooks no alternative. This draws on discourses of technological determinism, and a conception of technology as progress, that risk can be managed, and that the natural world can be predicted and controlled (see Giddens, 1972; Lash, 1987; Latour, 1993, 2004; Levidow, 1998). There is some tension here then in the assurance that GM technologies will be safe and their construction in terms of uncertainty. This was echoed in some of the kiwifruit grower focus groups, as will be discussed in Chapter Six.

Interestingly, no reference is made in the *Kiwifruit Journal* article or the ZESPRI submission to the *details* of possible environmental or health risks involved in producing or consuming GM foods. Neither is it suggested that consumers perceive *particular* risks, for example, allergic reactions, nor is there any detailed discussion of social or cultural issues associated with GM, or acknowledgement that risk may be culturally constructed (see Douglas & Wildavsky, 1982, Shiva, 1997,

2000). This is in contrast to the arguments of other New Zealand interest groups that are against GM in crops and food (for example the 'GE-Free' coalition and MAdGE).

The ZESPRI submission makes only two main recommendations, and these link *research*, uncertainty, and safety: First, "New Zealand should maintain its current GM free status for commercial food production until the *uncertainties* about the technology and its acceptance are better resolved" (ZESPRI, 2000, Executive summary, 4.6, emphasis added), and second, "*Research* about GM is necessary to reduce the *uncertainties* about the technology and to determine its food and environmental *safety*" (ZESPRI, 2000, Executive summary, 4.7, emphasis added). Despite the rhetoric of uncertainty then, there is a technical construction of risk; an expectation that risks can be quantified and eventually controlled or resolved (see Beck, 2000; Latour, 2004).

The message for broader consumption, however, is slightly different. As discussed above, the second paragraph of the earlier media statement issued in 1999 represents *not* funding GM research as *strengthening* food safety, and clearly indicates that the kiwifruit industry will not be involved:

No New Zealand commercial kiwifruit, either under evaluation or in commercial production, has ever been genetically modified . . . As part of our commitment to further strengthening food safety practices, Kiwifruit New Zealand has resolved not to fund research, include within its inventory, or market genetically modified kiwifruit. (Kiwifruit New Zealand, 1999)

The overall rhetorical construction of the kiwifruit industry GM position argues that *perceived* uncertainties surrounding GM foods mean that current best practice in terms of food safety should not include GM food production. The rhetoric associated with current kiwifruit industry food safety practices then positions the industry as responsible, as having *integrity*. The possible loss of this integrity through association with GM is seen to be important to all stakeholders: international customers and consumers, as well as internal stakeholders, growers, and suppliers. Yet, the term 'uncertainty' featured in the closing paragraphs of the letter about GM policy again implies that, in the future, uncertainty and risk can be managed. It argues that New Zealand should curtail the release of GMOs into New Zealand until

risks are “better understood and stronger mitigating strategies have been developed” (Hodge, 2003).

The construction of ‘uncertainty’ and ‘risk’ in ZESPRI documents in relation to GM is thus highly ambivalent. It demonstrates the tensions to be managed between a market rationality—and consumer conceptions of uncertainty— and a technical/scientific rationality—and technical constructions of risk.

However, there is some recognition in this repetition of the key term ‘uncertainty’ in conjunction with the strong acknowledgement of consumer concerns that these concerns are considered to be legitimate. The submission recommends that changes to the regulation and control of GM research are needed: that research “should be better facilitated by appropriate changes to legislation, and to regulatory and institutional arrangements” (ZESPRI, 2000, Section A2.2). Yet, no further detail suggesting the nature of these changes is given. While the marketing focus of the ZESPRI position is clearly supported by detailed evidence, the submission makes no substantive recommendations as to who might make technical assurances about food and environmental safety, or how such assurances might be measured; and what changes to regulatory and legislative requirements are needed, or appropriate time frames for this to occur.

The kiwifruit industry position on the legislative and regulatory environment in New Zealand is thus, by omission, an example of strategic ambiguity (Eisenberg, 1984) that mirrors its ambivalent position on risk and uncertainty. The industry position on labelling, would suggest a desire for a stringent regulatory framework; however, the neo-liberal framing of GM decision-making as market-driven, would suggest a desire that the research and development environment should be as free of legislative interventions as possible. Indeed, no clear recommendations are given for public policymaking. As Conrad and McIntush (2003) commented:

Ambiguity also allows actors to reconcile their own ambivalence and to develop effective rationalizations for supporting particular policies. But strategic ambiguity also means that public policymaking is more a loose collection of ideas competing for attention than a coherent decision structure (p. 408)

In sum then, integrity is associated, and articulated, with managing the environment responsibly, with managing the respect, trust, and diverse perspectives of multiple stakeholders, and with managing uncertainty. In association with the theme of integrity, mention has already been made of the meanings attributed by the kiwifruit industry to science, technology, and concepts of ‘natural’ in relation to GM policy. These understandings are to some extent held in tension with the meanings in positioning statements on GM that refer to *innovation*.

Innovation and Competing Understandings of Technology and Science

Despite the fact that the kiwifruit industry GM policy was developed on the joint recommendations of the ZESPRI International (marketing) group and the ZESPRI Innovation group, the major emphasis in the policy documents is on the perceptions of the kiwifruit *markets* rather than *innovation* as the main driver of GM policy. However, the rhetorical positioning of the policy indicates a tension: the need to be seen as both innovative and responsive to market concerns, particularly since other industries, such as the dairy industry, position ‘innovation’ as *embracing* GM.

Other submissions to the Royal Commission, such as the dairy industry and the HortResearch submissions, make much of the importance for New Zealand to retain intellectual property rights in genomic research, and link keeping pace with other countries’ research with being innovative—using technologies like GM because they are cutting edge and may provide a competitive advantage. Such links reflect a specific technologically deterministic viewpoint; that is, technological development represents progress, and is inevitable (Henwood, Wyatt, Miller & Senker, 2000; Ho, 1999; Levidow, 1998; Shiva, 1997). However, as discussed above, the ZESPRI submission designates market and consumer acceptance as the preferred driver of GM research. There is a brief acknowledgement in the ZESPRI submission that New Zealand needs to be involved in research “so that the country keeps pace with the rest of the world” (ZESPRI, 2000, Section B (h).5) but this statement is still contextualised in terms of the market, since it follows the statement, “Greater factual

information will be important for consumer acceptance” (ZESPRI, 2000, Section B (h).5).

The second aspect of research considered in the ZESPRI submission is made under the heading *Alternative uses for GM tools*. The submission supports “low risk procedures in controlled laboratories” (ZESPRI, 2000, Section B (n).4) rather than commercial production of GM food. This is consistent with the reference earlier in this chapter to the kiwifruit industry’s acceptance of genomic science as a diagnostic procedure but caution with regard to a commitment to the production of GM foods.

We are continuing to explore with HortResearch . . . the possibility of doing some mapping work that . . . could still be of value in our traditional breeding programme . . . we don’t have any real concerns that we’re missing out on opportunities as a result of this policy. (Innovation spokesperson D)

The nature of kiwifruit industry research and production is then implicitly represented as innovative *without* the need to use new GM technologies. For example:

There is a lot that hasn’t yet been explored in terms of standard ways of breeding the product . . . and so one has got to question whether the additional speed is really going to provide the additional value relative to the risk that it brings with it . . . there is huge progress being made at the moment on a range of fronts that will add value by up to ten years ahead of anything we can do with genetic modifications. (Innovation spokesperson D)

Here, the main advantage of GM is represented as one of short time frames for commercial development; yet, this is represented as able to be matched by traditional breeding methods.

Indeed, consistent with the industry emphasis on market concerns, the importance of being *perceived* to be innovative by customers is interestingly evident in the media statement on GM. Rather than using GM to appear innovative, the KiwiGreen production system is positioned as innovative because it remains ahead of competitor industry systems. It is described as, “more than just using natural technology options. It means staying ahead of the ball game and making our systems more transparent for customers” (Kiwifruit New Zealand, 1999). Yet, the coupling of “natural” and “technology” indicates a need for the industry to be perceived as technologically sophisticated. Much of the international consumer resistance to GM results from social movements such as environmentalism, but the kiwifruit industry

also identifies with other primary producer industries in New Zealand. The kiwifruit industry must thus acknowledge and manage diverse viewpoints, including both environmental discourses and those of science and technological determinism.

The Innovation team position on science and technology is somewhat paradoxical; it is comfortable with GM science but cautious about the outcomes of GM technologies. However, its support for, and interest in, research is clearly evident with the first sentences in the *Kiwiflier* article: “ZESPRI is committed to a high technology future. Currently about 20% of our annual investment in Innovation projects goes into new cultivar development” (ZESPRI Innovation, 2001, p. 4). However, this research is still justified in terms of the consumer, as providing “factual information . . . important for allowing consumers to make informed choice in the future” (ZESPRI Innovation, 2001, p. 4). There is a reference to consumer concerns that the new cultivar ZESPRI Gold might be GM, and the evident relief when they were reassured that it was produced by “entirely natural plant breeding” (ZESPRI Innovation, 2001, p. 4). This first paragraph then aims to reassure growers that industry values are unchanged, as is the industry position on GM, at the same time positioning innovation in terms of the technology associated with ‘natural’ production and breeding systems.

The article in the *Kiwiflier* further reflects the tensions being managed in the kiwifruit industry position in relation to science and technology when it indicates support for diverse aspects of potential Government policy: “We support the Government’s position in seeking a balance between the needs of both sides in the GM debate and acknowledge its desire to preserve scientific opportunities” (ZESPRI Innovation, 2001, p. 4). Support is indicated for controlled laboratory research but also for the two year moratorium on applications for commercial field trials. It is evident that in managing the need to be seen as both innovative and responsive to market concerns, the kiwifruit industry represents its ongoing practices as innovative, rather than embarking on GM research and development.

The kiwifruit industry has a clear policy not to produce GM fruit at the current time and argues that the commercial release of GM products in New Zealand

would be likely to alienate international kiwifruit markets. The industry policy is thus rhetorically constructed in terms that are market-driven. The policy focuses on the uncertainties (and therefore risks) associated with current GM knowledge. Yet, the policy constructs GM technologies as likely to be perceived as safe in the future in the light of further research and the implementation of labelling. The major explanations for this policy are given in terms of the economic benefits to the industry (and therefore to New Zealand) and the need to be seen as having environmental integrity, as well as taking responsible action that reduces uncertainty and respects diverse perspectives of the issues.

In contrast, the dairy industry policy on GM, while again being market-driven, takes the position that New Zealand *should* embark on the rapid adoption of GM to ensure that it maintains its position as a world leader in primary export products. The following section of this chapter examines the rhetorical construction of the dairy industry GM policy.

The Dairy Industry Policy on GM

This section identifies the documents that were analysed, before exploring in more depth how the dairy industry position on GM was expressed and explained as the policy was established.

Documents Selected for Analysis

The documents analysed were written for a variety of audiences over the time frame of this research. The major document(s) analysed is the comprehensive set of submissions made by the NZDB to the Royal Commission. This was also made on behalf of New Zealand Dairy Research Institute, Livestock Corporation Limited, Dairying Research Corporation, and ViaLactia Biosciences New Zealand Limited. This lengthy, highly detailed submission comprises 89 pages in the main document with further witness briefs from Juliet MacLean, a dairy farmer and Nuffield scholar, and John Yeabsley, a senior fellow of the New Zealand Institute of Economic Research. In addition, the NZDB made legal and concluding submissions

(documents of 11 and 13 pages respectively) in conjunction with the New Zealand Cooperative Dairy company. (The New Zealand Cooperative Dairy Company initially made a short, separate submission but, in this document, referred substantively to the NZDB submission.)

As for the kiwifruit industry, the primary audience for submissions was the commissioners, but since all submissions were publicly available on the Commission's website, the larger audiences were New Zealand citizens and consumers, and potentially international audiences, markets, and customers interested in the dairy industry policy on GM.

Three information booklets are also analysed. The first of these was produced by the NZDB in 2000, and was specifically written for dairy industry personnel, for example, those marketing New Zealand dairy products in international markets. Many of these personnel were involved in discussions with customers about dairy industry policies; the booklet was to ensure that they had access to general information about biotechnology and was entitled *What is biotechnology? Biotech brief*, with a further subtitle: *Winning worldwide*.

The second information booklet was again produced by the NZDB, but was written specifically for, and mailed to, all dairy farmers. It was produced in April, 2000 and was entitled *Biotechnology: Why we're investing in research*.

The third information booklet was written by dairy farmer Juliet Maclean, following her Nuffield scholarship in 2000. The theme of her study was, "The threats and opportunities that agricultural biotechnology will pose for New Zealand agriculture" (Maclean, 2000, p.1). This research was funded by Meat New Zealand, the NZDB, Pipfruit Growers New Zealand Inc., ZESPRI International Ltd., McKenzie Charitable Foundation, and Federated Farmers of New Zealand. The booklet was written to address a concern that farmers' lack of understanding of agricultural biotechnology could be to New Zealand's detriment. It was entitled *A brief guide to understanding biotechnology in New Zealand farming*, and aimed at a wide audience of primary producers, not just at dairy farmers. However, this booklet was widely referred to in research interviews with dairy industry members.

Two media statements made by Fonterra are also analysed. The first, titled “Statement on Genetic Modification”, was made on 14 September, 2001 in the interim after the report of the Royal Commission and before the announcement of Government policy on GM, and the second, titled “GM Decision”, was made on 30 October, 2001 in response to the announcement of Government policy.

The Fonterra 2001/2002 Annual Report, the New Zealand Milk Products and Fonterra websites, and a speech made by Craig Norgate, first CEO of Fonterra, are also referred to in the following chapters. Although the overall GM policy is consistent throughout these documents, the rhetorical strategies change, with different priorities emphasised for the different target audiences.

The Market Context of the Policy: Remaining Competitive

The dairy industry positioning on GM is expressed and explained as being driven by the *market*, and in this respect it is similar to that of the kiwifruit industry. However, the kiwifruit industry is primarily concerned about the values and attitudes of their customers and consumers in Europe and Japan, who are GM risk-averse. In contrast, although the dairy industry state that they will never use GM in ways that are not acceptable to their customers (ViaLactia spokesperson), such concerns are not foregrounded in their arguments.

Both industries are market-driven in the sense that the rationality of the market is of prime concern; for both industries economic viability and the dollar return for shareholders is of primary importance. However, the social meanings implicit in the rhetorical construction of the dairy industry GM policy, and the supporting arguments, indicate a different market context from that of the kiwifruit industry. This positioning is derived from different organisational values and values-related tensions that underlie the policy. Particular aspects of the identity of the dairy industry determine which market and other factors are accorded a priority in strategic decision making.

From the outset, the NZDB argues in its submission to the Royal Commission that New Zealand needs to maintain the *competitiveness* of its primary industries in

the global marketplace, in order to maintain its living standards. The dairy industry justifies its position on GM arguing, as ZESPRI did in their submission to the Royal Commission, that the industry success is important economically to New Zealand, because of New Zealand's economic dependence on primary industries involving farming, fishing, forestry, and horticulture. This positions the industry in terms of its global identity, as striving for the public good of New Zealand rather than the private good of shareholders. GM is then articulated with the future economic success of the dairy industry, as a means of remaining competitive. This argument, like the ZESPRI arguments, draws on neo-liberal free-market discourses that are consistent with current New Zealand Government policy, and are based on the claim that competition encourages innovation and technological development, leading to efficiencies of production (Dalziel, 2003; Devine, 1998, 2001; Kelsey, 1997; Scott, 1997).

Fonterra's media statement on 14 September 2001 equally emphasises the need to be competitive:

The reality every New Zealander should understand is that our economy is overwhelmingly dependent on biological products, including dairy products, meat, wool, fish, and fruit and vegetables. Maintaining and enhancing New Zealanders' living standards depends on the country maintaining and enhancing competitiveness of these key industries. (Fonterra, 2001, September 14)

The prioritisation of "living standards" as evidence of success and well-being, rather than, for example, care for the environment or educational standards and knowledge acquisition, highlights the economic perspective that is privileged in the dairy industry GM positioning.

The executive summary of the NZDB submission articulates GM with economic success by rhetorically constructing GM as *essential* to continuing success as a "world competitive sector," to maintain and "enhance" the economic status quo and current living standards; it also positions GM as *desirable*, by suggesting that this provides an "opportunity to lead the world" (NZDB, 2000a, Executive summary, p. 2). The industry drive to compete as a global player in world dairy markets is also evident in CEO Craig Norgate's speech to the Fonterra Annual Meeting in 2002:

Globalisation and industry consolidation is leading to the emergence of a handful of key dairy players that will increasingly shape the global arena. It will be increasingly important to be part of that influential group. (Norgate, September 12, 2002)

Within a market rationality, then, the dairy industry's GM positioning foregrounds New Zealand's identity as an innovative and competitive knowledge economy (*Growing an innovative New Zealand*, 2002), rather than, like the kiwifruit industry, foregrounding individual consumer choice. In addition, it foregrounds the dairy industry as a major player in promoting this New Zealand identity in global markets. Globalisation creates an opportunity for re-branding national identity to distinguish local products in competitive global markets by adding a focus on knowledge, prosperity, and innovation—on the human capital of New Zealand as well as its untouched environment (True, 2003).

The following edited quotation from the NZDB submission executive summary demonstrates the connections created by the sequencing of the NZDB arguments:

New Zealand's economy is overwhelmingly dependent on biological products . . . The New Zealand dairy industry is the largest and most important of these industries . . . The world is in a biotechnological revolution. Genetic modification ("GM") is an integral part of that. The pace of change is rapid and accelerating . . . GM is in widespread use overseas . . . The biotechnological revolution is an important part of the knowledge economy, a concept to which New Zealand is committed . . . The New Zealand dairy industry has advantages which give it the opportunity to lead the world . . . New Zealand should ensure that responsible use of GM is permitted . . . It should allow the New Zealand dairy industry to be a leader, not a follower, in biotechnological developments and the responsible use of GM. (NZDB, 2000a, Executive summary, p. 2)

This rhetoric of urgency as evidenced by the words "revolution," "rapid," and "accelerating," is maintained by the continued emphasis on the need to be competitive within international dairy markets represented in the submission. The need for a commitment to GM is accentuated by the construction of biotechnology and GM as a "revolution" with an accelerating pace of change. This is articulated positively with New Zealand's commitment to a knowledge economy. In contrast, Rifkin (1999) constructed the biotechnology 'revolution' negatively:

The biotech revolution is, after all, the ultimate consumer playground, offering us the freedom to recast our own biological endowment and the rest of nature to suit whatever whim might move us. (p. 224)

Rifkin's representation of biotechnology as a "whim" suggests that the consequences have been considered too lightly.

Yet, the use of GM technologies, the dairy industry argues, can speed up the timeframes for research which may foster more rapid changes in dairy production than other techniques would allow, for example at the level of animal breeding, plant development for improved fodder, and microbial development for new value-added products like functional foods and nutraceuticals. The use of the metaphor of a 'race' with competitors adds persuasive immediacy to the dairy industry argument:

The New Zealand dairy industry is in a *never-ending race* with its competitors to maintain and enhance its competitive advantage. The New Zealand economy will suffer if there is any significant erosion in its competitive advantage. Such an erosion will occur quickly if the ability of the New Zealand dairy industry to compete in the biotechnology *race* is hindered through an inability to research and use GM. [emphasis added] (NZDB, 2000a, Section 57.2, p. 68)

Again, failure to compete in this 'race' is articulated with a negative impact on the New Zealand *economy*, a benefit likely to be valued by the recipients of the submission, the Royal Commission, and implicitly the New Zealand Government who set up the Commission. However, the metaphor of a 'race' is linked with other benefits in other documents, depending on the intended audience.

The explicit emphasis of the NZDB booklet aimed at *farmers*, as in the submission, is on the need to remain competitive at an *industry* level. From the outset, the need to compete is again positioned as urgent and a race; for example in the Foreword by the Chairman of the NZDB, the use of the words "dare" and "first" both imply urgency:

Developments in biotechnology are moving so fast that we *dare* not be left behind by our competitors. Potentially biotechnology offers us, and our competitors, the opportunity to make quantum leaps in productivity. The *first* to make new discoveries has the opportunity to patent them and gain the full benefits. (NZDB, 2001c, p. 1, emphasis added)

In this instance, the 'race' is positioned as providing increases in farm productivity, of particular relevance to the *farmer* audience.

In 2003, the 'race' was further positioned as benefitting *global consumers*. The following statement appeared on every page of the Fonterra website: "In milk, we have a unique raw material. We seek to lead the race to develop its nutritional

potential by meeting the needs of an increasingly health-conscious world” (Fonterra, 2003). Here, the metaphor of a ‘race’ is positioned as bringing health benefits, likely to have appeal for the wider audiences of the website. This reference to “the race” is repeated in the Annual Report for 2001/2002, and in more detail in Craig Norgate’s (first CEO of Fonterra) speech to the World Dairy summit:

But there is a new race on—a race to unlock the hidden potential of milk that new science is bringing into focus. All of us are in the race and we are all striving to win it. There are riches for the first to unlock the value, and commercialise it, and bring new products to the market, which line up alongside consumers’ desires for healthier nutrition. We all have a collective interest in the race, to ensure that dairy products are positioned as healthy products for the world, not simply a staple of life. (Norgate, October 29, 2001)

On this occasion, the *altruistic* benefits of improved global health from GM are paradoxically juxtaposed with the self-interest of the *financial* benefits expected to accrue from GM for the industry shareholders, the readers of the Annual Report, and the conference attendees.

The booklet produced for NZDB personnel, such as *marketers*, also demonstrates the centrality of *competition* to dairy industry positioning on GM, and to the industry identity in the global dairy marketplace, through the subtitle, *Winning Worldwide*. As Cheney and Tompkins (1988) suggested, the titles of texts can demonstrate the priorities accorded to particular discourses. Rather than simply being an information booklet as implied by the main title, *What is Biotechnology? Biotech Brief*, this sub-title positions biotechnology—and GM—as *winning*, with the implication that without biotechnology and GM the industry will *lose*. However, the majority of this booklet’s substantive content focuses on explaining GM science, aimed at educating marketers, who deal with customer concerns. This focus implicitly assumes that an understanding of the science of GM will facilitate a supportive stance, which can be transferred to customers and consumers. A similar position is taken by Dutton (1999), Glick (1997), Johnstone (1999), and Wansink and Kim (2001).

However, there is no mention of the specific arguments for the need to be competitive put forward in the submission—benefits for the industry economically, or for New Zealand economically, and benefits in terms of research and intellectual

property ownership. Instead, the headings, “Perceived benefits” and “Perceived concerns,” highlight benefits and concerns seen by customers and consumers, with the benefits always privileged by being listed first, despite the fact that the research discussing the relative importance of risks and benefits to attitudes towards GM is inconclusive (Frewer, Howard & Shepherd, 1995, 1996; Gaskell, Allum, Wagner, Kronberger, Torgersen, Hampel & Bardes, 2004; Moon & Balasubramanian, 2001, 2003; Rowe, 2004). Interestingly, the booklet assumes that positive impacts will result from GM by constructing concerns as “arguments put forward by opponents [of GM]” (NZDB, 2001b, p. 10).

In this booklet primarily for marketers, in contrast to other dairy industry documents, the benefits and concerns listed are in terms relevant for producers and consumers rather than those prioritised by the dairy industry. The headings are “Environmental”, “Consumer/food safety”, “Economic and commercial”, and “Ethical”. Yet, environmental and food safety issues (highlighted by the kiwifruit industry) are not addressed significantly in other dairy industry documents related to GM. They are not prioritised in the overall dairy industry GM positioning, and, although the economic rationality of the market is privileged, the political rationality of consumer choice is not. However, even in this NZDB booklet for marketers, the benefits listed under “Economic and commercial” relate to dairy *production* outcomes: improvements in crop yield and quality, reduced production costs, and a more targeted, less time-consuming approach to breeding, rather than consumer benefits, industry returns, or economic benefits for New Zealand.

Under three of the four “Perceived concerns” headings, concerns are listed with a degree of scepticism as the concerns of only *some* people, for example:

Some argue that the giant multinationals and farmers in the developed world may exploit the benefits of biotechnology at the expense of producers in developing countries. (NZDB, 2001b, p. 11, emphasis added)

In contrast, the language used for “Perceived benefits” uses active verbs which imply certainty: “Biotechnology enables high yielding disease/insect resistant crops to be produced” and “Biotechnology will allow the production of foods containing reduced levels or absence of allergenic proteins” (NZDB, 2001b, p. 10). In only two out of

the ten *benefits* listed are words used indicating uncertainty such as ‘may’ or ‘could’. However, in all eight of the *concerns* listed, the concerns are qualified by the terms ‘may’, ‘could’, or ‘some people’. The end result is a document that privileges GM benefits and thus intends to persuade as well as inform.

The dairy industry case—that it needs to be competitive with other dairy producers—depends on the support of industry marketers, who need to interpret the GM policy accurately to customers in sensitive markets. Being *competitive* is articulated in this booklet with an industry identity where industry personnel understand and support the benefits of GM at the level of industry production, and represent this position *credibly* to customers.

The market rationality for the dairy industry positioning on GM is thus underpinned by the need to be competitive in global dairy markets. GM is represented as crucial in the ‘race’ to gain competitive advantage in the international marketplace. It is linked with economic, producer, and health benefits, depending on the intended audience. Interestingly, the GM research literature has not explored GM issues in terms of *competition*, perhaps because the focus tends to be on functionally-oriented, *public* perceptions of GM, rather than on critically-oriented, *corporate* positioning on GM.

Constructing an Identity of Business Credibility and Authority

In various documents, specific identities are rhetorically constructed for farmers, as well as for the dairy industry as a whole, which emphasise the *business* credibility of the industry, and position the industry as having an *authoritative* voice in the GM debate in New Zealand.

The perceived benefits and concerns in relation to biotechnology and GM are again outlined in the NZDB booklet for dairy farmers. However, the benefits as outlined are not specifically tailored to farmers at a production level, as might be expected, since production benefits were initially promoted more than consumer benefits by companies such as Monsanto (Krueger, 2001). Farmer benefits such as the reduced use of pesticides and chemicals, or improved milk yields are not

explored in detail; instead benefits are firstly addressed at an industry and market level. In this 15 page booklet, 2 pages are devoted to defining the international marketplace, 2 pages identify competitors, and 2 further pages indicate the likely *financial* investment and gains in biotechnology research.

This highlights the *business* credibility of the industry and positions farmers primarily as businessmen, rather than as agricultural experts, with their most important consideration being the farm gate return—the dollar return that they receive as shareholders in the dairy industry. It emphasises the *corporate* identity of the industry. Within only two pages of “Potential Benefits”, one full page is devoted to *health* benefits, and the other lists on-farm production benefits amongst other more general *consumer* benefits, in the briefest of bulleted lists.

In its conclusion, the booklet positions the use of biotechnology not only in terms of the need for competition to maintain the status quo, but in terms of the need for competition to *survive*; the viability of the dairy industry is articulated with choosing to invest in biotechnology/GM. The booklet thus appeals to dairy farmers to support biotechnology/GM in terms of their business identity as shareholder decision makers within the dairy industry.

The third booklet, written by Juliet Maclean for a wide audience of primary producers, addressed in the booklet generically as ‘farmers’, sets out to be persuasive, but privileges a different identity for primary producers. It ambivalently constructs them simultaneously as needing to be informed about new biotechnologies, and as agricultural *experts* with some *authority*. The use of the second person and words like “must”, “never”, and “important” give the arguments an imperative tone, suggesting the audience needs direction:

My challenge to farmers is this. You must understand the issues if you are going to make the best decisions. You would never build a new dairy yard or set of cattle yards without doing your homework first. You would not change the breed of your herd or flock or the composition of your share portfolio based on a weekend article in the local tabloid! This is important! We must not let vocal minorities who know nothing about agriculture plot our destiny based on their emotion. (Maclean, 2001, p. 15)

Yet, the first person pronouns “we” and “our” are inclusive, constructing the author and farmers as agricultural experts in opposition to lay minorities. Juliet Maclean

derives some *authority* as an informed dairy farmer from being a Nuffield Scholar, but she also positions farmers as needing information, as in danger of reacting emotively. Farmers are implicitly positioned as needing to be responsible, like the *majority* of expert farmers, and contrasted with *radical* uninformed *minorities*, whose arguments are represented as subversive by the term “plot” and whose emotional reactions are positioned as invalid. Other pro-GM interest groups, for example, the Life Sciences Network (LSN) in their submission to the Royal Commission, frequently dismiss anti-GM activists’ arguments as emotive. Yet, as Motion and Weaver (2005a) have pointed out, the LSN uses equally emotive terms in its own discursive positioning of GM.

In the detail of the NZDB submission, the identity of the dairy industry is again constructed as one of *authority* by virtue of its *business* and *production credibility*. The industry is represented as unique in that it is currently the most efficient dairy industry globally, with production methods, such as the year-round availability of pasture, contributing to the lowest production costs for commodity milk products like milk powders, despite the distance of New Zealand from its major markets (Yeabsley, 2000). The industry is also positioned as unique in terms of the existing intellectual property associated with the bovine genome, justifiably since New Zealand is a world leader in bovine genomic information (ViaLactia, 2005). However, these very unique features, Yeabsley (2000) argues, mean that New Zealand has to match the research of other countries:

We are unlikely to be able to rely on other countries to do the relevant research and then become an efficient follower, because the local dairy industry is unique in terms of climate, soils, and herd makeup so that offshore innovations may be irrelevant to our needs. Indeed, we typically have to *match* rather than *duplicate* foreign advances. (p. 3)

The dairy industry is paradoxically positioned in terms of competitor industries as needing to be the *same* as other global dairy producers, to compete equally on the same terms with regard to GM, and to be *different*, in order to remain competitive.

Yeabsley (2000) further suggests that the New Zealand dairy industry has developed a unique cluster of groups of industry personnel and well developed supporting activities. This positioning as unique lends credence to the stated

aspiration to remain a world leader in the global dairy industry. Other biotechnology companies have equally been found to be concerned with their corporate reputation, since source credibility has been found to be important in determining consumer trust in GM (Frewer, Howard, Hedderley & Shepherd, 1999; James, 2003; Priest, 2001), and several studies recommend strategies for reputation management (Grupp & Gaines-Ross, 2002; Gurau & McLaren, 2003; Moon & Piper, 2001).

The identification with, and expectation of, a role of leadership also lends an imperative tone of moral authority to the NZDB submission; for example, the use of the word “should” in conjunction with “responsible” in the last sections of the executive summary: “New Zealand should ensure that responsible use of GM is permitted” (NZDB, 2000a, Executive summary, S6). In this sentence, “New Zealand,” rather than the commissioners, is constructed as the audience for the expected action. The dairy industry thus recognises that the Royal Commission’s recommendations will determine Government public policy on GM and the submission implicitly exhorts the Government to take morally responsible action by supporting GM. There is an assumption that the dairy industry voice is powerful and likely to be influential.

Fonterra’s media statement on September 14, 2001, after the Royal Commission’s report, but before the Government’s response, reiterates many of the arguments and much of the language used in the submission. The word “must” again constructs the commercial use of GM as a moral imperative:

Fonterra must be allowed to conduct research in New Zealand in a responsible manner. We simply must have the ability to make sensible choices about the commercial application of genetically-modified organisms in the future. (Fonterra, 2001, September 14)

The terms “responsible” and “sensible” additionally position both GM research and commercial production of GM as a normalised ethical discourse in New Zealand. In this way, as Motion and Weaver (2005a) suggested, the discursive construction of GM can be used to establish a “regime of truth” (Foucault, 1991, p. 74) in a struggle for legitimation and power.

A struggle for power is similarly evident in both the NZDB submission and the Fonterra media statement of September 14, 2001, when the dairy industry

threatened to move its research offshore if the voluntary moratorium on applications for the commercial release of GMOs were continued. This threat is constructed as a loss to the knowledge society, and therefore to Government strategy (see *Growing an Innovative New Zealand*, 2002; O'Sullivan, 2001), in an attempt to sway Government policy:

Should the moratorium be extended, it would be impossible for us to remain competitive with developments in genetic modification without moving our research operations offshore. A move overseas would have a negative impact on our business. Worse it would have an even more negative impact on New Zealand's scientific community as our scientists led their junior colleagues and students offshore. If the concept of a Knowledge Society is to have meaning in a New Zealand context, it must include biotechnology in all its forms. (Fonterra, 2001, September 14)

The dairy industry is implicitly accorded significant status in this quote, by the assumption that the loss of dairy industry scientists would be a considerable loss to the New Zealand scientific community, and to New Zealand's international identity and credibility. In this instance, the role of science and specifically "biotechnology in all its forms"—including GM—is privileged as the priority for economic development. However, such commercial GM research and development agendas for governments and scientific institutions have fuelled significant distrust from the general public (Henderson & Weaver, 2003; James, 2003).

The second media release issued by the NZDB, after the announcement of Government policy on GM, implicitly constructs GM as based on "sound science," and constructs technical assessments of risk as "common sense." It identifies the two year moratorium on applications for the commercial release of GMOs as a limitation, not favoured by the industry:

The policy does include restrictions and conditions that appear to go beyond what can be justified by sound science and common sense assessments of risk. We believe that we can live with them, bearing in mind that they will make us less competitive in this crucial area than we could be. (Fonterra, 2001, October 30)

A reluctant approval is evident in the statement: "Fonterra Co-operative Group says it can *live with* the policy announced by the New Zealand Government today on research into genetic modification" (Fonterra, 2001, October 30, emphasis added). The media release additionally represents GM as essential to the future of science, the industry, and New Zealand, and by linking these three elements constructs a

powerful role for the dairy industry: “Science can go on in New Zealand and that’s good for our company and better for New Zealand” (Fonterra, 2001, October 30).

Previous threats to take research offshore were therefore not implemented.

The dairy industry GM position thus relies heavily on a market rationality articulated with its business and scientific credibility as a *powerful* industry leader. To manage the contested nature of GM, however, the industry uses ambiguous terms which are explored in the next section.

Ambiguous Terms and Dynamic Tensions: Biotechnology, and GM

The dairy industry places explicit emphasis on the importance of considering GM issues from a science perspective. This is not unexpected given that New Zealand primary industries are supported by substantial scientific research. For example, the dairy industry is supported by the Crown Research Institute, AgResearch, as well as dedicated dairy science research facilities owned by the industry such as Dexcel, the Fonterra Research Centre, and ViaLactia Biosciences. In the submission, in Section B (a), and in the three booklets analysed in this study, definitions of biotechnology and explanations of the scientific processes involved in various types of genetic technologies are explained in detail. The NZDB submission refers to the Independent Biotechnology Advisory Council groupings that define new and potential biotechnologies, providing some measure of independent credibility as justification for the scientific explanations of GM.

However, there are tensions in the dairy industry positioning of GM and biotechnology. GM is portrayed both as reassuringly familiar—an inevitable progression from traditional practices—and as innovative, an exciting new opportunity—a scientific revolution. Implicitly, the identity of the dairy industry itself is then similarly positioned as both familiar and innovative.

The NZDB submission, for example, begins by defining biotechnology as the *context* of GM: “To deal adequately with the issues relating to GM, it is necessary to view GM in its proper context. That context is that it is a part of the wider science

referred to as biotechnology” (NZDB, 2000a, Section 10.1, p. 13). ‘Biotechnology’ is defined as:

... the set of techniques which use living organisms, including plants, animals and micro-organisms, to make biological products or to research the basis of disease and assist in the development of non-biological products. (NZDB, 2000a, Section B (a), 10.2)

The NZDB submission then positions GM as *no different* from other biotechnologies by reassuring the reader that biotechnology and its application to food has been around for thousands of years. GM is then implicitly aligned, for example, with familiar technologies such as bread, beer, and wine making, and milk pasteurisation, and “practised traditional plant and animal breeding techniques” (NZDB, 2000a, Section B (a), 10.3).

However, on other occasions the dairy industry *conflates* the term biotechnology with GM, representing ‘biotechnology,’ not just GM, as a ‘revolution’ and therefore radically *different* from the past, as described previously. Other literature also demonstrates that definitions of biotechnology are contested. Biotechnology—and GM—are similarly constructed as a seamless continuum of biotechnological change (Aldridge, 1996; Connor, 2000) or as a dramatically new (good or bad) technology (Davis, 1991; Ho, 1999; Reiss & Straughan, 1996; Rifkin, 1999).

In an explanation of “new and potential” biotechnologies in the NZDB submission (NZDB, 2000a, Section B (a), 10.4), GM is positioned as playing a central role, and it is these aspects of biotechnology for which the dairy industry argues. The research carried out by the New Zealand Dairy Research Institute, Livestock Improvement Corporation Limited, the Dairying Research Corporation, and ViaLactia Biosciences (NZ) Limited, all subsidiaries of the NZDB, is explained in some detail. All of this research could be said to comprise biotechnology in the light of the earlier NZDB definition of biotechnology, yet ViaLactia is the only one of these research arms which is referred to as a biotechnology company, and is the only one involved in GM research (although, collaborative projects have since been developed between ViaLactia and Livestock Improvement).

GM, then, is equated directly with the new biotechnology revolution by the NZDB, despite the care taken previously in establishing that biotechnology is nothing new and involves successful, tried and true agricultural technologies in long term use in New Zealand. This somewhat ambiguous construction of biotechnology is confusing, since both meanings are given validity in different contexts (see Empson, 1961, for a discussion of different constructions of ambiguity), highlighting the fact that meanings associated with GM are still contested. This is a strategic use of ambiguity, described similarly by Eisenberg (1984), Conrad and McIntush (2003), Conrad and Poole (2002), and Leitch and Davenport (2002) as a way of managing multiple or conflicting organisational meanings. For the dairy industry, strategic ambiguity in relation to biotechnology allows it to position persuasive arguments differently for different audiences in its attempts to gain support for its GM policy.

The booklet designed primarily for dairy industry marketers sets out to “provide basic explanations of key terms and issues associated with biotechnology” (NZDB, 2000b, p. 2). It positions biotechnology as “nothing new” (NZDB, 2000b, p. 4), and as a *continuum* of practices, with GM positioned at the most recent end of that continuum: “Modern biotechnology is a progression from age-old practices such as cheesemaking, brewing, and selective breeding” (NZDB, 2000b, p. 3). By association with familiar and accepted biotechnologies, GM is rhetorically presented in a way that is reassuring to the marketers, whose task is to reassure international customers of the safety and benefits of GM products. However, in the introduction, biotechnology is again conflated with GM, by constructing biotechnology as *controversial*: “[The booklet] describes the latest developments in the field; [and] summarises the most commonly-voiced arguments for and against biotechnology” (NZDB, 2000b, p. 2). Indeed, the definitions and explanations of key terms in the booklet are persuasive. For example:

Genetic modification (GM) enables the genetic material of cells to be altered so that they can produce new substances, perform new functions or perform existing functions better or differently. (NZDB, 2000b, p. 3-6)

In following text, this booklet focuses specifically on the advantages of GM, positioning them as “better”, “modern”, “exciting”, “challenging”, “more precise”, “dependable”, or “fastest”.

The booklet written by Juliet Maclean also uses terms in ambiguous ways. Maclean similarly positions biotechnology as both “not new” and “new”:
“Biotechnology itself is not new but for many farmers it is a new way of thinking”; and as a “revolution” but with ambiguous benefits: “The biotechnology revolution offers us options for a healthy farming future” (Maclean, 2001, p. 3). It is unclear whether “healthy” refers to economic profits, physical health benefits for animals, product outcomes with human health benefits, or a healthy environment. This rhetorical ambiguity forces the reader to make the interpretation. ‘Biotechnology’ is also first positioned reassuringly as part of familiar, established New Zealand farming practice:

Biotechnology is already part of life in New Zealand. Much of the knowledge and technology that our primary industries use to produce, farm, harvest and process our products comes from biotechnology. (Maclean, 2001, p. 7)

Yet, later the term ‘biotechnology’ is conflated specifically with GM in the context of its contested safety, for example:

Research shows biotech crops are safe to feed livestock and have no impact on the resulting milk, meat or eggs . . . Biotechnology is already huge! 2001 – 56 million hectares in GM crops globally.” (Maclean, 2001, p. 8)

The figures demonstrating the extent to which GM has been adopted are intended to further reassure farmers that the widespread use of ‘new biotechnology’ is an indication of its safety.

In contrast, the NZDB booklet aimed specifically at dairy farmers gives no initial definition of biotechnology, and no initial references are made to a continuum of technologies involving earlier traditional practices. From the outset, biotechnology is conflated with genetic technologies, yet only one of these is specifically identified as “gene modification”. Five levels of ‘biotechnology’ are described: gene selection, altering genes within species (gene modification), moving genes within species (isogenics), moving genes between species (transgenics), and cloning. This distinction between different types of genetic technology seems designed to position

the outcomes positively. Under each heading, the explanation of the process is given in the context of its application in the dairy industry, and in two cases this is followed by an example of how this technology might be beneficial to human health: in the reduction of breast and prostate cancer, and in improving cardiac health (NZDB, 2000b, pp. 8-10). GM benefits are then presented in terms of both self-interest, for farmers, and altruism, for public health.

There are some discrepancies then both between documents and within documents in the ways in which biotechnology and GM are presented by the dairy industry. 'Biotechnology' is used strategically and ambiguously in place of 'GM' as a less controversial term to simultaneously position the dairy industry as both familiar and traditional, and innovative and competitive. The term 'biotechnology' is used to articulate GM (and by association, the dairy industry) with less controversial agricultural technologies to facilitate stakeholder identification with reassuringly familiar and traditional aspects of the dairy industry. This exists in tension, however, with the representation of 'biotechnology' and 'GM' as revolutionary. Depending on the stakeholders targeted, different identities for the dairy industry, and different constructions of GM, are foregrounded.

If language is viewed as symbolic action and having a constitutive role in ordering our world (Burke, 1966, 1973; Cheney, 1991; Heracleous 2004), then the social construction of particular meanings through language can provide an indication of the intentions of the social actor. The resulting rhetoric is an attempt by the rhetor to appeal to others to identify with these particular meanings.

Organisational rhetoric then involves the management of multiple identifications (Cheney, 1991) and, as Eisenberg (1984), Conrad and McIntush (2003), and Leitch and Davenport (2002) argued, strategic ambiguity in this instance is an attempt to manage conflicting meanings about GM, and multiple identities for the dairy industry, to attain multiple and conflicting goals. The dairy industry rhetoric involves strategic communication designed to foster multiple interpretations of messages about GM to manage the contested nature of the associated science and technology,

and to achieve a correspondence between industry intentions and the interpretations of stakeholders.

In contrast, the dairy industry rhetorical positioning on GM draws on specific discourses of science which inform particular *prescriptive* understandings of risk assessment and risk management.

The Rationality of Science and Understandings of Risk

As Simon (1976) argued, it is difficult to separate facts from values; organisational values provide the frame of reference for decision premises, and the contexts for decisions can change as discursive conditions change. The rationality or 'logic of action' (Karpik, 1978) for decision-making conferred by the symbolic systems privileged by an organisation will determine the processes of decision-making, the means by which decisions are implemented, and the ends or goals which are envisaged (Albrow, 1987; Hindess, 1987; Simon, 1976). When organisations attempt to separate moral values from rationality, they take an instrumental approach to decision-making which emphasises the logic of prediction and control—a purposive rationality (Giddens, 1972). Western societies, for example, tend to privilege technical, functional, individualist rationalities (Cheney, Christensen, Zorn & Ganesh, 2004).

Edelman (1995) argued that the values associated with particular goals are then assumed; the particular rationality favoured is used to suggest that there are unambiguous or uncontested goals, when in fact the claims presented are designed to perpetuate particular perspectives, and maintain the power of an elite group. Indeed Douglas (1986) suggested that institutions to a large extent determine how we think, our knowledge, and our conceptions of what is 'natural,' in the sense of what is justice, what is rational, what we choose to focus on, and what we consider to be reasonable and logical. Rationality is then culturally determined (Cheney, Christensen, Zorn & Ganesh, 2004; Douglas, 1986). This means that we may not be convinced by any form of reasoned argument if it is counter to the ways in which our major institutions have classified or recognised knowledge for us.

A particular science rationality as a logic for decision making is evident in dairy industry positioning on GM. As discussed in Chapter Three, technical/scientific perspectives have been extensively critiqued for assuming that science is neutral, and failing to recognise that scientific discourses are themselves political in a debate sometimes termed ‘the science wars’ (Brown, 2001; Kitcher, 2001; Latour, 1993, 2004; Nelkin, 1984, 1995; Segerstrale, 2000; Wa Mwachofi, 1998). Brown (2001) noted that it is the *objectivity* of science that is contested; in contrast to social constructionist or postmodern science perspectives, technical science perspectives assume that facts about reality can be objectively deduced from empirical evidence.

Technical science perspectives are privileged by the dairy industry in their GM positioning. Environmental and ecological discourses that highlight ethical, cultural, and social issues (see, for example, Bookchin, 1995; Jagtenberg & McKie, 1997; Latour, 2004; Merchant, 1992, 2003) are not significantly represented; although, such acknowledgement of other perspectives would better reflect New Zealand’s complex cultural identity. Indeed, there is little recognition that the uncertainties and risks associated with GM are legitimately contested even at a scientific level, as found by Scott and Carr (2003).

The sections in the NZDB submission which relate to *Evidence and Level of Uncertainty* (Section B (b)) and to *Risks and Benefits of Use or Avoidance* (Section B (c)), dismiss ethical, cultural, and political concerns specifically because they are not scientifically based. For example:

Many of the *alleged* uncertainties of GM which are often raised by opponents of GM are not *soundly based upon science*. Rather, much of the opposition to GM in agriculture springs from a complex mix of cultural, ethical and political concerns. [emphasis added] (NZDB, 2000a, Section B, (b), 16.1, p. 24)

Such concerns are positioned as distorting the issues, for example, “Cultural, ethical and other concerns should be recognised, but not allowed to distort the risk assessment process” (NZDB, 2000a, Section B, (c), p. 25). This is consistent with continuing attempts to keep science and political society separate, a position which is critiqued by Latour (2004). This privileging of scientific perspectives thus constructs legitimate decision-making about GM as controlled by science experts and science

institutions, and marginalises the values of all other interest groups. It begs the question, what process should be assigned to address such concerns? Interestingly, Harvey (2004) suggested that technical and political or ethical issues should be separated but *concurrent* in GM decision-making, to avoid other groups being out-manoeuvred by scientists.

The New Zealand Government established a Bioethics Council (Toi te Taiao) in December 2002 to advise on cultural, ethical, and social issues associated with biotechnology but this has no decision-making powers. This continued separation of technical and socio-political issues associated with GM is increasingly problematic in New Zealand, a bi-cultural nation. ERMA is the regulatory agency designated to make decisions about applications for the commercial release of GMOs but has been extensively critiqued for failing to address Maori and other cultural perspectives of risk (Roberts, Benton, Satterfield & Benton, 2004).

As Wynne (1992) and Douglas and Wildavsky (1982) pointed out, social meanings about risk result from cultural and organisational biases. A number of adjectives describing the assessment of risk and uncertainty in the NZDB submission assume the legitimacy of a technical science perspective; for example:

The *proper* approach to the uncertainties involved in any new technology or scientific discovery is to research the possible known consequences, and to assess the risk of possible unforeseen consequences, by proper scientific methodology . . . the risks need to be *properly* assessed and managed. (NZDB, 2000a, Section 16.3, p. 24, emphasis added)

Here, the use of the word “proper” relies on the underlying scientific assumptions made by the NZDB for an understanding of the judgement intended.

In a more detailed discussion of risk assessment, the NZDB submission identifies ‘proper’ scientific principles as scientific method involving the replicability of results, and publication by peer review, leading to the quantification of benefits and risks. This again draws on scientific discourses that privilege technical assessments of risk (Burke, 2004; Tait, 2001; Wilkins, 2001). However, Adam, Beck and van Loon (2000), Beck (1992), Ho (1999), and Perrow (1984) suggested that modern risk involves uncertainty in a way that requires us to reflexively address cultural and ethical concerns, because a logic of control can no longer be applied in a

post-industrial society, when outcomes cannot be envisaged or predicted, and it is unlikely that results will be consistently replicable or quantifiable. The implications of this are considerable. For example, lay publics increasingly critique the assessments of risk privileged by technical experts (Beck, 1992), and it becomes impossible to insure against GM risks (see New Zealand Law Commission, 2002; Berry, 2003) with consequent issues of liability for compensation if damage does occur.

When other scientific or non-scientific approaches to GM are mentioned in dairy industry documents, they are frequently dismissed as myth or referred to as not being 'sound science.' In the GM media statement issued in September 2001, Fonterra makes no attempt to discuss or explain the scientific processes and risks involved in such technologies. However, words which again have ambiguous meanings, like "responsible," "soundly-based" and "realistic" indicate, as in the submission, that a technical/scientific perspective is taken-for-granted. For example:

We must ensure that the *responsible* use of genetic modification is permitted . . . The regulatory systems need to recognise *soundly-based* public concerns, manage risks, and be *realistic*, cost-effective and timely. (Fonterra, 2001, September 14, emphasis added)

In addition, this comment implies that regulatory systems (such as ERMA) should be based on scientific risk assessments, to avoid expensive and time-consuming public hearings which add to the costs of scientific research and development. Similar concerns have been voiced by other New Zealand scientists and resulted in at least one project being taken off-shore (Beston, 2001).

Similar assumptions are also quite explicit in the second media statement issued after the extension of the moratorium, commenting that "restrictions on commercial release are not scientifically justified" (Fonterra, 2001, October 30). This perspective implies that science needs less regulation than that preferred by the public and Government, that science-based research can be assumed to be responsible and self-monitoring, that public fears are irrational and unfounded. It is again consistent with a neo-liberal/public choice approach to the role of the State in

public policy decision-making, which argues for business/scientific autonomy, with no regulation by government (Dalziel, 2003; Kelsey, 1996; Tenbenschel, 2003).

The NZDB submission argues for an objective, science-based assessment of the risks, but in the same section paradoxically acknowledges that there may be “bias arising from the source of funding, the interests of the researcher, and other factors” (NZDB, 2000a, Section B, (c), 17.4, p. 26), which must equally affect science-based assessments. A number of different factors are acknowledged to affect the perception of risk; for example:

Whether the risks affect children or adults; whether they are accepted voluntarily or imposed . . . These sometimes unstated perceptions are allowed to influence the perception of risk, so as to make an objective, science-based assessment more difficult, if not impossible. (NZDB, 2000a, Section B, (c), 17.6, p. 26)

Surprisingly, this seems to negate the privileging of objective scientific perspectives. This ambivalence in the submission, regarding which science and which scientists are privileged to properly assess GM risks, indicates that the dairy industry is *aware* of the contested nature of risk assessment and risk management. Yet, the continued *assumption* that pro-GM scientists with technical science perspectives should be privileged simultaneously denies the political nature of their own rhetoric. As Aune (2001) commented, this is typical of realist rhetoric drawing on public choice theory, like, for example, that associated with neo-liberal free-market rationality.

The information booklet for primary producers by Maclean, however, privileges a pro-GM deterministic scientific perspective, which assumes positive outcomes for GM unequivocally. (For other examples of GM determinism, see Davis, 1991; Enriquez & Goldberg, 2000; Mannion, 1999; Oram, 2000). For example, under the heading *Applications of this Science*, Maclean talks about “exciting possibilities” and “will revolutionise the efficiency and accuracy of our herd and sire replacement policy” (Maclean, 2001, p. 7). Under the heading *Consumer Acceptance*, resistance to GM is marginalised by discounting both the research quoted and consumer concerns as the result of unreliable and emotional reporting:

It is difficult to accurately gauge levels of consumer concern as research results and media coverage are frequently biased and taken out of context. Vocal minorities with

various political and personal agendas often evoke public fear by using emotional rather than scientifically backed arguments. (Maclean, 2001, p. 10)

Maclean again implicitly assumes that scientific arguments have no political or personal agendas behind them and are never biased, taken out of context, or based on emotional arguments. However, recent research clearly demonstrates such bias and, as discussed previously, indicates that the use of such emotional rhetoric by the science community itself has become a standard persuasive tactic in the biotechnology debate (Motion & Weaver, 2005a). Maclean constructs the debate as a contest for the support of consumers rather than a scientific debate:

It is important to understand that retailers and lobbyists acting to prevent the use of biotech crops in animal feeds are doing so as a response to perceived consumer resistance rather than assessments of sound scientific evidence. (Maclean, 2001, p. 11)

As discussed above, it is evident that the dairy industry privileges technical/scientific perspectives of GM and assumes that if their audiences and publics had more scientific information, and understood the science, they would support GM. This draws on a 'deficit model' of scientific understanding that assumes lay publics do not understand the scientific 'facts' (see Irwin & Wynne, 1996). As discussed previously, this belief is not supported by current research, which indicates that attitudes to science, biotechnology, or GM are more likely to be influenced by the level of trust which publics place in science, than by the level of understanding or knowledge (Frewer, Howard, Hedderley & Shepherd, 1999; Irani, Sinclair & O'Malley, 2002; James, 2003; Hornig-Priest, 1995, 2001; Wynne, 1992, 1996).

The scientific rationality evident in the dairy industry GM rhetoric thus has an assumed legitimacy that reflects Western conceptualisations of science and technology. As Latour (2004) argued, the hegemony of science is represented as being beyond critique, and as Cheney (2004) has commented in relation to the free-market, in this sense, science can be considered to be amoral, to be the guardian of its own ethical standards. This means that the dairy industry uses a technical/scientific rationality in an attempt to legitimate its policy on GM by linking it with the existing assumed legitimacy of Western science. The industry thus attempts to construct its GM policy as value-free and beyond critique.

The market and scientific rationalities drawn on by the dairy industry are used to justify *why* New Zealand should support GM. The NZDB submission also argues *how* the policy should be implemented, including extensive discussion of the preferred supporting legislation and regulatory environment.

Legislation and the Regulatory Environment: The Need for Control

The NZDB submission focuses considerable attention on the regulation of new biotechnologies, but the regulatory environment is barely mentioned in the other documents analysed. This indicates that arguments related to this particular issue are strategically aimed at policy makers—the Commissioners who will make recommendations to the Government, and the Government itself. The NZDB submission is positioned as an expert opinion on legislative and regulatory issues associated with GM.

The NZDB consistently represents GM risks as able to be managed through legislation and regulation. As discussed in the previous section, this reflects a technical approach to risk assessment (Burke, 2004; Tait, 2001; Wilkins, 2001) and an understanding of the natural world as predictable, and able to be controlled (Giddens, 1972; Latour, 2004). However, rather than presenting extensive arguments that represent GM risk as minimal, or GM practices as safe, the NZDB highlights the potential *negative* outcomes of making the regulatory environment more stringent. The NZDB therefore avoids going ‘head-to-head’ with those arguing against GM by avoiding defining the specific nature and scope of the risks involved. It marginalises GM risks simply by omitting their detailed discussion.

The NZDB firstly argues that New Zealand legislation cannot afford to be different from that of other countries, if the dairy industry identity as a global dairy producer is to be retained. A particularly stringent regulatory system, it is argued, would further disadvantage the New Zealand dairy industry, and the nation itself, in its bid to compete in global markets. GM risks, and public concerns about risk, are briefly acknowledged, but risk is given an economic context as an “opportunity cost”:

The regulatory systems in place to address these concerns and risks need to be appropriate, timely and cost-effective, recognising particularly the opportunity costs which will be imposed by a regulatory system which is out of line with those of comparable countries. (NZDB, 2000a, Section S7, p. 3)

“Appropriate” in this context is represented as *not* risking the loss of economic opportunities considered to be potential outcomes of GM. The terms “timely” and cost-effective” are consistent with rational choice theory (Albrow, 1987; Aune, 2001), and highlight the industry’s neo-liberal perspective, emphasising efficiency as the means to successful participation in a free-market. In the closing submissions, this argument is made particularly forcefully in quite threatening terms:

The agricultural industries are virtually unanimous in predicting very large opportunity costs if there is put in place a regulatory regime for GMOs which unduly restricts the use of GMOs in agriculture. It is submitted that New Zealand would ignore those predictions at its peril. (NZDB, 2000a, Closing submission Section 3.14, p. 11)

Here, the disadvantages to the dairy industry are represented as *dire* disadvantages to New Zealand.

The case for being comparable to other nations is given further weight by arguments that position New Zealand as having international legal *obligations* in terms of its membership of the WTO and existing food regulatory authorities such as FSANZ. The NZDB argues that New Zealand cannot afford to breach WTO trade agreements by being seen to create barriers to trade. A similar argument advanced by the USA in response to the cautious stance on GM taken by New Zealand and the European Community has created considerable controversy (Beston, 2003; James, 2000). It seems that there may be ongoing international debate regarding the incompatibility of agreements such as the Cartagena Protocol on Biosafety, recommending, for example, the ‘precautionary principle,’ with other economic agreements such as those instituted by the WTO (see Muller, 2004).

The NZDB makes no references to other United Nations agreements where New Zealand’s credibility and international reputation might be considered to be at risk if it *pursues* GM, such as those concerning the rights of indigenous peoples and environmental issues, for example, the Mataatua Declaration (Commission on Human Rights, 1993) and the Cartagena Protocol (Convention on Biological

Diversity, 2000). The dairy industry's and New Zealand's identity as an economic trading partner is privileged over its identity as a participant in international debate on human rights issues or environmental issues of global concern.

In the NZDB submission, other organisations' investigations and reports on GM issues are selectively quoted in support of arguments in favour of GM. A report by the US Congress Committee on Science (2000) in relation to plant biotechnology is extensively quoted, yet the 'precautionary principle' advocated by the United Nations Rio Declaration on Environment and Development (1992) is authoritatively challenged and reinterpreted:

This principle is sometimes misapplied as imposing an onus on those conducting an activity to negate the possibility of a serious threat, that is, to prove affirmatively that the activity is not harmful. The latter approach is wrong. Before the precautionary principle can be invoked, there must be some proper scientific evidence of a threat which meets the definition in *Daubert v Merrell Dow Pharmaceuticals Inc.* (NZDB, 2000a, Sections 64.20, 64.21, p. 81)

Here, the use of the word "wrong" is particularly prescriptive. The NZDB thus constructs risk assessment within a scientific and legislative framework, and favours a selective regulatory approach to decision making about GM.

The NZDB also argues that New Zealand's membership of the Codex Alimentarius Commission and its credibility in the context of international food regulations might be undermined if the New Zealand Government does not explicitly endorse its participation in such international forums by maintaining a regulatory environment similar to that of other participating countries. For example, the NZDB submission comments:

New Zealand has considerable influence, directly and indirectly, on both the policies that apply internationally to food trade and the content of international standards. New Zealand's success and reputation as an exporter and its level of influence internationally in regulatory matters belie its size. (NZDB, 2000a, Section 55.1, p. 66)

This implies that if New Zealand does not adopt the NZDB's recommendations on legislation and regulatory systems, it will be risking its international credibility both as a regulator and as a trading nation.

The extent of the NZDB's preoccupation with GM legislation and regulatory systems is further evident in a *separate* legal submission made to the Royal

Commission, which repeated the arguments in the main submission, but in more detail. In addition, four full pages of Yeabsley's (2000) witness brief are devoted to explaining the fundamental principles on which a successful regulatory regime should be based. His recommendations focus on the different types of regulation needed for different objectives and he clearly separates "technical/scientific issues, environmental issues, cultural and ethical issues, other social issues, and economic issues" (Yeabsley, 2000, p. 23). He acknowledges that environmental, cultural and ethical, and other social issues require wide public participation, but he makes no attempt to specify the processes for discussing these. Yeabsley presents an economic rationality as the most appropriate underpinning for the regulatory framework. His credibility and authority as an expert witness rely on his position as an economist, and his detailed discussion focuses on a cost/benefit analysis in economic terms.

Yeabsley's (2000) witness brief, the NZDB main submission, and the NZDB legal submission privilege linked technical/scientific and economic issues. Their position is itself prescriptive; yet, it represents a prescriptive approach to legislation as inappropriate and excessive. It suggests such an approach will close off future options, and may not develop fast enough to keep pace with technological developments. For example:

Regulation which focuses on clearly identifying standards to be met or outcomes to be achieved, with the methods of achieving this remaining flexible, to be tailored to particular circumstance. This would seem appropriate in the biotechnology context, as a prescriptive approach risks closing off some options, and also risks irrelevancy over time as technology evolves faster than the regulatory environment. (Yeabsley, 2000, 91, p. 24)

GM outcomes are again assumed to be positive, to be uncontested. Yet, interestingly, the ability to keep pace with change may be equally difficult in a technical or regulatory approach to risk management. Conversely, it might be argued that a prescriptive approach ensures that the full implication of technological developments is debated in terms that include environmental, social, cultural, and ethical issues, and their associated value systems.

The dairy industry arguments appear to acknowledge such issues, but simultaneously marginalise them by privileging *objective* science over *subjective*

concerns, and denying the right of non-science groups to a significant voice in the regulatory process; for example:

It is clear that cultural and ethical concerns are legitimately and strongly held by many people. The regulatory process for GMOs must address these concerns, in order to enjoy the level of public confidence which is necessary for any regulatory regime. However, they should not be given disproportionate weight . . . cultural and ethical concerns are essentially subjective, while scientific risks are to a large extent objective . . . scientific risks need to be addressed objectively, and managed by a regulatory process which does not require public input on a case by case basis. (NZDB, 2000a, Section 64, p. 83)

Given such recommendations, it is perhaps unsurprising that there is public concern about the economic, capitalist agendas of science/business interest groups in New Zealand (Henderson & Weaver, 2003; James, 2003) and internationally (Krimsky, 2003).

Interestingly, debate about the appropriate means of controlling GM research and commercial development first occurred soon after the discovery of the nature of DNA by Crick and Watson. The Asilomar Conference in 1975 proposed an international moratorium on the new technology for a period of two years while these same issues were debated. Following the discussion, the US National Institutes of Health published a document called *Guidelines for Recombinant DNA* which remains the base document for the regulation of molecular biology and GM in most countries.

However, in the USA, such regulation has never been incorporated into statute, so these remain merely *guidelines* that are followed by funding agencies. The resulting free-market approach results in a purely *outcome*-based regulatory environment in the USA, so that scientists are given much more freedom to determine for themselves what scientific and technological research is undertaken, and the conditions under which development occurs. In the USA, it is only when technologies reach the point of being released commercially that regulations are imposed.

Other countries, for example in Europe, have a more cautious and more prescriptive approach, with legislation controlling the conditions of the research environment, controlling the *process* of the research from the point of application, through development, to the final outcome. This may explain why, as other research

has shown, the US public appears to be more accepting of GM technologies (see Anderson & Jackson, 2003; Moon & Balasubramanian, 2001; Tait, 2001).

In the USA, ongoing opportunity for public involvement in debating research issues occurs at the level of each research institution and the research does not become more widely publicised until outcomes have eventuated (personal conversation, Paul Atkinson, Research Director, AgResearch, January 23, 2003). The US public now has a tradition of some 30 years of being less involved in discussion about wider environmental, cultural, ethical, and social issues associated with new technologies at a national level than, for example, their European counterparts. Certainly, in New Zealand there is a strong preference expressed by many research scientists for a regulatory environment similar to that in the USA which gives scientists more control over the research environment up until the stage of release (personal conversation, Paul Atkinson, Research Director, AgResearch, January 23, 2003).

The legislative and regulatory issues discussed at such length in the NZDB submission are mentioned little in the other dairy industry documents analysed. In general, however, the position expressed is consistent with that in the submission. The NZDB booklet for farmers has a page headed "Safety Assurance" (NZDB, 2000b, p. 13) which refers to ERMA and the Royal Commission as being authorities that have been set up to manage food safety and consumer concerns, respectively (although arguably this was not the function of the Royal Commission). The NZDB booklet for dairy industry marketing and operational personnel simply has a page on "Labelling of genetically modified foods" (NZDB, 2000a, p. 9) which describes the three categories for GM foods which have been included in labelling regimes that have been set up in various countries. In each case, the reference to legislation and regulation is mentioned only in the context of the interest of the likely target audience. It is designed to pre-empt possible questions from those audiences, rather than being an integral part of the position expressed on GM.

In its submission to the Royal Commission, the NZDB also argues in detail against an extension of the voluntary moratorium on the release and field testing of

GMOs, against the introduction of labelling of GM foods, and argues that existing liability laws are adequate. The NZDB consistently represents GM risks as able to be managed through legislation and regulation. It constructs risk assessment within a scientific and legislative framework, and favours a selective regulatory approach to decision making about GM. It privileges *objective* science over *subjective* moral and ethical concerns about risk, and denies the right of non-science groups to a significant voice in the regulatory process. Very specific positions are thus identified on the future legislative and regulatory operating environment for GM, reflecting the private interests of the dairy industry.

In the next section, it is evident that the dairy industry positioning of consumer concerns is somewhat ambivalent, and that dairy industry interests again tend to be privileged.

The Positioning of General Consumer and Specific Maori Concerns

In contrast to the kiwifruit industry, the market focus of the dairy industry highlights the significance of the corporate identity and corporate reputation of the industry in relation to GM issues, as opposed to the brand identity perceived by consumers. The focus is less on GM *products*, than on GM *capability*.

Little effort is made to counter consumer concerns directly, and consumer issues are not addressed in detail in dairy industry documents commenting on GM. This is despite the prevalence of pro-GM discourses which argue that GM will feed the world's hungry (Braun, 2002; Conway & Toeniessen, 1999; Johnston, 1999; Nash, 2000; Paarlberg, 2000), provide medical benefits (Berridge, 2000; Braun, 2002; Elliot, 2000; Katan & de Roos, 2004), and result in lower use of pesticides and longer shelf-life for foods (Conner, 2000; Conway & Toeniessen, 1999; Hazelhurst, 2003; Krueger, 2001; Watson, 2000). Health benefits, are mentioned but not prioritised as arguments in favour of ongoing GM research and development. Similarly, issues of food safety, which, as discussed previously, are a prime public concern in New Zealand and internationally, are rarely mentioned. They are simply assumed to be negligible and manageable.

Where they are represented, consumer issues are discussed from the perspective of the dairy industry. For example, the labelling of GM foods is dismissed as unnecessary, probably because the introduction of extensive labelling regulations by New Zealand, or by countries to whom New Zealand exports, might result in considerable costs for the industry.

In the NZDB booklet aimed at dairy industry marketers and operational personnel, however, consumer concerns about food safety and the environment are acknowledged, since this booklet is intended to assist marketers to allay the fears of consumers and customers about GM. On this occasion, consumer concerns are given status even when they are not scientifically-based concerns:

Because biotechnology is dealing with basic processes of life, it raises fundamental ethical concerns . . . Even when it may appear there is no scientific or factual basis for such concerns, they cannot be ignored . . . a rigorous approach to food safety issues—coupled with a real commitment to environmental and social responsibility—is required if the potential benefits of biotechnology are to be realised. (NZDB, 2001b, p. 4)

The references to “a rigorous approach to food safety” and “environmental and social responsibility” indicate awareness of the risk and sustainability discourses underpinning consumer concerns. It is strategically important that marketing personnel, who deal directly with customers and consumers, accept such concerns, and then give assurances of the safety of GM, to accurately and reassuringly handle consumer questions about dairy industry policy.

In contrast, Maclean’s booklet for farmers gives a wide-ranging overview of multiple GM issues, including consumer acceptance of GM. In this respect, it is less strategically targeted at particular audiences than the dairy industry’s own documents. For example, Maclean defines consumer acceptance as influenced by “perception of risks and benefits, level of knowledge, and trust” (Maclean, 2001, p. 10). She acknowledges that consumers do not see benefits to themselves in data showing savings to farmers and profits for multinationals. She argues that “Biotech crops” will be safe to use as feed for livestock, that there are no “detrimental impacts” (Maclean, 2001, p. 11), but does not list any actual advantages to either farmers or consumers.

Maclean's concluding remark demonstrates that she is responding to consumer concerns, but at a level that belittles consumers' understanding about GM: "Your roast Tegel chicken will be absolutely no different whether it has had a genetically enhanced diet or not" (Maclean, 2001, p. 11). In fact, since December 2001, in response to consumer concerns, Tegel has publicly stated that none of its products are GM, and neither are they fed GM feed products (Tegel Limited, 2005).

Yet, Maclean recognises the ultimate buying power of the consumer: "The consumer ultimately is the King," and calls for dialogue about GM:

To reach their potential, new biotech innovations must be accepted by each link in the food production chain. Open, accurate dialogue between all parties will help correct misinformation, generate trust and encourage informed decision making based upon sound science rather than distortion. (Maclean, 2001, p. 10)

However, the references to "correct misinformation," "sound science," and "distortion" are not consistent with current conceptualisations of dialogue (see Issacs, 1999; Tannen, 1998), and again privilege science-based perspectives.

Maori concerns about GM, like consumer concerns, are not foregrounded in dairy industry positioning on GM. Despite the fact that New Zealand is a bicultural nation, with the rights of both Maori and Pakeha (New Zealand Europeans) equal in law (Waitangi Tribunal, 2005), the dairy industry GM positioning makes only brief reference to Maori spiritual and cultural concerns, perhaps in token recognition of the need under law to acknowledge responsibilities with respect to the Treaty of Waitangi. The summary of the NZDB's brief discussion in the submission reads:

- The Crown's responsibilities under the Treaty are acknowledged in respect of GM
- Maori spiritual and cultural concerns over GM are entitled to equal weight with those of other groups in society.
- There are no Treaty rights in respect of the genome or the germoplasm of any species. (NZDB, 2000a, Section B, (g), p.46)

However, Pakeha values are by default privileged, since there is no recognition that Maori cultural values might require different consultation processes; these take considerable time, for example, and require extensive participation by each iwi (tribal group) (see, for example, Greensill, 1999). As in other sections of the dairy industry submission, the terms used assume a particular perspective. For example:

What is required of this Commission is to address the issue of what regulatory procedures and processes are necessary to ensure that due cognisance is taken of Treaty issues, and that there is *appropriate* consultation with Maori, when particular applications of GM technology are under consideration. It is important that the processes which are used to recognise and address Maori cultural issues do not create *undue delay, cost, or uncertainty*. (NZDB, 2000a, Section B, (g), 36.1, 36.2, p. 48, emphasis added)

Here, the term “appropriate” implies that consultation with Maori should not impede an application for GM research in a way that might disadvantage the *applicant*, for example, the dairy industry.

Unlike in the kiwifruit industry positioning on GM, issues of individual or consumer *choice* are rarely mentioned. In the closing submission to the Royal Commission, there is only a brief reference to individual choice, through comment that farmers have the right to farming practices involving GM, as well as organic farming practices:

A regulatory regime which restricted the farming practices of the majority of farmers because of the needs of a small number of farmers is not, it is submitted, justified on public policy grounds. (NZDB, 2000a, Closing submission, p. 13)

It is evident that the dairy industry positioning on GM does not foreground consumer or Maori issues. However, issues of consumer choice were emphasised more in the research interviews and focus groups conducted with dairy industry members in 2002-2004, some time after the submissions to the Commission and the initial expression of the industry GM position. This suggests that, over the timeframe of this research, the dairy industry has had to give increasing weight to consumer concerns, and recognise that these have been vociferously debated in New Zealand (see, for example, Ashwell & Olsson, 2004; Henderson, 2005; Motion & Weaver, 2005a; Motion & Weaver, 2005b). The dairy industry position of support for GM is *currently* commonly predicated with the proviso that they would never proceed with commercial applications as long as these are of concern to consumers.

The dairy industry GM policy argues that research and development of commercial GM products is crucial, both for the future economic success of New Zealand and the continuing success of the dairy industry as a global competitor in international markets. The GM policy is thus rhetorically constructed in terms that are market-driven. This positioning draws on technical/scientific perspectives of risk

and favours a regulatory environment that selectively privileges the voices of scientific experts. It uses ambiguous representations of 'biotechnology' and 'GM' to position GM in ways that will be accepted by diverse stakeholders. In contrast to the kiwifruit industry, however, consumer perceptions of GM are somewhat marginalised, in the privileging of the corporate perspective of the dairy industry.

Conclusion: Similarity and Difference in the Kiwifruit and Dairy

Industry Policies on GM

There are both similarities and differences in the kiwifruit and dairy industry positions on GM. Both industries are market-driven and privilege economic perspectives of GM issues, presenting the private benefits for the industry as in the public interest, in terms of the significant economic value which each industry contributes to the overall New Zealand economy.

Edelman (1995) argued that words like 'public interest', 'rationality' and 'efficiency' are not scientific or technical terms. They suggest that there is an unambiguous goal, when that is rarely the case. Such terms, Edelman commented, make controversial assumptions whose meanings change according to the values and ideologies of their users. This means that, particularly when decisions are contested or confused, policy is created "to transform . . . self-serving inclinations into justifications imbued with patriotism, altruism, logic, or fashionable ideology (Edelman, 1995 p. 412). In this sense, 'in the public interest' may additionally mean a need for information and public knowledge (Edelman, 1995; Weaver & Motion, 2002) or the means to voice public discontent (Rogers-Hayden & Hindmarsh, 2002). As Krimsky (2003) commented, a *critical* public interest perspective "requires people who are able and willing to speak out candidly and critically" (p. 224) about the environmental, political, economic, and socio-cultural impacts of the industrialisation of science.

Within the market rhetoric of each industry, it is clear that different market rationalities are constructed, drawing on different discourses and different symbolic systems of values and value-premises which reflect particular aspects of each

industry's identity. As an established leader in international markets, the kiwifruit industry focus is to maintain this position, and to maintain the existing trust and allegiance conferred by their international customers and end-consumers. The strength of the kiwifruit industry has arguably been facilitated by the emergence of a single-desk approach to marketing kiwifruit, and the very successful strategies of the industry marketing organisation, ZESPRI International (Webby, 2004). For these reasons, the market rationality associated with the kiwifruit industry GM positioning privileges the concerns of international customers and consumers, and the industry seeks to protect its *brand* identity. Since concerns draw significantly on risk discourses associated with the environment and food safety, these discourses are clearly evident within the rhetorical positioning of the industry. In fact as will be seen in Chapter Six, the brand identity for the kiwifruit industry is built strongly around environmental values associated with 'natural' and New Zealand's 'clean, green' image.

In contrast, the New Zealand dairy industry, although a strong competitor in the global dairy industry, is increasingly threatened by other international dairy producers which are able to compete with New Zealand dairy products on the basis of price. The New Zealand dairy industry advantage has been based on efficiencies of production developed through sophisticated scientific breeding and pasture management and the efficient technical manufacture of commodity milk products. It is the technical basis for, and identity of, the industry which is threatened, its *corporate reputation*, and the importance of reputation to biotechnology companies has been recognised elsewhere (Grupp & Gaines-Ross, 2002; Gurau & McLaren, 2003; Moon & Piper, 2001). The possibility that other nations might compete with the New Zealand dairy industry on the basis of new GM technologies results in a market rationality that draws on science and technology discourses favouring GM, and privileges its *corporate* identity as a producer in competition with other international dairy producers.

Interestingly, the kiwifruit industry would entertain the possibility of using GM should consumer opinion change, and there is increasing evidence that the dairy

industry is unable to proceed with the adoption of GM at the pace it initially recommended. Recent research suggests that consumers are still risk-averse to GM products (Gaskell, Allum, Wagner, Kronberger, Torgersen, Hampel & Bardes, 2004; Rowe, 2004). So, on a pragmatic level, the two industries are equally reliant on consumer support.

Significantly, the rhetorical positioning of the two industries highlights different perspectives of time; the kiwifruit industry advocates caution until research results are more understood—a *consumer* timeframe—while the dairy industry positions research and development timeframes as urgent and a ‘race’—a *production* timeframe. ZESPRI Innovation claimed that GM represented no scientific advantage to the industry, in terms of new cultivars, because of the long-term, perennial nature of the crop; for example:

You know, I can't see a benefit, because we are dealing with a perennial crop . . . With a perennial crop it's a much more long-term changeover and you have to be far more conscious . . . that any decision you make to change has a far greater impact. (Innovation spokesperson E)

The perennial nature of kiwifruit production means there is considerable long-term financial investment in the kiwifruit vines, but this is comparable perhaps to that of investing in breeding superior dairy cattle. Yet, the timeframe suggested by the kiwifruit industry (personal conversation, Nigel Banks, ZESPRI Research director, August 30, 2002) to develop new research initiatives through traditional means—5-15 years—is less than that suggested as the timeframe for GM research to impact commercially on the dairy industry—20 years (personal conversation, Kevin Marshall, CEO ViaLactia, September 6, 2002). Conventional breeding programmes and GM then are constructed by the kiwifruit industry and the dairy industry, respectively, as relatively similar long-term investments, yet the dairy industry rhetorically constructed the research timeframe as a *race*, emphasising the urgency of the timeframe as if it were of short duration, while the kiwifruit industry constructed the timeframe as *long-term* in its advocacy of caution. As Adam (1999) has commented, timescapes of risk are socially constructed.

These two industries also rhetorically position their respective GM policies for different target publics. Attitudes to GM in both New Zealand and the kiwifruit industry's main international markets are generally also cautious about GM. The kiwifruit industry rhetoric is then targeted particularly at Government stakeholders, and at pro-GM interest groups in New Zealand that might *change* public attitudes to be more in favour of GM, in an attempt to influence public policy. Current Government policy clearly privileges innovation and knowledge-based industries that creatively employ new technologies but must also politically reflect the electoral mandate. The dairy industry, however, cannot assume that stakeholders within New Zealand or its international markets hold positive attitudes towards GM. The dairy industry rhetoric is targeted at a wide range of stakeholders, including farmers, marketers, and the New Zealand public, as well as Government and regulatory agencies, both to persuade those who are against GM to change their position, and to reinforce the attitudes of those who are pro-GM.

The kiwifruit industry acknowledges that there may be diverse viewpoints on GM, drawing on multiple value systems, and that its own policy and arguments are not the only valid positions. In contrast, the dairy industry is quite prescriptive, arguing that the only valid position is the perspective that they advocate. The kiwifruit industry demonstrates a position which is closer to the ecological rationality called for by Prasad and Elmes (2005) in relation to environmental issues, while the dairy industry position demonstrates an instrumental rationality drawing on discourses of the 'practical', typical of what these authors call 'environmental management'.

The following chapter, Chapter Six, focuses on the values expressed in the industries' GM policies in terms of the interrelationships between the organisational identities and images held by industry stakeholders.

CHAPTER SIX

THE INTERPLAY OF ORGANISATIONAL IDENTITY AND IMAGE EVIDENT IN INDUSTRY POLICY ON GENETIC MODIFICATION

Introduction

This chapter focuses on aspects of organisational identity—the interrelationships between the organisational values and culture, identities, and images that are represented in the rhetorical positioning of the kiwifruit and dairy industries on GM. It discusses the range of different values and values-related tensions implicit in the industries' GM policies in terms of the organisational identities and images held by stakeholders and publics.

The chapter analyses 'accounts' by industry members of the industry decisions and positions on GM. These are examples of retrospective comment by organisational participants involved in the industry, as they analyse decisions made on the basis of the premises for those decisions (see Tompkins & Cheney, 1983). The 'accounts' were accessed in research interviews and focus groups with kiwifruit and dairy industry members involved in policy development, research, production, manufacture, and communication or marketing. The chapter also refers to the documents examined in Chapter Five; that is both documents *expressing* the industries' brand identity and documents *explaining* the policy on GM. This analysis involves considering the values and identities of different groups within each industry, and aspects of the wider affiliations held by these groups in terms of their identity as New Zealanders and the images held of New Zealand. It involves considering the values and images perceived to be held of the industry in the international marketplace, and the influences of Government policy on the construction of these identities and images.

The primary focus in this study on *identities* underpins my interest in why the dairy industry and the kiwifruit industry, two seemingly similar industry organisations, developed different policies on GM. Both industries are largely

cooperatively owned; they are both primary export industries, which produce significant export income for New Zealand; and both dairy products and kiwifruit have a somewhat iconic status, being seen as representative symbols of New Zealand both nationally and internationally (see, for example, Tourism New Zealand, 2005). This focus on identities also underpins a second interest in whether groups within each industry represent GM policy consistently. The cooperative nature of the organisation of these two industries, and strong export focus, would suggest that there might be a high degree of consensus related to policy decision making, but the rhetorical positioning may be expressed and explained differently by specific groups in each industry reflecting different value-premises and rationalities.

The analysis in this chapter builds on recent re-conceptualisations of organisational identity and image in organisational communication, marketing, and public relations literature (see, for example, Balmer, 2001; Cheney, 2004; Cheney & Christensen, 2001a; Christensen & Cheney, 2005). It explores the proposition that the engagement of organisations with key stakeholders, in relation to specific public issues that have broad socio-political implications, may demonstrate rationalities that are linked to multiple aspects of the organisation's identity.

Organisational Identity and Image: A Process of Dynamic Adaptability

The wide range of meanings associated with organisational identity and image has resulted in a confusing array of terminology, which has proved difficult to synthesise (see, for example, Balmer, 2001). This thesis takes the perspective that organisational identity and image are both dynamic and interrelated, allowing the organisation to be adaptive in times of intense change (Gioia, Schultz, & Corley, 2004). Organisational identity is then both constitutive of organisational culture and image, and constituted by that culture and image (Hatch & Schultz, 2004). In this sense, organisations manage *multiple* identities (Cheney, 1991; Cheney, Christensen, Conrad, & Lair, 2004; Leitch & Motion, 1999; Scott, Corman & Cheney, 1998; Roper, 2005a). Social meanings associated with the identity and image of organisations can be said to be socially constructed, and a rhetorical and discursive

analysis of organisational communication adds to our understanding of these meanings. When organisational members collectively manage the identities and projected images of the organisation, they can be said to be *strategically responsive* (Gioia, Schultz & Corley, 2004), and an organisation's strategic positioning on controversial socio-political issues draws on particular identities in the value-premises for its decision-making and negotiation with the issues. This chapter thus considers the role of *identity* in the interrelationships between the values, identities, and rationalities in the kiwifruit and dairy industry organisational communication about GM. The following section in this chapter considers the management of organisational identity and image from the perspective of the kiwifruit industry.

The Management of Organisational Identity and Image in the Kiwifruit Industry Positioning on GM

This analysis focuses on the 'accounts' of members of the kiwifruit industry based on interviews with ZESPRI Innovation team leaders, ZESPRI International Communication spokespersons, technical advisers at packhouses/suppliers, and a spokesperson from Kiwifruit New Zealand; and four focus group discussions conducted with kiwifruit growers of ZESPRI Organic fruit, ZESPRI Gold fruit, and ZESPRI Green fruit; and growers based in Whangarei. Aspects of the kiwifruit industry identity and image represented on the ZESPRI brand video and ZESPRI System video, and on the ZESPRI website in 2001/2002 are also discussed. The relationships between the different industry groups provide some insights into why an integrated marketing identity has been important to the current success of the industry, and why the industry's GM policy is said to be market-driven.

Interdependent Business Units: An Integrated Marketing Identity

The kiwifruit industry has had a dynamic, adaptive identity (see Gioia, Schultz, & Corley, 2004; Hatch & Schultz, 2004) which has developed over the last 15-20 years in response to a variety of historical contexts that have helped to shape

the industry culture (Webby, 2004). One of the core industry values that underpins current strategies is the importance of international market perceptions—a common starting point (see van Riel, 1995) for a marketing identity.

The industry's business focus and the importance of international market perceptions in determining the 'gate return' for growers are very evident in all communication. For example, the financial and market information that is the focus of the industry newsletter, *Kiwiflier*, was specifically valued by the organic growers' focus group participants and by two of the packhouse technical advisers. In line with this strong business focus, the accounts of all interviewees and focus group participants emphasised that the industry policy on GM is *market* driven. There was concern that any suggestion of industry involvement with GM would have a "serious impact on our sales" (Technical adviser, packhouse/supplier C). The following reference to a "pragmatic marketing decision" summarises the feelings of participants well:

The key driver in ZESPRI's decision is in the acceptability or otherwise of the [GM] technology to our consumers . . . it's a *pragmatic marketing decision* that our consumers don't want it, and if they have it they will be likely to buy less kiwifruit. (Innovation spokesperson D, emphasis added)

Participants indicated a very high level of support for this instrumental marketing focus, which suggests *identification with* (Burke, 1973) the industry's marketing identity. The market approach to GM was universally known, understood, and supported by almost all participants in the research. For example, the GM policy was referred to as a "clear, strong message right from the start . . . everybody knows what it is" (Respondent F, ZESPRI Gold kiwifruit focus group); and "the understanding was there from the beginning" (Respondent C, ZESPRI Organic kiwifruit focus group).

Growers indicated there was a culture of good industry communication, feedback, and consultation through newsletters, 'think tanks' and road shows. For example, "We have a very good system and it's getting better all the time with sub-committees . . . [who] make recommendations . . . to the board" (Respondent C, ZESPRI Green kiwifruit focus group); and "the flow of information is continually

pouring in” (Respondent A, ZESPRI Organic kiwifruit focus group). However, there was little *formal* consultation prior to the development of the GM policy, as will be further discussed in Chapter Seven. Of all the research participants, only one of the Innovation team and one Communication spokesperson were involved in early discussion and preparation of the policy. Industry members interviewed were confident, however, in the industry structure and leadership, and were happy to leave decision making on the issue of GM to the Boards of ZESPRI International and ZESPRI Innovation because of their expertise in marketing and science. The response of the growers to the ZESPRI policy was described, for example, as, “almost a 100% . . . back ZESPRI in their calling for . . . no support of GMO” (Technical adviser, packhouse/supplier A). The following comment is typical of the overall attitude of industry members:

Basically you’re the marketer; you’re responsible for selling the fruit . . . there was acceptance of the position that ZESPRI has adopted at this point. (Kiwifruit New Zealand spokesperson)

There was significant support for the ZESPRI leadership, organisational structures, and initiatives, with comments such as, “A very good team of expertise” (Respondent A, ZESPRI Green kiwifruit focus group); “A proven track record” (Respondent F, ZESPRI Green kiwifruit focus group); “Kiwifruit growers are effectively confident in the strength of their ZESPRI umbrella” (Technical adviser, packhouse/supplier A); and “ZESPRI has the systems in place and has the trust of its customers” (Respondent F, ZESPRI Organic kiwifruit focus group).

As Simon (1976) commented, ethical judgements—which are relevant to the industry position on GM—require intermediate judgements that involve facts, and factual judgements need to be carried out from a position of trust that the ethical decisions will be upheld. Therefore, it is hard to separate policy, and ethical decisions, from administration, and their implementation. The kiwifruit industry members were able to trust their decision-makers to develop the GM policy because the organisation provided excellent channels of communication to facilitate the information flow leading to the decision. When organisational values become

internalised, individuals identify with the organisational values and these provide a frame of reference and the premises for organisational decisions (Simon, 1976).

The strength of the support for the ZESPRI policy on GM suggested very clearly, then, the high level of trust placed by the industry groups interviewed in the effectiveness of the leadership and management by ZESPRI Group Limited. The industry has developed some elements of a hierarchical corporate organisation to manage marketing, research, and administration, but without losing the support and involvement of other significant industry groups: the growers and suppliers. All kiwifruit industry sectors, for example, work together to implement the ZESPRI System, which was highlighted in Chapter Five as contributing to the positioning and identity of the kiwifruit industry through environmentally-friendly pest management, and transparent production systems.

The ZESPRI System: Integrated Production and its Impact on Identity

The importance of the production process is evident in the fact that the integrated, industry-wide system was frequently referred to by name; it has been given its own identity within the ZESPRI corporate and branding identity. The different industry-wide systems that have been introduced by ZESPRI: the KiwiGreen pest management system, and subsequently Taste ZESPRI, and the wider ZESPRI System were described as ‘excellent’ in different interviews and focus groups. Comments from participants in the Whangarei, ZESPRI Organic, and ZESPRI Gold focus groups; and from two of the three packhouse technical advisers, demonstrated that participants were proud of, and identified with, the associated value systems and the role of the ZESPRI Group in implementing these. For example:

In ZESPRI’s case, everything we do is based on the integrity of what we call the ZESPRI System, which is the integrated production and delivery system, which basically means that every single process, from the planting of the seeds through to the marketplace can be documented, and that’s a rite of passage. (Communication spokesperson B)

The phrase “rite of passage” additionally suggests an *expectation* that these values will be endorsed by all industry members; a goal to be aspired to by every industry

member. The distinctiveness of the industry organisation's values and practices then increased the industry members' support for, and identification with, the organisation (see Ashforth & Mael, 2004).

Participants rhetorically positioned the high quality production, packaging, and marketing systems in place within the industry as contributing to the industry's market advantage. For example:

The fruit's in a sense incidental. It's the package that goes around the fruit—that's what sells it, and some of that's the perception of how it's grown, the information on its quality attributes—all of those sorts of things. (Innovation spokesperson E)

However, although supportive of the ZESPRI System and of the marketing focus of the GM policy, all participants spoke of ZESPRI in the third person as if it were separate from them; although, ZESPRI is wholly owned by growers. Participants used the term 'ZESPRI' to refer to ZESPRI International and ZESPRI Innovation as the leadership, executive groups in a hierarchical corporate organisation, rather than using inclusive personal pronouns such as "our executive group" or "we" which might have been expected in a cooperatively owned industry. For example, "*They've* taken a pragmatic approach" (Respondent E, ZESPRI Green kiwifruit focus group, emphasis added); "I support ZESPRI's stance" (Respondent C, ZESPRI Gold kiwifruit focus group).

This suggests that the individuals interviewed also retained other identities, as part of other organisational affiliations held within the industry, for example, the grower group or packhouse group. In this sense, the industry is composed of multiple, loosely coupled, or fragmented identities (see Ashforth & Mael, 2004; Linstead & Grafton Small, 1992), yet the organisational rhetoric associated with the ZESPRI System establishes common values. It appears to facilitate the integration of different identities in the industry and to create a coordinated team approach to the production and marketing of kiwifruit. By establishing the common starting points (see van Riel, 1995) of the organisational identity, this rhetoric demonstrates one of the ways in which the industry manages multiple identities (see Cheney, 1991).

Distinct Industry Groups: Common and Diverse Values

As Hatch and Schultz (2004) noted, the social meanings associated with identity are constitutive of both the organisational culture and image and constituted by that culture and image. However, if the constitution of organisational identity is considered to be dynamic (Gioia, Schultz, & Corley, 2004; Hatch & Schultz, 2004), other values and identities co-exist with, and contribute to, the kiwifruit industry's integrated, production- and marketing-focused identity. Although industry members' comments indicated wide support for the cooperative, integrated nature of the industry, three *separate but integrated* industry groups were identified in the reference below to a "triangle" (marketers, growers, and suppliers):

That's why we talk in the industry about this triangle. And we are all interdependent and in order to get kiwifruit offshore and into our markets, we need our marketer single desk: ZESPRI. We need, obviously, the growers as the source of the product and we need the logistics that are supplied through this industry which is packing the fruit and getting it to the boats. (Technical adviser, packhouse/supplier B)

Growers were identified, for example, as "very, very pragmatic people" (Technical adviser, packhouse/supplier A), and despite the clear acknowledgement of the marketing justification for the ZESPRI position on GM, a variety of individual personal positions were also evident in the interviews and focus groups. This is suggestive of a wider range of group and individual values sourced from other affiliations. ZESPRI Organic growers, for example, used the pronoun "we" to clearly identify themselves as a separate group from other growers, with different concerns about GM: "Well, as a product group, of course, we have a vested interest in organics, so we could argue it philosophically" (Respondent A, ZESPRI Organic kiwifruit focus group).

As might be expected, there was some individual variation in interviews and focus groups regarding the GM issues referred to, indicative of the wider values about GM held within the industry and New Zealand. One grower was particularly concerned that the introduction of GM to New Zealand might reduce biodiversity and add to the destruction of native flora and fauna. Although, this was not specifically mentioned by other participants, it reflects a common discourse about GM and the potential loss of biodiversity (see Ehrlich & Ehrlich, 1998; Ho, 1999;

Jagtenberg & McKie, 1997; Shiva, 1997, 2000). In contrast, one grower in the ZESPRI Green focus group and one in the Whangarei focus group were strongly *in favour* of GM should the markets accept this, seeing GM as a “golden opportunity to . . . to splice a Bt¹ gene in” (Respondent C, ZESPRI Green kiwifruit focus group). Other growers in the Whangarei, ZESPRI Green, and ZESPRI Gold focus groups, although supportive of the ZESPRI policy, discussed the possible benefits of growing GM fruit to reduce the use of sprays and assist in pest management. Comments included, for example, “I think in the industry most people would be happy if they didn’t have to spray” (Respondent B, ZESPRI Green kiwifruit focus group); and “Is it worth alienating 21% of the market to stop two sprays a year or is it better to put the money into developing a safer spray?” (Respondent D, ZESPRI Green kiwifruit focus group). This was an instrumental recognition that current methods still rely on some chemical usage; it was related to a perceived possible reduction in workload, more reliable control of pest management, and consequently a more profitable return on the crop.

There were hints in the ZESPRI Gold focus group and from one packhouse technical adviser of some tensions in the industry in relation to the marketing differentials and production needs of the three different fruit cultivars, and in relation to the possibility of future de-regulation of the industry. However, these were not discussed in relation to the GM policy or mentioned by any other participants.

Interestingly, no participants spontaneously expressed concerns related to cultural, Maori, religious, or spiritual values, despite the fact that numerous other interest groups cautious about GM represented such concerns very strongly in their submissions to the Royal Commission (see Roberts, R. Benton, Satterfield, & N.

¹ *Bacillus thuringiensis* (Bt) is a bacterium that is pathogenic to insects. It is found naturally in soils throughout the world. There are numerous races, or subspecies, of this bacterium that produce different proteins which act as toxins against specific classes of insects.

Benton, 2004). Yet in the research interviews and focus groups an opportunity was provided for a discussion of ethical and social values associated with GM.

The perspectives of individual growers on GM were thus informed by a range of self-interested values that drew both on multiple GM discourses and on multiple aspects of their own identity as growers. Individual growers demonstrated a mix of the formal—that is instrumental or purposive—rationality, and substantive or value-oriented rationality described by Giddens (1972) and Weber (1978).

Yet, significantly, the integrated systems implemented by ZESPRI International and ZESPRI Innovation represent a number of core industry values, relevant to the GM positioning, which were endorsed by these seemingly disparate groups in the wider industry. These are an emphasis on natural production methods to produce a naturally healthy fruit, positioning of the industry as environmentally and socially responsible, and an emphasis on the integrity and transparency of the systems themselves. In the next section, these brand values are explored in more detail.

ZESPRI Brand Values: The Interrelationships between Identity and Image

The decision to move to single-desk kiwifruit marketing has enabled very high recognition of the ZESPRI brand internationally. The industry has developed a ‘monolithic’ (Olins, 1989) name and visual brand identity for all three fruit cultivars, ZESPRI Green, ZESPRI Gold, and ZESPRI Organic, in a variety of international marketplaces, including Europe, Asia, and the United States. This identity uses particular brand values—common starting points (van Riel, 1995)—to present images of New Zealand kiwifruit, and New Zealand, which are perceived positively in these different markets. As Olins (2000) argued, a brand depends as much on brand values as on particular attributes of the products.

The common starting points of *integrity*—the quality of the fruit and the transparency of the production systems; *naturalness*—environmentally sustainable production methods, and naturally good for health; and, to some extent, *innovation*—novel and unique responsiveness—rhetorically position the kiwifruit industry. They

construct particular brand values with which diverse industry groups and stakeholders within New Zealand can identify. These common starting points and brand values also create the opportunity for stakeholders in differentiated international markets to identify with the industry through the social meanings associated with diverse images of the industry. These same brand values were also evident in the value-premises of the market and environmental rationalities expressed in the rhetorical positioning of the kiwifruit industry on GM, discussed in Chapter Five.

Industry members identified ZESPRI's dominance of the international kiwifruit market in association with the perceived *success* of these brand values; for example:

ZESPRI really does all the advertising for kiwifruit in the world, selling kiwifruit . . . and all the countries just really latch on to that promotional work. (Respondent D, ZESPRI Organic kiwifruit focus group)

Industry members rejected GM because they felt there was much to lose if the current basis for this industry success were to change, with comments such as: "We . . . put a lot of money into getting the brand name . . . It's doing pretty well. Why mess it up" (Respondent C, Whangarei kiwifruit focus group); "All our markets are put at risk quite unnecessarily" (Respondent D, ZESPRI Organic kiwifruit focus group); and, "We've spent the last however many years building up the quality . . . of our kiwifruit as against anybody else's and we're just going to blow it" (Respondent B, ZESPRI Organic kiwifruit focus group).

The success of the ZESPRI brand, and the values that underpin it, sustains an international image that relies on the reputation of the industry based on the *quality* of kiwifruit *production*. One of the ZESPRI International communication spokespersons positioned this reputation as a "corporate story" of "integrity". This spokesperson repeatedly associated the word "integrity" with phrases suggesting a reputation for trust and honesty, for example, "trustworthy to your customers", "the transparency of all your processes", and "you must do what you say". Integrity was also associated with "consistency" in the comment, "You must have consistency so wherever your product appears anywhere in the world the same support systems, the

same integrity quality assurance tracks back” (Communication spokesperson B). This is consistent with the findings of GM-specific research that highlighted the importance of trust and source credibility in determining attitudes to GM (Frewer, Howard, Hedderley & Shepherd, 1999; James, 2003; Hornig-Priest, 2001).

The reputation of the industry is also based on values associated with the *quality of the product*:

We’ve said we’re not going to touch GE, GM products at all and that has to do with the integrity that we have a natural product that is great to eat and safe to eat and that until customers and consumers have the information they need to be confident that any genetic modification is safe, we can’t be involved. (Communication spokesperson B)

Here the common starting point of “integrity” is articulated simultaneously with products that are “natural,” products that are “safe to eat,” and products that are not GM. As discussed in Chapter Five, this rhetorical positioning of “integrity” draws on multiple discourses related to risk. These include environmental discourses that represent ‘nature’ as pure (Cronon, 1996; Reiss & Straughan, 1996; Worster, 1995), recent discourses related to food-safety scares in Europe (Adam, 1999, 2000b; Murcott, 2001), as well as public-choice/free-market discourses (Aune, 2001; Devine, 1998; Finn, 2003; Miller, 2003). One Innovation spokesperson used a similar rationality to comment on the *mismatch* of GM and health benefits:

Many fruits and vegetables are marketed on the basis of their health claims . . . and GM doesn’t add to that story. (Innovation spokesperson B)

This positioning constructs a complex identity for kiwifruit based on their health-value and life-style attributes which provides rich social meanings that multiple stakeholders can identify with. It underlines the social and cultural construction of the discourses (see Douglas & Wildavsky, 1982) drawn on by the kiwifruit industry in this positioning of kiwifruit.

The rhetorical positioning of the three different kiwifruit cultivars is, however, *differentiated* within the common starting points described for the ZESPRI brand in terms of *lifestyle values*:

We’ll take all the attributes that belong to the ZESPRI brand and apply that to a new product and then build a positioning so . . . we have ZESPRI Green which is about energy and zest and fit and fun for the family, Gold which is about indulging your

passions, indulging the moment, and Organic . . . that's about our world, your lifestyle, your choice. (Communication spokesperson B)

ZESPRI International's marketing rhetoric in its GM policy draws on existing value-systems within the industry, and is consistent with existing industry identities—there are shared zones of meaning (Heath, 1997) between multiple stakeholders.

The Communication spokesperson additionally positioned the ZESPRI brand in terms of a “relationship” with consumers in a way that suggested that images of products and organisations are as much constructed by consumers as they are by the organisation:

The role that we must play is developing a conversational relationship with them [consumers] so that your product and its attributes and its freshness and its naturalness and its natural energy—and it is about your wellbeing—actually means something to them. (Communication spokesperson B)

This spokesperson's use of the word “conversational” implies that this relationship involves a dynamic interrelationship between identities and images, processes of mirroring, impression-building, cultural expression, and reflection as discussed by Hatch and Schultz (2004). The strategic, dynamic negotiation of identities and images is evident in this spokesperson's aim to “keep extending that resilience, that relevance and those relationships” to maintain the “robustness” of the brand. She indicated that the much-used ZESPRI strapline which positions kiwifruit as “putting life into life” (Communication spokesperson B) had been particularly successful. Interestingly, this Communication spokesperson referred to organic kiwifruit as now being “mainstream,” that organic products are a “must-have” (Communication spokesperson B) rather than being valued because they earn a premium for growers. This suggests that environmental discourses underpinning organic production are becoming normalised within the countries which are the main kiwifruit markets, as borne out by recent research (see, for example, Tait, 2001).

The juxtaposition of phrases and arrangement of words in the following quotation indicates the rhetorical articulations, implications, and transformations that encapsulate the strategic positioning of the ZESPRI brand, by this Communication specialist, as a “story:”

My strategy has always been to take the absolute strength of environmental integrity, sustainability, working in harmony, working with nature, best growers in the world, safe to eat, great to eat, naturally good for you body and soul, and remembering what we mean about 'putting life into life' and you have a huge story. (Communication spokesperson B)

In this text, “environmental integrity” is articulated with discourses of sustainability and is exemplified by growers working “in harmony” with nature. Excellence is represented simultaneously in the reference to the world leadership of the industry as the “best in the world” and in the juxtaposition of “safe,” “great to eat,” (taste) and “good for you” (healthy). The phrases “naturally good for you body and soul” and “putting life into life” add an emotional fervour and passion to the brand, a rhetorical strategy that attempts to transform eating a simple fruit into a spiritual experience that consumers will seek to identify with.

These value-premises and rationalities also draw on major discourses privileged internationally and in New Zealand, such as the importance of lifestyle to health. For example, on its website, the ubiquitous Coca Cola brand features the strapline, “The Coca Cola company exists to benefit and refresh everyone it touches,” (Coca Cola, 2005). Like the ZESPRI brand identity, Coca Cola emphasise the brand values of consumer concerns, and the health-giving attributes and great taste of their products.

Strong brand values are also clearly evident in the ZESPRI Brand video, the ZESPRI System video, on the ZESPRI website, and in the ZESPRI Media Information Kit. The ZESPRI Brand video was customised for the Japanese market, with subtitles in Japanese but no voice-over. It relies on images of people of all ages and races enjoying eating kiwifruit, and was obviously developed for diverse target publics. Such images allow multiple audiences to identify with the experience of eating the fruit.

In contrast, the ZESPRI System video is aimed at customers—at global retailers and wholesalers of kiwifruit in international markets. It shows the growing conditions in New Zealand orchards, and depicts the climate, the environment, the expertise of the growers, and the ‘high-tech’ systems involved in grading and packaging. The voice-over describes every step of the ZESPRI System and defines it

as a “benchmark for category excellence” (ZESPRI, 2003b). It refers to a ZESPRI Promise: “To deliver fruit of superior flavour, texture, and size, packed with health-giving vitamins and minerals, through an integrated system” (ZESPRI, 2003b). The emphasis is again on integrity and excellence; innovation, sophisticated logistics and technology; and the assurance of a natural product, in harmony with nature, as epitomised in the slogan, “ZESPRI kiwifruit puts life into life” (ZESPRI, 2003b). For industry stakeholders, the production process is as much a part of the identity and image of the industry as the product.

Table 6. ZESPRI Brand Values and Systems

ZESPRI System	Overall integrating production system	Overall values (CSPs) include <i>integrity, natural, innovation</i> . These are articulated with non-GM, natural environment, health, food safety, and lifestyle choices.
KiwiGreen	Integrated pest management system	Unique system ensures environmental integrity and natural, high-quality fruit
Taste ZESPRI	Audit system for the production of fruit with specific sugar content	Quality control system, provides consistently high-quality, natural fruit

In 2001 and 2002, the ZESPRI website also featured the slogan, “It puts life into life” to depict the ZESPRI kiwifruit brand, and the themes of “integrity” and “natural” were again emphasised, with references to “safe to eat and grown naturally,” “environmental integrity,” and “a product that is naturally fresh and healthy” (ZESPRI, 2001a, 2002a). These brand values were further evident in the Annual Report of 2001 in imagery associated with the captions: “ZESPRI GREEN Kiwifruit – vitality”, “ZESPRI GOLD Kiwifruit – pure pleasure”, “ZESPRI ORGANIC Kiwifruit – our world, your lifestyle, your choice” (ZESPRI, 2001b).

In 2002, the Annual Report used a similar brand identity but added the value of remaining an integrated industry. It cited the ZESPRI System as a means of

managing the integration of different groups within the industry and the international markets: “The ZESPRI System provides the linkages that enable integration, innovation and reward to be achieved” (ZESPRI, 2002b).

The ZESPRI System was, then, clearly positioned as exemplifying the brand values, or common starting points, of the industry. It integrates the roles of multiple stakeholders—growers, suppliers, marketers, and customers—and provides a means by which stakeholders, both within the industry and in international markets, can identify with and enact these values. In this sense, the ZESPRI System, and the ZESPRI brand values are used as a means of managing multiple identities (see Cheney, 1991; Cheney & Christensen, 2001a) associated with the kiwifruit industry.

Environmental Integrity and the Risks Associated with GM

Industry participants echoed the brand values rhetorically evident in industry-wide documents, similarly constructing environmental integrity, by privileging ecological values drawing on environmental and sustainability discourses. In four interviews and three focus groups, industry participants spoke of the importance of the integrated pest management system, KiwiGreen, or showed concern about protecting the environment. They identified with ZESPRI brand values, rhetorically positioning environmental integrity as minimal impact on the New Zealand environment. Growers were concerned about the need to use sprays and pesticides, and aware that these were harmful to the environment, but these *traditional* methods were still seen as *less* harmful than GM. There was little evidence of the technological determinism, described by Levidow (1998). For example:

Ecologically, we’re harming the environment [with sprays], which we want to do [to kill kiwifruit pests], no doubt about that, but we’re not corrupting the DNA source from which everything is arising. (Respondent E, Whangerei kiwifruit focus group)

Kiwifruit sprays were described as “soft chemicals” in the sense that they are ‘soft’ on—less harmful for—the environment:

Kiwifruit’s a little fortunate in that it’s like a weed; it doesn’t really have major pest problems. At the moment, they are controllable . . . through the use of reasonably soft chemicals and not a lot of use. (Technical adviser, packhouse/supplier A)

In the organic kiwifruit growers' focus group, concern for the environment was implicit rather than stated explicitly, perhaps because this focus group comprised organic growers who met together regularly, and could take their common organic perspective for granted. Yet, their detailed technical discussion of organic production indicated their environmental values. For example, when talking about the difference between organic growers' use of the bacterium Bt to control pests, and proposals to genetically engineer plants to include the Bt gene, participants drew on a GM discourse frequently discussed in anti-GM literature (see Ho, 1999; Law, 1999). For example, one participant commented:

[In organic orchards] it's applied to a surface, in the atmosphere; it's in the sunlight and the weather and it breaks down. When it's inserted into the plant [GM], it's there in every cell; it's there through the roots; it's persistent; it's out to the soil.
(Respondent E, ZESPRI Organic kiwifruit focus group)

Technical advisers at packhouse/suppliers again demonstrated concern for the environment in discussion of technical aspects of crop management. For example, they were concerned about the "biological life of the soil" and its relationship to "an overall ecological balance" (Technical adviser, packhouse/supplier B).

Environmental integrity was linked to potential difficulties of *controlling* GMOs, and to previous problems encountered with the introduction of gorse, tobacco weed, and the stock root for tamarillos to New Zealand, which ended up growing uncontrollably in the wild. Again, similar concerns have been expressed by publics in other research findings (see Henderson & Weaver, 2003). For example:

I just think of the natural New Zealand fauna. That can be destroyed like—because of an introduction of something that we do not know anything about . . . and this is what worries me; that we're introducing something else [genetic modification] that we may not be able to control. (Respondent F, ZESPRI Green kiwifruit focus group)

Such concerns also draw strongly on ecological discourses (see, for example, Bookchin, 1995; Jagtenberg & McKie, 1997; Merchant, 1992, 2003; Plumwood, 1993), and on risk discourses that suggest risk is increasingly unable to be quantified in time or space, in a post-industrial society (Adam, Beck & van Loon, 2000; Beck, 1992, 2000; Lash, 2000).

Concerns were evident in the accounts of one of the Innovation team, one of the technical advisers in packhouse/suppliers, and all four growers' focus groups regarding the *uncertain outcomes* of GM in relation to the environment: the *unpredictability* of GM technologies, or that *control* of GM technologies depended on the effectiveness of regulatory and legal systems. As Douglas (1992), Douglas and Wildavsky (1982), and Perri 6 (2005) have found, individuals can feel powerless in the face of technology and regulatory systems which are seen as capricious.

In addition, the science associated with GM was recognised as contested. For example, "Is the science that we're reading about on both sides, is it good science or not?" (Respondent E, ZESPRI Organic kiwifruit focus group). The word "good" implicitly recognises that science perspectives privilege particular value systems. This individual's comment is then consistent with Beck's (1992) argument that values and rationalities associated with scientific industrialisation are being increasingly questioned. As Brown (2001) and Segerstrale (2000) have pointed out, individuals are frequently polarised in their opinions and values, taking different 'sides' in the 'science wars,' and from a sociology of science perspective, science is increasingly represented as 'political' rather than 'neutral' (Latour, 2004; Nelkin, 1984).

Focus group participants critiqued GM technologies, saying they lack "precision" (predictability and control) and represented them as a haphazard "unstable" process. For example:

I don't like the term genetic engineering because that seems to suggest that there's a precision . . . which isn't there. It's a bit more . . . like staking a bit of glue of some sort over a thousand columns and just hurling them somewhere . . . it's really hit and miss and most of them are misses. And the worry of that is that it's unstable.
(Respondent D, ZESPRI Organic kiwifruit focus group)

This participant's comment is suggestive of Perrow's (1984) and Wilkins' (2001) concerns about the inability to control the risk outcomes of complex, tightly-coupled systems. It echoes the concerns of Ho (1999), and contrasts strongly with the more technical rhetoric of scientists who construct GM as sophisticated and precise experimental techniques in highly controlled situations (see Latour, 2004).

GM was implicitly represented as changing nature in an ‘explosive cocktail’ that cannot be contained or controlled. The metaphor of being unable to ‘close the gate’ on GM is a common representation of risk by the general public (as Henderson & Weaver, 2003, also reported); for example:

It’s a gate that you can’t close once you have opened it . . . I think that we should not tamper in that area [GM] because it’s - why are we doing it? (Technical adviser, packhouse/supplier A)

The term “tamper” suggests an ethical concern, constructing GM as wrongful meddling in something that should be sacrosanct, and draws on a discourse of nature as sacred (Cronon, 1996). The unpredictability of GM was also represented as “fear of the unknown” (Respondent E, ZESPRI Organic kiwifruit focus group), as, “You can’t go back” (Respondent B, Whangarei kiwifruit focus group), and “putting something out into the environment that you can’t stop” (Respondent A, ZESPRI Gold kiwifruit focus group). These representations of GM are an interesting contrast to the positive representation of the ‘soft’ pest management control system (the KiwiGreen system) as ‘managing nature’ with minimal harm to the environment, expressed particularly in the ZESPRI documents discussed in Chapter Five.

The possibility that future commercial production of GM might impact adversely on the environment, reflects similar concerns internationally about the potential destruction of the ‘natural’ environment by GM food production (Allen, 2000; Ho, 1999; Rifkin, 1999). This draws on a discourse that suggests disaster occurs when ‘nature’ is destroyed by corrupt worldliness (see Douglas & Wildavsky, 1982). Given the market focus of the kiwifruit industry, these environmental values expressed by participants were also linked with the rhetoric of business *sustainability* in ways that add to evidence that this term is contested.

Images of Sustainability and New Zealand’s Environment

As Peterson (1997) has argued, the term ‘sustainability’ is increasingly used to describe practices said to have ecological integrity. However, the use of the term can suggest either anthropocentric definitions which privilege instrumental values,

using the environment for human purposes; or ecocentric definitions which privilege ecological values, where ‘nature’ is considered valuable for itself.

‘Sustainability’ and ‘sustainable development’ are then contested terms with a range of definitions from “optimum levels of exploitation” to “management practices that will not degrade the environment” (Peterson, 1997, p. 16; see also Allen, 2004; Hajer, 1997; Hediger, 1999; Moser & Miller, 2001). Often different time considerations are built into definitions; for example, short-term economic gains or the long-term viability of a resource. Sustainable can also mean “a system’s abilities to resist or recover from disturbances, stresses, and shocks” or “its ability to produce goods” (Peterson, 1997, p. 16). Peterson argued that sustainability is in danger of becoming a self-legitimizing *metadiscourse* that endorses its own discursive practices; she critiqued the modernist discourse that sees humans pitting themselves against nature in an effort to control it, and warned against the assumption that technology can fix anything.

Although ZESPRI is a member of the Sustainability Business Network—an organisation prioritising ‘strong’ sustainability (see Allen, 2004)—interview and focus group participants did not always prioritise this perspective. They represented sustainability in terms of both the ‘strong’ ecological values, and the ‘weak’ instrumental business values referred to by Peterson (1997). One of the ZESPRI communication spokespersons credited kiwifruit growers with ecological values in terms of their identification with the land. For example:

The land is what supports us. The growers who tend that land, love their land . . . why would you do anything to introduce a foreign body to the land or do anything that may harm it? . . . It’s very much about respect for the land. They want nothing that is going to hurt them. (Communication spokesperson B)

However, the proviso “They want nothing that is going to hurt them” adds an instrumental perspective which betrays ambivalence—a respect for the land itself, but also for the economic returns that it brings.

Additionally, environmental integrity was carefully positioned as a deliberate *marketing* strategy for the kiwifruit industry, to avoid being associated with images

of radical environmentalism by articulating ‘environmental integrity’ with ‘natural’; for example:

We are very careful how we use ‘environmental integrity’ because you must be really careful . . . not to sound like you’re a 1970s bleating Green, because it’s not credible. Clean and green to whom? So what we try and do is talk about ‘naturalness’. (Communication spokesperson B)

This comment again indicates an instrumental, self-interested business rationality.

One Innovation team member spoke of the ZESPRI environmental policy as a “commitment,” clearly indicating that many of the industry members identify strongly with values associated with ‘strong’ environmental sustainability, but at the same time he acknowledged that this ‘commitment’ is deliberately used as a marketing strategy. He described ZESPRI’s environmental policy as being:

To move towards practices which have less and less impact on the environment, so we look to move towards softer control options or more managed control options. . . but it also becomes part of the marketing strategy as well, you know proving our clean, green image. (Innovation spokesperson E)

This comment indicates the importance that ZESPRI puts on responding to the images held of the industry by stakeholders in international markets, as opposed to validation of industry practices from within New Zealand. Although growers may genuinely identify strongly with the environmental values and lifestyle afforded by practising horticulture in New Zealand, *imagery* associated with ‘clean, green’ New Zealand was also valued. The overriding value was acknowledged to be economic, and was described as “survival” in a business sense:

Whilst in a sense the New Zealand lifestyle is important, it’s—for the majority of primary sectors—when it comes to actually making a decision about what they will or won’t do, it’s a secondary consideration. That’s *survival*. (Innovation spokesperson E, emphasis added)

Environmental values—and sustainability—were, in this sense, also constructed in terms of *business* sustainability. The identity of growers as environmentalists thus exists in tension with their identity as business managers.

Auditing systems imposed on the kiwifruit industry by international markets (through agreements such as EureGap certification) were acknowledged as driving the implementation of environmental sustainability policies by two of the Innovation team and one of the Communication spokespersons. Sustainable practices were an

environmental management requirement for business success in international markets, as much as grower-motivated practices. Participants in the Whangarei growers' focus group and the ZESPRI Green growers' focus group, for example, were concerned about the extent of the compliance demands made by international markets in Europe and Japan, and perceived these as excessive in terms of meeting environmental standards. As one Technical adviser commented:

Japan thoroughly scrutinise our fruit in a way that is perceived by our growers as being a form of trade barrier . . . smaller packhouses just will not be able to install the [track and trace] technology. (Technical adviser, packhouse/supplier B)

There are some tensions then in the environmental and business/market rationalities used by different industry members, and these rationalities are aligned with the multiple identities held by industry members; some groups identify particularly strongly with environmental values (for example, organic growers) and are more genuinely concerned about looking after the land, other growers identify more strongly with business values and are more pragmatically concerned with various realities of production. These tensions clearly demonstrate the contested nature of the term 'sustainability' (Elkington 2001a, 2001b; Hajer, 1997; Hediger, 1999; Moser & Miller, 2001).

Identity and the Value of New Zealand's 'Clean, Green' Image

New Zealand's geographic isolation has resulted in the iconic representation of New Zealand as unpolluted and under-populated; a pristine, pastoral paradise; and a safe haven from the rest of the world (see, for example, Mitchell, 1972). However, this 'clean, green' image has also been critiqued as a myth (Brown, 1997; Henderson 2005; True 2003; Weaver, 2001), and the value of this image to New Zealand trade has been the subject of a Ministry for the Environment report (BERL/AERU, 2003) with contested findings ("GE release will lift earnings", 2003; Knight, Holdsworth & Mather, 2003). New Zealand's location is then often seen as a trade *advantage* but its isolation from the rest of the world is also constructed as an *obstacle* to trade. Three organic growers and a Communication spokesperson commented on New Zealand's

unique geographical location and its distance from its major markets as an additional barrier not faced by other countries competing in the same markets.

However, references to New Zealand's 'clean, green' environment were used on the ZESPRI website in 2001 and 2002 specifically to enhance the brand values, by coupling the growing conditions for kiwifruit with this identity for New Zealand:

The clean, green country, pure water and clean air make New Zealand the perfect environment for growing kiwifruit. (ZESPRI, 2001a)

This New Zealand identity has been highly successful in marketing the country as a tourism destination with the campaign "100% pure New Zealand" (Tourism New Zealand, 2005), and in marketing other New Zealand branded products, such as apples and wine. It is continually articulated both in ZESPRI documents, and by industry members, with the ZESPRI brand values.

The importance of New Zealand's 'clean, green' image to the kiwifruit industry was highlighted in the accounts of members of all four focus groups, all three packhouse technical advisers, and by two members of the Innovation team, as well as by both Communication spokespersons. The incompatibility of 'clean' and 'green' with GM was made quite emphatically; for example:

We will not be growing any genetically modified kiwifruit; we won't be sourcing any genetically modified kiwifruit. The 'clean, green' image is fundamental to the success of our industry. (Technical adviser, packhouse/supplier B)

New Zealand's reputation for an unpolluted environment was positioned as being a *unique* advantage in comparison to competitors in the international marketplace, with GM likely to "tarnish" that reputation (Innovation spokesperson C). At times, industry members' comments indicated a *pride* in New Zealand which suggested a strong identification with this imagery as New Zealanders:

Well, isn't our 'clean, green' image more important to us, and the fact that all of a sudden now we're going to be genetically modifying everything we grow, that we produce here. Why? Just so we can foot it with the United States. Big deal! (Respondent A, Whangarei kiwifruit focus group)

This sarcastic reference to being able to "foot it with the United States" draws on other occasions when New Zealand, as a small country, has stood up to the might of larger countries on a political level. It capitalises on images of New Zealand as a 'David' taking on 'Goliath' used to represent the New Zealand stance on nuclear

power, and the Springboks' rugby tour in the 1980s (see Foote, 1999; Lange, 1990; White, 1998). Such comparisons have been frequently drawn by others in the New Zealand debate about GM (see, for example, Henderson & Weaver, 2003; Henderson, 2005).

In this sense, industry members identified themselves as environmentally conscious *citizens* of New Zealand, taking actions that confirm the reality of these environmental values:

But the perception of 'clean and green' is not about particularly being GE; it's about everything, the holistic 'clean and green' view that we don't have polluted rivers, we don't look at the orchard and see plastic bags blowing around, and that we have done a great deal in terms of the environment to try and keep it at least as pristine as it was 15 years ago. (Communication spokesperson A)

New Zealand's unpolluted environment was also represented as the antithesis of the "pollution problems," "overcrowding," and "problems with water" associated with European contexts (Innovation spokesperson E). The reality of this New Zealand identity was linked with the ZESPRI brand identity and specifically valued as a marketing asset, not only for the kiwifruit industry, but for New Zealand as a whole. The interview and focus group participants identified with other primary industries, suggesting that these industries provided the historical basis for this 'clean, green' image, having created the agricultural lifestyle upon which images of an unpolluted, pastoral paradise were first constructed:

We're actually not just talking about the image of kiwifruit. We're talking about the image that New Zealand has sold for trade and what sells a lot of our fruit, and I think . . . the primary industries, they still make most of the money in this country (Respondent A, ZESPRI Gold kiwifruit focus group)

The kiwifruit industry is thus positioned as not only *benefiting* from the 'clean, green' image, but as assisting in the *creation* of an identity for New Zealand, from which other industries such as tourism also benefit. The use of the name 'kiwifruit,' for example, links the fruit to another national icon, the 'kiwi,' a bird unique to New Zealand. Efforts towards national branding of products can now be seen in many countries in other continents; such as Africa, in attempts to market local rice crops (Yamoah, 2005), and in Norway, in attempts to market fish to Asia (Kleppe, Iversen & Stensaker, 2002).

This image of the New Zealand environment was then seen in ambivalent terms as both a reality and a construction. It was also recognised as a *fragile* perception:

We can't get a perception of being more 'clean, green' but sure as heck we can lose that image of being 'clean.' (Innovation spokesperson E)

This participant expressed concern that pollution caused by New Zealand dairy industry effluents has "tarnished" New Zealand's image.

Other participants in the interviews and focus groups contested the reality of New Zealand's unpolluted environment. The 'clean, green' image was described as simply an overseas perception: a "group marketing tool" (Respondent C, ZESPRI Green kiwifruit focus group), as "very valuable" (Respondent E, ZESPRI Green kiwifruit focus group), and as something to "capitalise" on (Respondent A, ZESPRI Green kiwifruit focus group). There is certainly evidence to suggest that New Zealand might not be as clean and green as the image suggests ("Polluters pay heavy price," 2004; Taylor, 2002). As one spokesperson commented:

If you actually look at New Zealand per capita, sort of CO₂ emissions and all those sorts of things, we're as bad as the worst. But we have managed to sell a lot of product on a 'clean, green' image. (Innovation spokesperson C)

At the level of New Zealand's identity, as well as at the level of an industry identity, there is some tension then between the intrinsic environmental values and the extrinsic financial opportunities afforded by New Zealand's 'clean, green' image. The perceived images associated with both New Zealand and the kiwifruit industry when 'mirrored' back to the industry organisation help dynamically shape the identity of the industry. In this sense, aspects of image and culture both constitute and are constituted by the organisational identity (Gioia, Schultz & Corley, 2004; Hatch & Schultz, 2004).

The value to the kiwifruit industry of safeguarding New Zealand's clean, green image formed one of the main arguments in ZESPRI's submission to the Royal Commission. One of the Communication spokespersons identified tying the ZESPRI brand to a national image as a way of garnering loyalty from within the industry, but also as a marketing *risk*, when that image cannot be controlled by the industry:

Innovation is seen as important to the overall positioning of the industry in the international marketplace. However, rather than representing the use of GM technologies as innovative, as in the dairy industry and other primary industries, the only explicit reference to innovation in statements describing the GM policy describes the natural production system, KiwiGreen, as “staying ahead of the ball game” (Kiwifruit New Zealand, 1999). Being innovative in this text refers to the quality controls implemented by ZESPRI which depend on environmental values at odds with those associated with GM discourses.

Both the ZESPRI System marketing video and comments made by both Communication spokespersons reinforce the articulation of ‘unique’ with ‘natural’ as the result of innovative marketing strategies. They indicate that bringing overseas customers onto New Zealand orchards, to pick and taste fruit for themselves, and to experience the unique growing conditions is an important marketing tactic in terms of creating customer identification with the product as unique and natural:

We bring around three or four hundred customers down each year, that’s about half a billion dollars’ worth of business, so that they can actually pick the kiwifruit that might end on their retailers’ shelf and they can see at first hand what it’s like. You know if you think of a Japanese or a Belgian who’s picking with this like twist to the wrist, and they pluck a gold kiwifruit, fresh from the vine, and you say, “Oh no, no eat it – it’s fine.” “Is there sprays?” “No just eat it.” What do you think? I mean that is magic. (Communication spokesperson B)

The kiwifruit industry thus illustrates the dynamic adaptability discussed by Gioia, Schultz, and Corley (2004). In these terms, organisational identity is an adaptive process that underpins the development of images, which are interpreted by target publics, and when fed back to the organisation may change the organisational members’ perceptions of their own identity. *Innovation*, then, is defined in terms of being uniquely responsive to the desired images of food products held by international markets, and the perception that natural production methods are a unique point of difference.

“Naturally Good for You” and the Health Industry

The phrase “naturally good for you” additionally positions the ZESPRI brand in terms of the health benefits of eating a ‘natural’ fruit. On the ZESPRI website, the

The growers and the whole ZESPRI group are very innovative and very quick to respond to market, you know, what the market is saying; realising that if we don't, we won't stay ahead. (Technical adviser, packhouse/supplier A)

This complex identity for growers is also constructed on the ZESPRI website by connecting the kiwifruit industry with current images of New Zealanders as enterprising business and marketing pioneers. In 2001 and 2002, the first page of the ZESPRI website positioned ZESPRI in relation to New Zealand's reputation for outdoor adventure, and renown for starting the craze of bungy jumping. For example:

New Zealand is renowned for its "go get 'em" attitude. Who else would think to tie themselves to a bridge with a large rubber band and jump, just for the fun of it? When a New Zealander did this, it started the worldwide craze of bungy jumping. It's that sort of enthusiasm and attitude that you can share when you eat another of our famous exports, ZESPRI New Zealand kiwifruit. (ZESPRI, 2001a, 2002a)

ZESPRI is linked with well-known New Zealander, A. J. Hackett, to imply that ZESPRI is unique and innovative, leading the world in enthusiasm and innovation in the kiwifruit marketplace. Through identifying with this image, ZESPRI customers are encouraged to identify with trying something new and different—kiwifruit. The identity of the industry as unique, as both pioneering and innovative, both constitutes and is constituted by concepts of innovation that are part of the identity of the industry members as New Zealanders, and part of the perceived image of New Zealand, and New Zealand products, internationally.

Industry members' accounts additionally represented the kiwifruit industry as unique in terms of being a world leader, and therefore innovative. For example, "Other countries want to tag in on the New Zealand price. They want to latch in on the tail of New Zealand, to hold their returns up" (Respondent E, ZESPRI Organic kiwifruit focus group). Similarly, in the 2002 Annual Report, under the heading "Strategy for Sustained Success," innovation is again one of the strategies highlighted, but specifically in a competitive marketing context. Reference is made to the importance of the brand and industry reputation:

The innovations that are implemented add value to our competitive position by ensuring that we maintain the ZESPRI brand and service reputation for delivery of consistent quality kiwifruit, regardless of variety. (ZESPRI, 2002b, p. 27)

It's a suicide leap if you think your country of origin sells. An example is in Japan they have this water called Kiwi Blue and it was contaminated—yeah, you might have a dud New Zealand exporter. You don't risk your reputation on the basis of non-professional delivery. (Communication spokesperson B)

To offset this risk, now that the brand status is high, ZESPRI is aiming at year-round marketing by growing kiwifruit off-shore in the United States, Italy, and Japan under the ZESPRI production system and brand. As one participant commented:

We could lose our 'clean and green' image tomorrow, but if we're out of season, fresh, get to market on time, good quality, we've probably still got markets.
(Respondent G, ZESPRI Green kiwifruit focus group)

This is evidence not only of innovative marketing but of a move to safeguard the ZESPRI brand against the possible commercial release of GM in New Zealand, by progressively disassociating the brand with its country of origin. If New Zealand introduces commercial production of GM foods, the 'clean, green' image of New Zealand may be less valuable to the ZESPRI brand.

New Zealand's environmental image is important to the kiwifruit industry not only for its intrinsic value but also in terms of its articulation with food safety and the implication of food safety in terms of health. The brand values associated with *environmental* integrity, and *quality* production through the ZESPRI System draw on discourses linking the natural environment and safe food production practices with the maintenance and enhancement of good health, for example, discourses surrounding food scares in Europe (see, for example, Adam, 2000b).

The identity of the kiwifruit industry as *innovative* thus relies on a social reductionist definition of technology. This means that users decide how and to what extent technology will be used, and being healthy is linked with the tasks and duties of being a responsible citizen (Beck-Gernsheim, 2000). In contrast, competing social constructions of the term 'technology' in Western cultures are typically examples of technological determinism (Levidow, 1998) and position GM as one of the latest, inevitable 'cutting edge' developments (Enriquez & Goldberg, 2000; Mannion, 1999; Oram, 2000).

Innovation and “Naturally Good for You” – New Zealand Pioneers

The kiwifruit industry defines *innovative* in terms of being unique and pioneering, as being uniquely responsive to the benefits and limitations of New Zealand’s geographical location and isolation from international markets. This identity is constructed by connecting the kiwifruit industry with historical images of New Zealanders as pioneers.

On the ZESPRI website in 2002, under the heading, “A Tradition of Passion, Innovation and Excellence”, *innovation* is positioned as being part of New Zealand’s heritage, “built by inspired growers . . . ZESPRI also inherited the pioneering spirit” (ZESPRI, 2002b). The juxtaposition of the four words in this heading links “innovation” with exceptional kiwifruit growers, people of passion. At the same time, it emphasises that kiwifruit production methods are based on tradition, which in the days of the pioneers was linked with a national identity and image of New Zealand as a land of ‘milk and honey’, a pastoral paradise (Belich, 2001; Brown, 1997; Mitchell, 1972). These early New Zealanders had to be innovative; as pioneers they were breaking new ground both in the literal sense of developing agriculture and horticulture, and in the metaphorical sense of finding ways to build a lifestyle with the minimum of resources. New Zealand kiwifruit are thus positioned as simultaneously traditional and innovative, in the sense of being “naturally good for you” (a frequently used phrase in all marketing material)—the outcome of pioneering primary production techniques. Since the major target markets for these messages are kiwifruit markets in Europe and Japan, newly farmed, pastoral New Zealand is implicitly contrasted with these historically older, industrialised nations. The accounts of industry members similarly identified growers as being innovative “pioneers” in terms of horticultural production:

The growers are wonderful early adopters, you know, they have always been innovative; they’ve always been pioneers. (Communication spokesperson B)

However, growers were also seen as innovative in terms of marketing and business opportunities:

brand is developed through using extensive cameo pages of different consumer audiences enjoying the three varieties of kiwifruit: Gold, Green, and Organic. The emphasis is continually on the integrity and safety of the production, and the natural, healthy attributes of the raw fruit:

Bursting with life . . . Maximise your energy . . . When you're working out or working late, how do you replace all the energy you've lost . . . How about ZESPRI GREEN kiwifruit? . . . Stress free Naturally . . . Research carried out by Rutgers University found ZESPRI GREEN Kiwifruit ranked high in anti-oxidant levels. These antioxidants have anti-cancer and anti-inflammatory qualities, they protect against heart disease and even protect the retina of the eye. (edited quotes, ZESPRI, 2001a, 2002a)

These representations of kiwifruit rely on positioning the fruit as naturally healthy, not only safe to eat but positively beneficial for health. As such, they tap into "health" as a major value, and "nature" as an emerging value in international markets (Beck-Gernsheim, 2000, Reisner, 2001), facilitating the identification of international market audiences with the ZESPRI brand.

The social construction of 'nature' in the industry rhetoric is continually that of nature as "moral imperative"—the way nature ought to be (Cronon, 1996, p. 36). The 'natural' way of doing things presupposes that there is no other justifiable way. This stems from the period of the Enlightenment in Western thought and treats nature a little like a religious dogma, as sacred. As Cronon (1996) commented, often ideal nature is a pristine wilderness, or a pastoral paradise: if we see "Nature as Eden", human actions have resulted in the environmental degradation of the original pristine nature (p. 36).

Two of the Innovation team members, one of the Communication spokespersons, and three of the focus groups specifically made references to the health-giving properties of kiwifruit, and positioned these as incompatible with GM. For example:

They promote this zest for life, this fitness . . . and maintaining health through eating *natural* kiwifruit. So you can see where the conflict comes in when we start talking about genetic modification when you're given this natural healthy way . . . of keeping your health by eating kiwifruit. (Technical adviser, packhouse/supplier C)

Industry members represented the value of kiwifruit in the international marketplace as derived from its positioning as a *luxury*, ready-to-eat, export product, describing it,

for example, as “top of the range,” and suggesting that “staple” foods like corn might gain more advantage from being GM (Respondent E, Whangarei kiwifruit focus group).

ZESPRI additionally deliberately builds on the ZESPRI organisational image in the marketplace by articulating kiwifruit with the identities of growers, capitalising on both the organisational culture and New Zealand culture. The Communication spokesperson responsible for the brand strategy described this in detail:

So what we try and do is talk about naturalness. We use our growers as super stars, we use real people; you know, this is an annual report admittedly but if you go through the web you will see that we always show people eating. We always have food because it is safe to eat. We always have lovely young people, this is a Japanese film star; they're healthy; they live our brand. The orchards are beautiful, this is one of our lovely organic growers who makes his own compost and he's just told me he's found another way of doing it, so it's even better, but it's all about sharing, caring, relationships and honesty; and we don't lecture. It's like the health story or the nutrition story that goes with ZESPRI, we break it down into lifestyles, into age groups, into audiences. (Communication spokesperson B)

The emphasis on deliberately developing multiple relationships with customers and consumers is indicative of the multiple identities and images managed in kiwifruit industry communication with both internal and external stakeholders.

In sum, the kiwifruit industry is positioned as unique, a world leader that has successfully established a niche market for kiwifruit, and this success underpins the strong market focus for the industry's GM policy. The industry is highly integrated, with industry members demonstrating universal support for the GM positioning, despite their varied individual and group values in relation to GM. This integration and the development of sophisticated production systems are highlighted by industry members as demonstrating the integrity crucial to the industry's market success. ZESPRI emphasises the unique quality and health-giving attributes of the kiwifruit, and the unique quality of the natural production methods. Kiwifruit growers are positioned as innovative pioneers, and the industry is positioned as environmentally aware, by drawing on images of New Zealand's unique environment. This iconic national identity underpins the complex brand identity constructed for the industry,

the growers, the production methods and the product, an identity positioned by the industry as *incompatible* with GM.

The next section in this chapter considers the management of organisational identity and image in relation to the dairy industry positioning on GM. The section begins by identifying the industry groups with whom individual interviews and focus group discussions were conducted, as described in detail in Chapter Four.

The Management of Organisational Identity and Image in the Dairy Industry Positioning on GM

The dairy industry in New Zealand underwent significant restructuring during the timeframe of this research, as described in Chapter Two. In 2000, at the commencement of the research, the NZDB was the marketing authority for four different dairy companies. However, in 2001 the two largest dairy companies, Kiwi Cooperative Dairies Ltd. and New Zealand Cooperative Dairy Company Ltd. merged with the NZDB to form Fonterra Cooperative Group Limited. All of the subsidiary companies of the individual groups that merged, including dairy research facilities and manufacturing plants, are now part of Fonterra.

The following analysis of the dairy industry identity and image is based on interviews conducted with industry members from ViaLactia, the research organisation formed to focus on biotechnology research, and from the NZDB/Fonterra. These industry employees worked in communication, media relations, operations, marketing, and legal areas. Separate interviews were also conducted with representatives of dairy factory management, and the New Zealand Dairy Workers' Union. Four focus group discussions were conducted with organic dairy farmers, smaller dairy farms, larger dairy farms, and with sharemilkers, as described in detail in Chapter Four. The analysis also includes discussion of NZDB/Fonterra websites and annual reports. Industry members' 'accounts' provide insights into how the industry operates, why it has become such a successful global

dairy industry, and why the industry GM policy is thought to be crucial to the industry's ongoing success.

Competition in the International Marketplace and Perspectives of Risk

One of the major differences between the kiwifruit industry and the dairy industry is the different market access enjoyed by each industry. As outlined in Chapter Two, the dairy industry has very limited access to the lucrative markets of Europe, Japan, and the United States because of trade barriers which limit the quantity of dairy imports to these countries. Only small quantities of branded New Zealand products such as milk, yoghurt, and cheese can be exported from New Zealand to these markets, and the majority of New Zealand's dairy income comes from the sale of commodity products such as milk powders to markets in Latin America and South East Asia. These commodity products compete largely on the basis of price, and rely on New Zealand's history of efficiency in the dairy industry, and extremely low-cost milk production, to survive in the international dairy marketplace.

The strategic importance of maintaining these markets was perceived to be paramount by industry members. A market rationality was given for GM research and development, based on the need to compete in international markets, by seven out of nine dairy industry personnel, and in three out of the four focus groups held with farmers. For example:

Genetic modification has got a lot of potential in terms of delivering possible benefits . . . we saw our competitors operating in the same sort of areas, so people such as Arla and Nestle . . . and I mean they're big competitors of ours and once competitors start to look, then in some ways you're too late. (NZDB/Fonterra marketing spokesperson)

Global interconnectedness makes image and reputation an important part of competitive advantage (True, 2003) and for the dairy industry, image and reputation was represented as being competitive with regard to GM.

Consequently, the strategic use of GM was positioned as *essential*, and was frequently associated with the need to maintain and enhance the *efficiency* of the

industry—the basis for the competitive advantage—as described clearly in this colourful comment:

The industry's success was always and still is built on its sole advantage over all of its competition globally, which is that it can produce the raw material of the business—milk—more efficiently, at a lower cost than anybody else ... and that basically was because the 'moos' can live outside all year round and nobody has to build a shed for them ... Suddenly, it becomes potentially possible to breed animals which don't need to go in sheds, grass which grows happily in snowy conditions and then you can work out many of the other opportunities. So, we lose our advantage then potentially, or we enhance and reinforce our advantage also by producing better grasses and better clovers and better fodder at lower cost and diddly-do. So, risks huge, rewards huge, an option for putting your head in the sand ... none, really. (NZDB media spokesperson)

This positioning privileges managerialist discourses of pragmatism that focus on an instrumental rationality based on economic utilitarianism (Prasad & Elmes, in press). Such managerialist discourses emphasise growth, productivity, quality, and continuous improvement in a fiercely competitive, market-driven environment, and, it is argued, prioritise profit at the expense of other values (Capelli, Bassi, Katz, Knoke, Osterman, & Useem, 1997; Henderson, 2003). The continuing efficiency of dairy industry production, and thus retaining a competitive advantage in the international marketplace, was linked with researching and developing GM products.

As Levidow (1998) suggested, talking about the efficiency of biotechnology reduces it to a discussion of attributes and outcomes that commoditises nature in terms of quantifiable outputs (ends), through the use of a neutral technical tool (process). Technology is then constructed as value-free, separated from the means of production and social purposes.

The identity of the dairy industry as a global competitor in international dairy markets, and the specific attributes of that identity as a producer of low-cost commodity products, with a very limited value-added product range, set the base for the industry position on GM. Participants in the individual focus groups and interviews were strongly aware that this industry identity underpins the whole operation of the industry. For example: "If they can find ways of enhancing just even a commodity, straight away they command a premium price" (Respondent E, Larger farms focus group). The industry identity was seen as necessarily dynamic,

responding to external change to remain competitive in the global marketplace, and if necessary using GM. For example:

If we see farmers in other parts of the world getting an edge over us because of GE, if we are not using it, you can bet your boots farmers in New Zealand are going to squeal pretty smartly. (Respondent B, Smaller farms focus group)

Not pursuing GM research and product development was then seen throughout the industry as a risk, an opportunity cost, rather than benefits of GM being seen per se as the main driver of the GM and biotechnology policy. As Gioia, Schultz and Corley, (2004) argued, the dynamic instability of identity can be an adaptive response to a changing competitive environment.

However, industry members also identified risks in *pursuing* GM. For example, the spokesperson from ViaLactia positioned the “deliberate” investment of 150 million dollars in GM research and development as a significant financial risk, which might have uncertain outcomes both in terms of developing a viable product and in terms of establishing viable markets for those products:

Now the upside is huge, but there’s a risk (a) that we won’t be successful in our science; (b) that the consumer will not want genetic modification. (ViaLactia spokesperson)

The financial risk of investing in GM research was seen to be worthwhile because the New Zealand dairy industry was positioned as *uniquely* able to compete successfully in global markets. This was attributed to its history of successfully managed integrated dairy production “from grass seed right through to the consumer in the supermarket,” and because of its planned integrated approach to GM research and development at multiple related levels— “across three platforms ... cows, pasture and bacteria”—that is animal breeding and management, feed management, and pasture management (ViaLactia spokesperson).

Interestingly, the dairy industry is described here as an “integrated” industry because it focuses on every level of dairy production and supply from the level of seed/pasture through to manufacture and marketing of milk products. This description has marked similarity with descriptions of the kiwifruit industry as “integrated,” explored earlier in this chapter. This may be explained by the fact that both industries are largely cooperatively owned by the primary producers

themselves; although, the integrated nature of the dairy industry was not as prominent in the rhetorical positioning of the GM policy or brand identity. The similarities and differences between the two industries will be discussed more fully in the final section of this chapter.

Six of the industry managers and participants in two of the focus groups also commented on the risk that consumers would *not* choose GM products, and on the importance of acknowledging consumer concerns. In fact, as explained in Chapter Five, more weight was given to such concerns in the interviews and focus groups—which were conducted for this research between 2002 and 2004—than was acknowledged in the submission to the Royal Commission and other positioning documents produced by the NZDB in 2000 and 2001. For example, this was acknowledged by the ViaLactia spokesperson:

It allowed us to use genetic modification if that is what we wanted to do. But the strap line that we used was preserve the opportunity and we knew at that time that there was no way that we would be ready to do genetic modification for a decade and even then it would be by way of field trial, not commercial. ... We are always committed to our consumer and we will never do anything that will cause a difficulty for our consumer, whether it's the person who's eating our consumer products or the purchaser of our ingredients, and we constantly say it even today ... "We will not use GM unless it's acceptable to the consumer." (ViaLactia spokesperson, original emphasis)

Consumer concerns were similarly acknowledged by the communication spokesperson primarily concerned with industry stakeholders as “paramount,” such that, “The industry needs to be acutely sensitive to consumer perceptions and it’s critical to maintain the confidence of our customers” (NZDB/Fonterra communication spokesperson). Concerns were also acknowledged by the media spokesperson:

The message out of the market place, from the marketers, is for heaven sakes keep your heads down and don’t talk about this subject [GM] and be careful in all you do, not to ‘queer’ our pitch. (NZDB media spokesperson)

Although there was always awareness that the development of GM products was a risk to dairy markets, at the time the GM policy was developed this was expected to be short-lived. If increased information about GM was given to consumers and stakeholders, it was expected that attitudes might quickly become more favourable.

In fact, it seems likely that risk-averse consumers are becoming more entrenched in their attitudes to GM (Gaskell, Allum & Stares, 2003; Grunert, Bredahl, & Scholderer, 2003; Reisner, 2001; Shanahan, Scheufele, & Lee, 2001), particularly in relation to foods (Gaskell, Allum, Bauer, Jackson, Howard & Lindsey, 2003).

Industry members commented that little consumer perception research had been conducted, but that, for example:

It was probable in the fullness of time it [GM] would be much more widely accepted at least in various forms . . . we expected consumer resistance, if it was there at all, to drop away. (NZDB media spokesperson)

However, the marketing spokesperson indicated that since the Royal Commission further consumer perception research has been completed, and the position has changed:

We won't release any genetically altered product into the food chain unless there's a clear demand from consumers. And of course there's not a clear demand now and I can't imagine that there will be for a long time to come yet. (NZDB/Fonterra marketing spokesperson)

Although the competitive marketplace for dairy products was still the rationale given for GM, at the time of the interviews and focus groups with dairy industry members—after the report of the Royal Commission and the Government response—the *urgency* of the dairy industry rhetoric disappeared. Significantly, unlike in the documents analysed in Chapter Five, there was no emphasis on the research and development of biotechnology or GM being a *race*. This was perhaps also because the Commissioners' report and Government policy confirmed that GM research and production *could* proceed, albeit with caution.

Interestingly, the dairy industry's GM position was modified strongly in the interviews with comments on the need for 'caution'—a word much used in the Report of the Royal Commission and repeated in Government policy statements—for the preservation of opportunity, but with commercial development predicated by consumer acceptance of the new technology. Arguably, the dairy industry chose to align its rhetorical positioning on GM more closely with that of the Government to ensure both Government and popular support for future dairy industry research and development. Perhaps because of the size of the dairy industry in New Zealand and

world markets, and because of its existing sphere of influence with policy-making institutions, the NZDB/Fonterra assumed that they could also respond to consumer concerns by re-positioning those concerns, rather than modifying the preferred policy on GM. In the context of its GM policy, the identity of the dairy industry as a strong competitor in the global marketplace thus exists in tension with its positioning as responsive to customer concerns.

Industry Stakeholder Identities and Rhetorical Understandings of Risk

Despite the single focus of the dairy industry GM policy, farmers in all of the focus groups held varying attitudes towards GM, and were as likely to acknowledge a wide range of possible risks as international consumers. The New Zealand general public has been similarly found to acknowledge varied concerns (Cook, Fairweather, & Campbell, 2003; Gamble & Gunson, 2002; Henderson & Weaver, 2003). As a producer group, there was no clear indication that farmers identified themselves strongly in favour of, or against, GM *per se*. As in the kiwifruit industry, comments included concerns about the *control* of GM. For example:

The scary part about it is what I said. Where's it going to end? You know, how far are we going to go with it and who's going to control it and who is going to play God with it? (Respondent C, Larger farms focus group)

The phrase “who is going to play God” identifies the inequities that might eventuate if particular interest groups use GM to meet their own agendas. As in the kiwifruit industry, concern about the control of GM suggests that individuals felt unable to take action because they lacked power over the processes and practices associated with GM. This is consistent with theories emphasising the social and cultural construction of risk (Douglas 1992; Douglas & Wildavsky, 1982; 6, 2005).

Other farmers had concerns about the *agendas* of multinational biotechnology companies, describing these as “blackmail,” and about the *patenting* of GMOs (Respondent C, Organic farms focus group). Again, such concerns about the business agendas of multinational organisations, and the possible impacts of GM both economically and culturally through the establishment of patents, echo common GM

discourses (see, for example, Hindmarsh & Hindmarsh, 2002; Krimsky, 2003; Kurian & Munshi, 2003; Muller, 2004; Shiva, 1997).

As for kiwifruit growers, uncertainty about the long term *environmental* impacts of GM was expressed in all focus groups, with references to the effects of DDT, gorse, and blackberries, such as, “Some of these things that we’re talking [about] just keep going. There’s no end” (Respondent A, Organic farms focus group), and “How can you stop it” (Respondent C, Smaller farms focus group). Such discourses of *uncertainty* associated with GM risks are typical of the ‘risk society’ identified by Beck (1992), which, he argued, is emerging because industrialisation creates more and more risks that cannot be quantified in space or time (see also, Adam, Beck & van Loon, 2000; Lash, 2000). Such uncertainty then results from the questioning of prevailing conventions of rationality. Environmental impacts are particularly important to farmers, since residues in soils can prevent the use of land for agriculture and impact on the economic viability of their farms.

As might be expected, organic farmers were particularly concerned about GM risks associated with the environment, but they were also concerned—“it scares the hell out of me”—about “the impact of. . . adding viruses and the antibiotics and what have you . . . to our food chain” (Respondent B, Organic farms focus group). Such concerns about the risks associated with using anti-biotic markers and viruses in GM research are well-reported in the GM literature (see, for example, Ho, 1999; Rifkin, 1999).

At the same time, farmers in all focus groups except the organic farmers’ group, could see a number of potential benefits resulting from GM. These included industry-specific benefits, such as “growing heavier crops or having bigger cows,” but also health benefits, such as possible treatments for multiple sclerosis, particularly if there was a personal interest: “If you had a child with multiple sclerosis your attitude would change I think” (Respondent A, Larger farms focus group). This focus on the health benefits of GM reflects current Western discourses which privilege health values (see Beck-Gernsheim, 2000; Reisner, 2001), indicative of a substantive, outcome-oriented, *value-based* rationality (Giddens, 1972; Weber,

1978). However, other farmers' comments also indicated pragmatic, means-oriented, *instrumental* rationalities focusing self-interestedly on farming production, even though such benefits were not highlighted particularly in the NZDB documents designed for farmers. As in the kiwifruit industry, the possible management of pests and diseases, "where we would use less sprays . . . or less insecticides" (Respondent B, Smaller farms focus group), was represented as a possible benefit of GM. Such *personal* motivations are evidence of the 'bounded rationality' described by (Simon, 1976); that is the ability to focus only on decisions that are available to the decision-maker given the constraints of previous knowledge and experience.

However, farmers also endorsed the instrumental *market* rationality evident in dairy industry documents; for example:

Those sort of efficiencies [potentially from GM] are what has kept New Zealand farming at the forefront of the world for returns and we can't ever afford to not be up with the play. We've got to be that far ahead of the rest of the world, always be converting grass to dollars, because that's what we do; and we've got to be at the top because we are the only unsubsidised country in the world. (Respondent C, Sharemilkers focus group)

In one focus group, the dairy industry was implicitly linked with New Zealanders' identity as a "small country" of "risk takers": "We've actually developed and researched a lot of things that the world has benefited from" (Respondent A, Larger farms focus group). This is reminiscent of the alignment of the kiwifruit industry brand identity with bungy jumping and images of New Zealanders as innovative pioneers. It demonstrates that dairy farmers drew on similar imagery to link the dairy industry identity with their own identity as New Zealanders. Farmers thus drew on multiple value-premises in their accounts of dairy industry positioning on GM evaluating different outcomes, for example, weighing up the possible "detrimental effects in the future" and ensuring that the processes used are "tried and true first" (Respondent E, Smaller farms focus group).

The spokesperson from the Dairy Workers' Union similarly represented multiple possible risks and benefits in relation to GM. However, as might be expected from a union representative, he was concerned primarily about the health and employment issues which might arise for dairy industry workers from GM

research and development: “At the end of the day I think it pulls down to our basic responsibility in the terms of health of our members” (Dairy Workers’ Union spokesperson).

The booklets explaining GM policy to dairy industry stakeholders, analysed in Chapter Five, were clearly produced by the NZDB/Fonterra executive group because of the need to allay concerns such as those articulated above by the union spokesperson, and to convince farmers, workers, and marketers within the dairy industry—internal stakeholders—of the value of GM research and development. In contrast, the interviewees who were part of that executive group—NZDB and Fonterra managers—made *no* comment about *any* risks associated with GM, other than the financial ones discussed earlier in this section; their support for the industry GM policy was unanimous. As a distinct industry group, the accounts of industry managers reflected their professional backgrounds (largely scientific and technical), and their identification with instrumental technical/scientific, or economic perspectives of GM. Two of the industry managers commented emphatically on the *safety* of GM. One interviewee clearly privileged such a technical rationality for GM, with the comment, “a marvellous potential—I mean it’s a technology.” (NZDB/Fonterra legal spokesperson). This comment additionally implies that such a technical rationality is ‘normal’ and draws on discourses of technological determinism that *assume* the benefits of technologies such as GM (see Levidow, 1998). The comment of the ViaLactia spokesperson was equally emphatic: “When somebody says to me, ‘Are you sure that this particular genetic modification will not have an adverse affect?’ I am as sure as I am that that building will be there tomorrow morning” (ViaLactia spokesperson). In conceiving of safety purely in terms of a technical/scientific rationality, these managers excluded social or cultural risks, or possible ecological risks to the environment, which were considered to be dependent on social, cultural, and political values at odds with the objectivity of science. This position denied the possibility that science itself might be socially constructed (see Brown, 2001; Latour, 2004; Segerstrale, 2000).

The specialist functional industry groups, for example, farmers, manufacturing, technical, marketing, and research, then expressed somewhat distinct identities, separate areas of interest, and interlinked but separate rationalities in relation to GM policy. As Scott, Corman & Cheney (1998) suggested, individuals may hold multiple identities in an organisation depending on the different organisational roles they undertake, involving multiple processes of identification with organisational values and the premises for decision-making. However, although they acknowledged that dairy industry marketers and some farmers held concerns about the risks associated with GM, dairy industry managers never expressed concerns about GM per se. The safety of GM was assumed in the eyes of dairy industry management, and the rationality supporting this was normalised—assumed to be the only valid perspective.

At an operational level, the dairy industry participates in a world that is no longer ‘GE free,’ and the *global* identity of the New Zealand dairy industry was represented as demanding that it respond to GM initiatives taken by other countries in the global marketplace. It was evident in the analysis of the dairy industry positioning documents on GM in Chapter Five that the industry was particularly concerned to ensure that the legislative and regulatory environment was favourable for GM *research and development*. However, for operations, technical, marketing, and legal managers in the dairy industry, the regulatory environment surrounding GM was also a significant *management* issue.

Regulation and Certification: Auditing Technical Operations

As in the NZDB submission to the Royal Commission, the legal and regulatory framework for GM research and development was a major focus in interviews with legal and technical dairy industry spokespersons. Because the New Zealand dairy industry is a global industry, both New Zealand and *international* regulations impact on the research, development, and manufacture of milk-related products. The dairy industry expected that because of its global status, industry knowledge, and experience in managing international regulations, recommendations

about regulations impacting on dairy industry production would be taken seriously by the Government (and the Royal Commission). For example in relation to environmental risk management in New Zealand, the legal spokesperson, who had co-ordinated the NZDB submission, commented that New Zealand's environmental risk management system was "rigorous" and, in fact, "too restrictive," causing "barriers." She added, "We ... could see areas where there needed to be some amendments and changes, and those have occurred" (NZDB/Fonterra legal spokesperson), indicating that the expectation of influencing Government was successful.

In relation to international food safety regulations, this expectation that the dairy industry would be influential in determining the scope and direction of future regulatory systems was justified by references to the "expense" of being "exposed" if a regulatory system were developed that effectively "sets up some sort of trade barrier." This spokesperson emphasised:

There's a tremendous amount of knowledge that we can piggyback on if we work with other regulators and other regulatory systems . . . trying to bring that knowledge and experience to the Commission was important to us. (NZDB/Fonterra legal spokesperson)

As indicated in Chapter Five in the analysis of the NZDB submission, at an executive level the New Zealand dairy industry has an identity as an international leader in the area of food regulation. The dairy industry role in the development of New Zealand Food Safety Authority regulations was described as "proactive"; for example:

You know we're involved and working quite closely with the New Zealand Food Safety Authority, not just on genetic modification but a whole raft of things. So we work very closely with them to make sure that they are aligning in their requirements with our importing countries and also that any monitoring or certification or audit type activities are practical ones and meaningful. (NZDB/Fonterra technical spokesperson)

Here, it is evident that this proactive role involved powerful lobbying strategies in the interests of the industry.

As a manufacturing industry, the dairy industry had experience of working with GM products and processes prior to the Royal Commission, through both sourcing other products to be combined with milk, and guaranteeing the composition of its own products for supply to others. It has two manufacturing arms: New

Zealand Milk which produces the branded products that go into New Zealand, Australian, and some European and US markets; and New Zealand Milk Products, which produces milk powders, and ingredients such as casein for incorporation into milk and non-milk products, sold largely within Latin America and South East Asia. The industry therefore has to audit all its manufacturing processes to ensure that the products are acceptable in diverse markets. This includes being able to specify the technical GM status² of ingredients, processes, and products, which has clearly become a management issue for the industry.

Although, as discussed in Chapter Five, it was evident that the dairy industry favours *minimum* regulation of research and development of new GM processes and products, *robust*, clearly articulated regulatory systems surrounding the auditing and detection of GM are supported by the industry. In regard to GM, the technical spokesperson explained that:

There's a number of layers that you can go to, to identify whether a product has been exposed to or has . . . been processed with or has even come from other products that may have been genetically modified . . . you can keep going down to the nth degree and there's times when you want to do that and there's times when having a broad brush approach is okay. (NZDB/Fonterra technical spokesperson)

The dairy industry needs clear systems regulating the importing of GMOs to New Zealand to ensure these are consistent with the regulatory systems they have to abide by, imposed by countries importing New Zealand milk products. The dairy industry thus frames the GM regulatory environment in terms of its importance at a technical/operational level as well as at a research and development level. This reflects its identity as a manufacturing industry, and is consistent with its construction of GM risks as purely technical.

Levidow (1998) referred to a regulatory perspective of GM/biotechnology as “biotechnologising regulation” (p. 220)—meaning that regulatory policy is

² The GM status of a product can be assessed at four different levels: contains GMOs, PCR (Polymerase Chain Reaction) negative-tested (a specific test to look for specific genetically modified material), identity-preserved, and no GMO association.

developed to support specific biotechnology values. He commented that in the United Kingdom regulation is essentially a means of protecting biotechnology research and development; it marginalises the perspectives of other potential experts, and limits definitions of risk. In contrast, in Denmark biotechnology regulation is linked with *sustainable* agriculture (Levidow, 1998).

The accounts of the industry managers indicate an instrumental, technical focus. This suggests that both the process and products of GM, and the resulting compliance issues, can be managed “in the same way” as any other manufacturing constraints—for example, the production of kosher halal food (NZDB/Fonterra technical spokesperson). In this sense, policies and practices associated with GM are represented as being part of the *normal* operational context of the dairy industry—just the way things are—a social construction of the risk environment (see Cronon, 1996; Douglas & Wildavsky, 1982). This operational focus on regulations and controls supports the industry identity as an efficient, well-regulated industry, focusing on technical issues as opposed to cultural and social ones; it sets up the expectation that any new technology or particular auditing requirement can be similarly managed. However, the emerging status of the international regulatory systems clearly creates some difficulties, as can be seen in the following comment:

I guess the issue, if there was compliance required, is that there are different testing standards as well around the world. So . . . if we decided to go GM-free . . . we might set up regimes that meet our standard, which presumably would be linked to an international standard. But customers invariably have developed their own test methods and while some of them might go, GM is a relatively new discipline and they may be relying on international standards, they may not. (Dairy factory manager)

The values held by dairy industry management in relation to GM underpin both the industry’s manufacturing identity and its technical rationality. This rationality constructs GM risks simply as technical compliance issues, and is informed by technical/scientific and risk discourses that construct risk and ‘nature’ as able to be managed and controlled.

Ethical, Cultural and Social Issues

Consistent with the privileging of these scientific and risk discourses, scientific facts were represented by the legal spokesperson as indicating the ‘true’ safety of GM, able to be isolated from social and cultural values:

We recognised the extremely difficult areas of social, cultural, and Maori issues particularly, and acknowledged them, but we were very keen to try and ensure that some of those, in quotation, “values” issues were kept quite separate from the safety and risk issues . . . And they just can’t be handled in the same way - the risk, the *true* safety and risk to the environment. (NZDB/Fonterra legal spokesperson, emphasis added)

This comment again fails to recognise the contested nature of scientific ‘truth’ (see Brown, 2001; Scott & Carr, 2003; Segerstrale, 2000) or that science is inevitably political (Horlick-Jones, 2005; Latour, 2004; Nelkin, 1984). It represents science as objective, value-free, and apolitical.

Only two dairy industry managers mentioned ethical issues, and it was assumed in both cases that such issues could be addressed by arguments using the instrumental rationality of the free-market. For example:

Obviously ‘consumers’ is a big bundle of everything including the ethical, cultural and social issues, and so there’s no way that we would do something that would upset our consumers. If we did we are out of business. (ViaLactia spokesperson)

This rationality draws on neo-liberal public choice theory which constructs the market as amoral, and decision-making as an individual choice. Yet, this approach fails to recognise the hegemonic nature of the market and the resultant marginalisation of particular groups and values (see Cheney, 2004; Moloney, 2003; Roper, 2003; Tenbenschel, 2003). This means that in the case of GM, the particular market perspectives of powerful corporate businesses regarding the benefits and risks of GM products may be normalised; for example, the assumption that GM products will provide the means to feed the world’s hungry peoples with little or no attached risk. In this instance, the perspectives of the cultural groups intended as recipients of GM products may be marginalised; for example the right of these groups to maintain their own agricultural traditions may be ignored.

In contrast, farmers were much more prepared to take seriously the ethical and cultural issues underlying GM policies, and drew on socio-political discourses

about GM, such as those discussed by Shiva (1997, 2000) in relation to the potential loss of biodiversity, and the marginalisation of other cultural groups. For example:

So you might say okay, well this particular genetic modification of a crop is going to produce this amazing abundance of food, but within five years all the hundreds of seeds that have been saved . . . in the seed banks of the poor of the world is lost. Well you know you've got a gain and a loss. You've got to decide if that loss is worth more or more valuable than the gain you've made over there. (Respondent C, Larger farms focus group)

This was an interesting contrast to the general rhetoric of the industry documents and that of many of the industry personnel, which constructed ethical or cultural concerns and values as being able to be separated from technical concerns. Decisions can be made on several levels depending on the specific identification and specific industry group or value-premise that takes precedence at any one time. For example, a personal identification could override an organisational one and an organisational decision could override a socially desirable one or vice versa. So decisions may be 'correct' for different reasons, as a result of different rationalities and identifications (Simon, 1976).

The most prevalent value-premises and rationalities underpinning the dairy industry's rhetorical positioning on GM reflect the *corporate* identity of the industry. They highlight instrumental technical rationalities for GM which marginalise the wider ethical, cultural, and social values held by their industry stakeholders. The marketing and technical focus of the dairy industry GM policy was less clearly articulated with common industry-wide values and strategies, and the diverse values and identities demonstrated by specific industry stakeholder groups, than in the kiwifruit industry. This resulted in less consistency in dairy industry members' identification with the GM policy. In the farmer focus groups, there was varied discussion related to the particular perspectives able to be taken on GM, and farmer groups identified more strongly with the historical *cooperative* identity of the dairy industry as discussed in the next section.

Organisational Contrasts: A Corporate/Cooperative Industry

Many of the groups within the dairy industry have a distinct and independent identity; they experience a hierarchical relationship with the executive management group, yet this is a cooperatively owned enterprise. Such groups move in and out of relationships as internal and external stakeholders with the larger industry organisation (see Cheney & Christensen, 2001a); for example, farmers are both owner/shareholders of Fonterra, producers/suppliers of milk to Fonterra, and consumers of dairy products themselves, reacting to Fonterra policy on GM. They have had to contend with changes to the industry organisation as a result of the increasing market orientation demanded of the industry by virtue of its involvement in global dairy markets. Both Cheney (1991) and Doolin (2002) have argued that one impact of market discourses on organisations has been the need for organisational members to re-negotiate their organisational or professional identities. In the dairy industry, this has meant that the *experience of farmers* is at times marginalised by the consequent privileging of the *marketing* initiatives formulated by the executive of the industry organisation.

Farmers own 100% of the shares in Fonterra, yet on a practical level their concerns end at the farm gate when their milk is collected for sale or manufacture into other products. In the larger farms focus group, there was some discussion about possible private agendas for research and new technologies, and regret that *competition* rather than *cooperation* is the current likely basis for decision-making. Competition was felt to be less in the industry interest and likely to result in less “concern for the environment and other people” (Respondent C, Larger farms focus group). Another respondent also commented, for example:

The unfortunate change is that historically when we as a community found a good crop you shared it around. Now you patent it and protect it from someone else so it's that kind of greed factor which is making that negative I think. (Respondent A, Larger farms focus group)

However, such private commercial agendas were interestingly rationalised by these farmers in terms of “progress” (Respondent A, Larger farms focus group), and a belief that the research and development of new technologies inevitably leads to

improvements in lifestyle, a form of technological determinism (see Chapman, 2004; Levidow, 1998)

Organic farmers represented technical perspectives of science—“things that are in a box,” and “isolated”— as driving GM research, rather than the organic or ecological perspective which they favoured. By implication, they identified themselves as *farming experts*: organic farmers who were *different* from Fonterra, a *business organisation* with a pro-GM perspective of science For example:

I think too we're back to the—I don't want to say ignorance but the lack of knowledge by our scientists about the whole process on the farm and all the life on the farm, the biological life on the farm. . . . [Scientists] think that . . . that isolated area will affect that and only affect that but it's the whole thing that affects things. It's the biological life plus all those things in boxes that work together to get the production on a farm. (Respondent C, Organic farms focus group)

They believed that the private agendas of corporate business were driving the direction of GM research through the allocation of considerable funding, a public concern identified in other research findings (Henderson & Weaver, 2003; Krimsky, 2003). In this focus group, farmers identified a trend for farms to become larger in size, and for “factory farming”—increasing specialisation of farm production (Respondent C, Organic farms focus group). They were less able to work with an overview, with a ‘big picture’ of the dynamics of farming, and felt they were losing the knowledge associated with “traditional” methods of farming practice:

We see the farmers looking for something that they are told will fix that problem instantly . . . because it's easiest and the quickest, instead of going out and using their own eyes and ears and things and taking their staff with them to educate them about the different stages of development on the farm. (Respondent C, Organic farms focus group)

Some regret, then, was expressed in the organic farms focus group for the loss of traditional, cooperative dairy farming practices. As owners they used small-scale, *cooperative* methods in contrast to the global *corporate* identity of the industry in the competitive international marketplace.

Because of the size of the producer group—nearly 14,000 farmers—decision making and communication between farmers and the executive/corporate management group is of necessity managed by processes of representation and delegation. Much of the consultation that occurs with farmers thus takes place at the

level of the Shareholders' Council, where 48 representatives of dairy farm owners meet regularly with corporate dairy industry managers.

In some instances, it was evident that despite being shareholders/owners, farmers felt that information about GM from the NZDB and Fonterra management groups had been scant. The organic farmers and sharemilkers referred to the level of information provided as “just about like a taboo subject,” (Respondent B, Organic farms focus group), and “Fonterra don't actually spit a lot of information eh!” (Respondent D, Sharemilkers focus group). A more detailed comment indicated:

Basically they—in a couple of their publications they had a couple of brief outlines on, or media releases about their research arm, other than that we've asked for as I said their policy on GE, which I think we got about twelve or eighteen months ago. Other than that they haven't—they've kept very quiet on that issue. (Respondent D, Organic farms focus group)

Farmers in the larger farms focus group felt that the industry was well supplied with information. This was generally given high “credibility” simply because it came from industry sources that were trusted because of the cooperative nature of the ownership (Respondent E, Larger farms focus group). However, it was evident that farmers had little involvement in policy decision making. In the smaller farms focus group, the farmers identified different possible rationalities for decision making about GM, such as, “Do you make an emotional decision, political decision or one based on science?” (Respondent B, Smaller farms focus group). This uncertainty indicated that they had not themselves been part of the dairy industry decision-making on GM policy.

Farmers clearly identified themselves, as milk producers, as most concerned about the success of their own farm as a business and their dollar return, and as separate from the decision-making management and marketing groups in the industry. On some occasions, for example, they felt they were not consulted, or that they “have no say in what goes on in the company” (Respondent B, Sharemilkers focus group). Others were frequently content to leave the decision to the marketers or executive groups in the industry; however, one participant was more self-critical:

I think a lot of us think, “Well, somebody above us is going to make a decision and we'll farm in the way that we are told to”. . . . So we don't educate ourselves

enough about the topics, somebody else is going to make the decision for us.
(Respondent D, Smaller farms focus group)

Another participant suggested that farmers would become more “political”, more involved in decisions if they felt policies were “wrong” (Respondent C, Sharemilkers focus group). At the same time, there was a level of trust in the Shareholder Council system and a belief that Councillors did consult with farmers:

If for example there was something that really sent, you know, alarm bells off, the Shareholder Council would have then gone back to shareholders with that.
(Respondent G, Larger farms focus group)

Farmers evidently also valued the numerous farmer networks and informal discussions felt to be typical of rural communities, over “a few beers,” or the “grapevine,” and “word of mouth” (Respondent E, Organic farms focus group).

Yet, farmers were very aware that, as a large corporate organisation, the dairy industry holds “political clout” as a lobby group, and individuals have no such power (Respondent F, Larger farms focus group). They were also aware that this political power exists because the industry is a world player in international markets, and contributes significantly to the New Zealand economy: “If we were only one percent of the economy, we still wouldn’t have the power that we’ve got now” (Respondent A, Larger farms focus group).

Farmers thus saw both advantages and disadvantages in the duality of their identity as cooperative farmers and shareholders of a corporate industry organisation. However, overall, the prevailing dairy industry values and rationalities which underpinned its formal rhetorical positioning on GM reflected the *corporate identity* of the industry organisation, rather than the diverse values and *cooperative identity* at times espoused by individual farmers. The dairy industry appears more fragmented than the kiwifruit industry, in line with the diverse nature of its organisational structure, its products, and its brands.

New Zealand Dairy Industry Brand Values

Despite the emphasis on a market rationality for GM policy, based on the competitive nature of New Zealand’s global dairy markets, industry members made

little reference to a particular brand identity for the industry. Within the two main product sectors, New Zealand Milk and New Zealand Milk Products (NZMP) multiple products are marketed under a variety of brand names, and the imagery associated with these brands is at times inconsistent with the industry identity privileged in its GM positioning. It would seem that the ‘integration’ of the industry, referred to by the ViaLactia spokesperson, is limited to the hierarchical structure connecting industry stakeholder groups. A brand identity was not articulated strongly with the GM positioning, as in the kiwifruit industry. Similarly to the kiwifruit industry, however, the NZ Milk branding philosophy was described as:

A logo and branding philosophy based upon energy, freshness, vitality and a clean, green country. Its brand positioning is based on consumer preference for New Zealand milk products because they embody all the pure, fresh, natural values of New Zealand. (NZDB submission, 2000, 62.2, p. 73)

On the New Zealand Milk website, the stylised visual representation of the brand identity of this sector is based on three factors, which are defined on the website as: (i) the sun—to indicate forward thinking and the future, (ii) the land—to indicate the green New Zealand landscape, strength, pride, and determination, and (iii) the water—to indicate action and momentum, energy and good health. This website emphasises the nutritional qualities of milk, and the New Zealand dairy industry’s unique difference in terms of the New Zealand environment:

New Zealand milk comes from the best country in the world for dairy products . . . New Zealand is renowned as a clean, green country. With clean air, pasture and water, it’s the ideal environment for dairy products. (New Zealand Milk, 2001)

A number of different brand names for New Zealand milk products including Anchor, Mainland, Fernleaf, Annum, Anlene, and Andec draw on such images of the unpolluted New Zealand environment to create an identity for the industry.

Yet, no inconsistency was seen by the dairy industry between the use of GM and their brand identity, drawing on a ‘clean, green’ New Zealand identity. Interestingly the ‘strap line’ used by the dairy industry for consumer goods is “Nutrition for Life.” This is very similar to that used by the kiwifruit industry, “Putting Life into Life,” despite the difference in their GM positioning. Unlike in the kiwifruit industry, however, New Zealand imagery played little role in the

development of GM policy. Indeed, in the research interviews and focus groups, only one industry member (a marketing specialist) actually made explicit references to aspects of brand identity.

This marketing specialist identified that there might indeed be particular consumer ‘sensitivity’ to GM issues in relation to dairy products, because of the perception that concepts of ‘trust’ and ‘purity’ might be incompatible with GM. The marketing spokesperson commented that the consumer goods section of the industry is deliberately positioned to build on the *trust* associated with mothers’ milk:

Dairy seems purer, closer to milk coming out of mothers, those sorts of things . . . there’s many, many photos of young children having dairy products and mothers sort of cuddling children just to sort of position itself around that whole trust in milk and degree of trust in mothers (NZDB/Fonterra marketing spokesperson)

Interestingly, the same association between the *purity* of mother’s milk and GM was articulated by the activist group MAdGE in New Zealand to argue *against* the commercial release of GM.

For NZMP (ingredients) as in the kiwifruit industry, New Zealand’s reputation as ‘clean and green’ was again articulated with ‘purity’ in the sector branding. For example:

New Zealand has got a very strong reputation, I mean ‘clean, green’ is the cliché you hear all the time, but I mean that really is the way that people perceive New Zealand . . . there’s always subtle links between the *purity* of the food that we supply . . . and its New Zealand origin. (NZDB/Fonterra marketing spokesperson, emphasis added)

As this spokesperson emphasised, New Zealand’s image as having an unpolluted environment and high water quality, for example, is particularly important to the positioning of the New Zealand dairy industry overseas. When images of New Zealand are used in marketing dairy products, cows are always pictured on green grass to identify the milk products with this unpolluted pastoral environment.

It is perhaps surprising then that the dairy industry’s submission to the Royal Commission, other documents referring to policy on biotechnology and GM, and other industry members’ accounts rarely refer to New Zealand imagery in any detail. In the submission there is simply a brief statement that New Zealand’s ‘clean, green’ image is important:

NZDB does not believe research into GM, or responsibly regulated commercialisation of GM products, will harm New Zealand's image. (NZDB, 2000a, Section 21.3, p. 34)

The explicit message is thus that GM will *not* impact on the existing identity of New Zealand or of the dairy industry.

The only specific mention of GM in any of the Annual reports and speeches or on the websites is a brief statement in the Annual Report for 2001/2002 under the heading ViaLactia. In this instance, the dairy industry responded to increasing sensitivity surrounding the term 'GM.' The following comment focuses on the broad applications of the term 'biotechnology,' and reassuringly represents GM as only one example of this technology:

Biotechnology is the tool that allows us to examine and modify biological systems, either using natural means or more advanced tools, including the responsible use of genetic modification. (Fonterra, 2001/2002, p. 33)

The *contrasting* of the terms "natural" and "more advanced," and the use of the word "responsible" is, however, a rhetorical strategy consistent with the phrasing of GM policy developed by the NZDB in its submission to the Royal Commission. GM is positioned as *preferable* to 'natural' technologies because it is more advanced, an indication of progress, in contrast to references to biotechnology being a continuum and GM being no different from earlier natural breeding methods, as discussed in Chapter Five. Unlike in the kiwifruit industry, the industry values highlighted in the GM positioning are thus held in tension with brand values relying on images of New Zealand as a natural, 'clean, green' environment. The consistent use of the term 'natural' is thus problematic for the dairy industry in their brand positioning and positioning on GM.

The dairy industry GM positioning was driven at a corporate level by privileging the technical and financial affairs of the industry and marginalising the concerns and values of grassroots farmers and consumers. The policy makers constructed this technical and economic rationality as 'normal,' and therefore the 'right' perspective, framed by specific discourses of science and technology. As Wynne (1992) argued, looking at risks as 'acceptable' in a technical sense can be seen as "a self-delusory discourse that [allowed] such institutions to avoid the

ambiguities and social risks of *negotiating* the conditions of acceptability case by case” (p. 280). The industry personnel responsible for constructing the GM policy firmly believed that GM represented absolutely no risk to the environment or food products. They argued that an effective regulatory system would control GM processes and products such that images of an unpolluted, ‘clean, green’ New Zealand could be maintained, and they believed that the existing brand identity would not be affected by the future branding of any GM products.

It is evident from the accounts of these different groups within the dairy industry that different GM perspectives existed at the time the policy was developed. These reflected the multiple identities—identifications made on the basis of the particular roles and values held by industry members (see Scott, Corman, & Cheney, 1998; Wynne, 1992, 1996)—co-existing within the industry. The concerns of farmers and marketers within the industry about GM were therefore deliberately addressed by the management groups with very pro-active biotechnology communication strategies, as will be discussed in Chapter Seven.

Consumer attitudes to GM are also dependent on value systems which include a range of attitudes and images associated with the environment, pollution, purity, and ‘natural’ as well as on rational choice based on cost-benefit analysis issues such as price (see, for example, Gamble & Gunson, 2002; Knight, Holdsworth & Mather, 2003; Rowe, 2004; Uzogara, 2000). However, dairy industry policy makers privileged the global, competitive identity of the dairy industry and the industry’s technical/scientific identity as ‘cutting-edge’ research and development-focused. Such assumptions meant that, initially, consumer perceptions were constructed as ill-informed—a ‘deficit model’ of understanding science and technology (see Gregory, 2003; Michael, 1996; Hornig-Priest, 2001). Policy makers did not *believe* that consumer concerns about GM would persist.

In the final section of this chapter, the different GM positions negotiated by the kiwifruit and dairy industries are contrasted and compared in terms of different aspects of each industry identity, and aspects of New Zealand’s identity.

Conclusion: Different Voices and Different Identities in the Kiwifruit and Dairy Industries

Cooperative or Corporate Industries?

It is clear that the kiwifruit industry is a more integrated, cooperatively-run enterprise than the dairy industry. The kiwifruit industry has constructed a strong cooperative identity, as evidenced in both the industry documents and the accounts of industry members, which relies heavily on concepts of integration. The focus on integration is evident in the development and enactment of the ZESPRI System, and to a lesser extent the KiwiGreen pest management system and Taste ZESPRI, which provide the industry members with a means of sensemaking (see Weick, 1979, 1995, 2001)—both a conceptual ‘umbrella’ of values and a pragmatic means of organising.

Kiwifruit industry stakeholders represent the industry as having excellent communication practices, with different industry groups able to participate in conversations at a variety of levels of formality, from written communication, to face-to-face formal and informal meetings. Consultation is expected and enacted, and when this does not take place, the considerable trust built up within the industry ensures that the rationale for this strategy is widely understood and supported. As Hatch and Schultz (2004), and Scott, Corman, & Cheney (1998) suggested, the organisational rhetoric is both constituted by and constitutes this identity and the consequent processes of organising.

The kiwifruit industry, then, has constructed a complex identity as a successful organisational hybrid—a cooperative within which specialised industry groups can have independent functions but still retain a sense of collective identity. The high degree of involvement of all industry members, regardless of their specialised group membership, is evident. For example, kiwifruit growers can track their fruit right through the production process, with regular information being fed back to the grower regarding, for example, the relative size of the fruit, its sugar content, and the number of rejected fruit. Kiwifruit from an individual grower can in fact be tracked if necessary right to the marketplace. Growers get individualised

financial returns, based on the size and quality of their fruit (personal conversation, Julie Lankshear, kiwifruit grower, April 8, 2005). As a result, all industry members are very much in touch with every aspect of the production and supply process, and motivated to remain so, and they feel very involved in the industry.

In contrast, the dairy industry, although cooperatively owned like the kiwifruit industry, demonstrates a far more hierarchical organisational identity. Dairy farmers sell their raw milk to Fonterra, but their involvement with that milk literally ‘ends at the farm gate.’ Farmers then get no individual feedback about the destination of their milk; it is consolidated in the milk tankers into a single supply, for which they are paid an equal return (although a premium is now paid for organic milk).

This contrast in the level of industry involvement was identified by one of the kiwifruit growers as linked to the higher use of mechanisation in the dairy industry and was seen as relevant to the different industry positions on GM:

I think a lot of the genetic modification in this country is the result of more mechanisation with our productivity and therefore we are less hands-on, and there’s [kiwifruit] growers in orchards who are more aware of what goes on because most of us or all of us do the pruning and are actually interactive with our product. But I find you look at the scale of dairy farming now and how much more technically advanced, that is how much more bigger scale it is—there’s less hands-on, walking in the pasture, getting dirty. (Whangarei kiwifruit grower)

The size of the dairy farmer base is much larger—nearly 14,000 farmer shareholders compared to 2,500 kiwifruit owner-orchardists—and, although there are extensive communication systems to communicate with these farmers, there is more distance between the individual farmers and the executive group of Fonterra, than between kiwifruit growers and the ZESPRI Group. Although farmers do feel they have information and have a voice, the greatest involvement in industry consultation resides with the Shareholder Council. The dairy industry, as evidenced by the rhetoric of its documents, and by the comments of industry members, is a more corporate-run organisation than the kiwifruit industry.

Different Markets, Different Products

One dairy industry spokesperson suggested that the major difference between the dairy industry and the kiwifruit industry GM policies might result from the

Additionally, there is no evidence that other countries which grow kiwifruit are likely to try to bring a GM kiwifruit to market in the foreseeable future. There is, however, evidence that the New Zealand dairy industry's main competitors, Arla and Nestle, are already researching and developing milk products in ways that use GM technologies to reduce the costs of their products.

This kiwifruit industry member's comment clearly identified these differences between the two industries:

What you've actually got is . . . two commercial organisations who can see benefits in both directions. For us there is a benefit in not adopting, or there is no benefit in adopting . . . and there are potential risks in adopting. Whereas with Fonterra . . . there's huge potential gains . . . Ours is a luxury item and theirs is a commodity product and that's the difference, so in a sense ours is already differentiated whereas they're trying to differentiate. (Innovation team member, E)

ZESPRI draws on a national identity constructed for New Zealand which is "already differentiated"—the imagery associated with a clean and green, unpolluted environment. The comment that the dairy industry are "trying to differentiate" implicitly refers to the competition they face in the global marketplace—competition that New Zealand also faces in trying to be seen as an innovative, technologically sophisticated nation that competes economically in world markets.

Competing Identities for New Zealand

Both the strategic branding of the kiwifruit industry, and its GM policy, draw on values similar to those underpinning the '100% Pure' tourism identity for New Zealand. Risks associated with GM are identified as the loss of kiwifruit markets, and are implicitly constructed as the loss of environmental quality and integrity, the loss of 'natural' goodness, and the loss of hard work built on traditional, pioneering values associated with developing the land in innovative ways. The 'natural' environment is constructed as sacred, life-giving, and healthy, to be minimally violated.

In contrast, for the dairy industry, the risk is also the loss of markets, but in this case the loss of future markets, the loss of opportunity, of being competitive in global dairy markets. The risks to be taken in terms of GM are seen in terms of short

time frames for opportunity and gain; they draw on an identity for New Zealand, presented similarly in the Government's *Growth and Innovation Framework* (*Growing an innovative New Zealand*, 2002), of being at the forefront of global innovation and cutting edge technology. 'Nature', in this sense, can be changed, controlled, and commodified (see Desmond, 1995; Dickens, 1996; Merchant, 2000).

Interestingly, the Foreword of the *New Zealand Biotechnology Strategy* rhetorically positions this strategy as a way in which these competing New Zealand identities, or brands, *can* work together, combining values associated with traditional agricultural practices, with technology, cutting-edge research, competitive time-frames, and preserving environmental values:

New Zealand is a country built on an exceptional ability to add values to natural products by applying biological knowledge. We are fortunate in possessing an equable climate, but we are even more fortunate to possess the know-how to make optimum use of it. And we have been doing it for decades – milk products, kiwifruit and pine trees are just a few examples. More recently, New Zealand researchers have been involved in the creation of world-class human health, pharmaceutical and environmental research, all of which involve biotechnology . . . Developments in biotechnology move swiftly. We will need to work hard to keep abreast because those developments will bring great opportunities. They can also carry risks. It is important that a balanced approach to biotechnology is taken so that our economic, social, environmental and cultural values are given equal consideration. That is why we have developed this strategy . . . While biotechnology is much more than genetic modification this strategy is about preserving opportunities. (Ministry of Research, Science and Technology, 2002)

This strategy underpins current New Zealand Government policy on GM and biotechnology. It is both the result of considerable debate on the public policy, and the subject of ongoing debate. Arguably, the seemingly opposing submissions of *both* the kiwifruit industry and the dairy industry to the Royal Commission on Genetic Modification are reflected in this Government strategy. Although, the *explicit* focus of the strategy is on developing biotechnology (and GM), the references to "preserving opportunities," "natural products," "risks," and the need to consider "social, environmental and cultural values" *implicitly* represents the Government strategy as a *cautious* approach in an attempt to appease all parties in the debate. The *market* rationalities of the kiwifruit and dairy industry are combined to create a duality of approaches to biotechnology which draw on multiple identities for New Zealand. These approaches draw on different, sometimes competing

discourses and rationalities that reflect the ongoing tensions that need to be managed in negotiating with the practices of GM.

The next chapter, Chapter Seven, focuses on the engagement of both industries in the wider debate about GM within New Zealand.

difference in *market access* (NZDB/Fonterra marketing spokesperson). The kiwifruit industry has access to lucrative European (and US) markets, while the dairy industry is denied access to these markets for the majority of its products because of the trade subsidy and protection policies of these countries. Despite the fact that all of these countries are WTO members, free-trade is not a reality for the dairy industry. The most successful markets for the dairy industry are therefore in Latin America and South East Asia where the demand is for inexpensive commodity products that provide a lower return per milk solid than value-added products would gain in luxury markets.

The difference in GM policy between the two industries is also, therefore, to some extent the result of the difference in *product*. Kiwifruit are a raw, luxury product, while the dairy industry sells little raw milk or fresh products outside the domestic market. The level of technology required to process milk into the ingredients and other products which are eventually sent to international markets is much greater than the grading, packaging, and distribution required for kiwifruit.

Such differences in product were identified by individual kiwifruit growers to be related to consumer perceptions and the readiness with which foods may be identified as GM. Kiwifruit were represented as a “ready-to-eat product” as opposed to the dairy industry manufacturing process where the products “just become an ingredient in something else which is an ingredient in something else, a long way from the final product” (ZESPRI Gold kiwifruit grower).

The discourses and identities drawn on by kiwifruit and dairy industry members to rhetorically position both the industry and the policies on GM thus to a large extent determine the rationalities used for the justification of the GM policy. In the kiwifruit industry, *raw* fruit is articulated with *natural* products and processes, as a result of *sustainable* practices that draw strongly on *environmentalist* values. In the dairy industry, *manufactured* products are articulated with *technologically complex* processes, which rely on the support of extensive *regulatory systems* and draw strongly on *technical/ scientific* and *economic* values.

CHAPTER SEVEN

ISSUES MANAGEMENT AND RATIONALITY: THE ENGAGEMENT OF THE DAIRY AND KIWIFRUIT INDUSTRIES WITH KEY STAKEHOLDER GROUPS

Introduction

The GM debate in New Zealand is an example of a highly contested public policy issue that organisations seek to manage in an attempt to influence public opinion and public policy in ways that will be favourable for their own organisations. This chapter examines the kiwifruit and dairy industries' communication with key stakeholders from the perspective of issues management, and in terms of the values, rationalities, and assumptions evident in the industries' communication.

Because GM issues are important to the dairy and kiwifruit industries' successful business operations in international markets, each industry, by virtue of its identity as a primary export industry, negotiates its engagement with key stakeholders in terms of an overarching market rationality. This means that the economic outcomes of developing GM products for an international market are prioritised. However, this market rationality exists in tension with other rationalities linked to additional aspects of each industry's identity. These rationalities draw on a range of discourses to manage the legitimacy gap (Sethi, 1977) between stakeholders' expectations and the industries' policies and performance.

The key stakeholders include the industry members, whose support for the GM policy is necessary to facilitate its implementation; customers and consumers in international markets, whose continuing business is sought; and the New Zealand Government, whose policies, legislation, and regulatory frameworks set the context for the implementation of industry policy on GM. The key stakeholders additionally include interest groups engaged in the wider public debate in New Zealand, which also seek to influence public policy, for example, Greenpeace, the 'GE-Free' coalition, and the Life Sciences Network; and the New Zealand electorate, whose

support for particular policy initiatives gives social and political legitimation to Government policy and legislation.

This chapter draws on the ‘accounts’ of industry members in interviews and focus groups to critically examine the kiwifruit and dairy industries’ communication strategies and practices, as they engage in debate about GM and seek to influence that debate. The chapter examines the priorities accorded to particular perspectives, how these priorities are justified, and the discourses that underpin each industry organisation’s strategic decision-making. It explores further the proposition first introduced in Chapter Six, that the engagement of organisations with key stakeholders, in relation to specific public issues that have broad socio-political implications, will demonstrate rationalities that are linked to multiple aspects of the organisation’s identity.

The chapter is organised into three sections. The first two industry sections discuss how the organisational culture and identity of each organisation has facilitated or constrained specific communication strategies with industry members, to manage GM issues. The second two industry sections discuss the rationalities used by each industry organisation to establish zones of meaning (Heath, 1997) with stakeholders and engage with key interest groups. The final section of the chapter explores the political nature of both industries’ engagement with public policy decision-making in New Zealand.

Identity, Participation, and the Framing of Strategy: Industry Voices

In primary industries, it might be expected that the producer groups—the dairy farmers and kiwifruit growers—would see GM as a highly relevant *current* issue (see Crable & Vibbert, 1985). For example, they might have concerns about the possible risks and benefits of GM to the environment, by virtue of their involvement with the land, as well as concerns about the attitudes of their markets towards GM products.

Recent research argues for a dialogic approach to public policy issues management to increase shared understanding of the parties involved (see Heath,

2001; Leitch & Neilson, 2001; Murphy, 1996; Murphy & Dee, 1992; Taylor, Kent & White, 2001). However, organisations rarely engage in dialogue that is free of strategic intent or that seeks to collaboratively negotiate change (Cralle & Vibbert, 1985; Roper, 2005b). Indeed, they attempt to actively influence cultural values (Vibbert & Bostdorff, 1993).

In industries that are almost wholly owned by growers/farmers, a less hierarchical structure to the industry organisation than in other large corporate industries might also be expected. These producer groups might be involved in policy decision-making about GM and participate actively in communication about related issues. However, as Cheney's (1999) study of the changes in worker participation and values in the Mondragón cooperatives in Spain would suggest, the increasing external pressures on the kiwifruit and dairy industries as they compete in global markets may also mean that market relations are prioritised over other values, in deciding GM policy.

An organisation's issues management rhetoric may then reflect and impact upon not only on specific bounded messages to external publics but also on daily organisational working life. As Cheney and Lair (2005) argued, rhetoric plays a part in persuasion and identification at multiple levels in organisations, in the processes of organising, as well as in issues management. An organisation's rhetorical and discursive strategies will demonstrate a range of priorities and rationalities, which represent key value-premises and assumptions, as they make decisions about policies and negotiate with stakeholders. Yet, the role of values in organisational decision-making is problematic (Conrad, 1993). As Conrad argued, individual, organisational, and societal values mutually influence each other, and may be markedly and uncritically aligned. However, they may equally be so differentiated that organisations mobilise a range of strategies to manage the resulting issues.

Organisations may use processes of collective and retrospective sensemaking which purposively reduce equivocality and ambiguity in the organisational environment (Weick, 1979), and rationalise their strategic positioning, often retrospectively, to reconcile ambivalences created by the management of multiple

priorities (Conrad & McIntush, 2003). Such bounded rationalities (Simon, 1976) will additionally be influenced by the organisational structure, and preferred means of decision-making (Douglas & Wildavsky, 1982), and by the current discourses legitimated by major institutions (Douglas, 1986).

Participation and Tactics of ‘Silence’ in the Kiwifruit Industry

ZESPRI’s issue management strategy in relation to GM was to minimise any possibility that their international markets might link the industry with GM practices or products, to avoid the possibility that these markets would reject New Zealand kiwifruit. ZESPRI chose deliberate tactics of ‘silence,’ rather than engaging significantly in debate about GM in New Zealand, or even within the industry.

Kiwifruit growers did perceive GM to be an issue in terms of their identity as growers and the practical production of their crop, and were aware of the GM issues in kiwifruit markets, but they did not *initiate* debate about GM at an industry-wide level, or *actively* debate ZESPRI’s GM policy. Individual growers identified with, and endorsed, the industry’s GM position that not only responded to the concerns of international markets, but favoured environmental management practices that minimised environmental impacts.

In only two focus groups was there an ambivalent voice about how GM policy was decided. One participant was concerned that, “We weren’t asked, were we?” (Respondent D, Whangerei kiwifruit focus group). A second grower was concerned there had been no opportunity to present an alternative point of view. However, this grower was still very positive about industry communication at a general level. His concern about the development of GM policy seemed to be an isolated occurrence:

I’ve got to compliment ZESPRI . . . about the way they form these ‘think’ tanks’ on most subjects, and they have a very good consultation process but . . . the CEO has come out in print . . . with a [GM] policy that’s obviously come only from the Board; it’s never been circulated or discussed amongst growers . . . we’re very much being told what’s happening. There’s been no asking. (Respondent C, ZESPRI Green kiwifruit focus group)

Despite their lack of involvement in GM policy discussions, industry members' accounts represented communication practices as consistent with the cooperative basis for the industry. This included a very high level of interactive, two-way communication and evidence of the participatory decision-making described by Cheney (1999), and Stohl and Cheney (2001). Industry members represented such participation as common practice, and said priorities were decided by a "consultative process right through all levels of the industry" (Innovation spokesperson E). Industry groups were evidently quite outspoken in their comments on industry strategies. For example:

Over the two years of the moratorium and prior to it there's never been any debate in terms of ZESPRI's position [on GM] and it's quite a vocal industry, the kiwi fruit industry, and if there is opposition in any way to what ZESPRI's suggesting it's very, very loudly debated on a number of forums . . . there is a large support for ZESPRI's stance [on GM]. (Technical adviser, packhouse/supplier C)

Widespread support for the GM policy evidently negated the need for debate.

Participants in all focus groups and all three technical advisers commented positively on the multiple channels of communication available to industry members, referring to "heaps of discussion," (Respondent B, ZESPRI Organic kiwifruit focus group), "the most amazing industry for transfer of knowledge," (Technical adviser at packhouse/supplier B), and "quality" information, (Respondent B, ZESPRI Organic kiwifruit focus group). This feeling is summed up well by the following comment:

The kiwifruit industry is unique in its make up; the transfer of information is very open by a number of different channels . . . both ways, from ZESPRI to growers and from growers to ZESPRI. (Respondent A, ZESPRI Organic kiwifruit focus group)

Kiwifruit industry members then viewed communication processes within the industry as two-way and symmetrical. Although often somewhat idealistic, this is suggested as being best practice public relations (compare Cheney & Christensen, 2001a; Grunig, 2001; Tilson & Stacks, 1997).

ZESPRI executive groups provided information for the wider industry, for example through newsletters, and invited feedback, for example through forums:

We run everything through audiences; the mechanisms we use will suit both the time and the audience and the frequency . . . we probably over-communicate to the industry. (Communication spokesperson B)

However, the rhetorical construction of communication ‘to’ the industry, rather than dialogue ‘with’ the industry, suggests that communication was frequently initiated by executive management, and might, in fact, frequently be asymmetrical.

Interestingly, the lack of industry-wide consultation on GM policy was rationalised, and endorsed, by industry members as a *deliberate* issues management strategy by ZESPRI executive groups. In their accounts, industry members in three of the grower focus groups, a technical adviser in a packhouse/supplier, and three members of the Innovation team, happily justified the absence of industry consultation, recognising why ZESPRI wanted minimum discussion about GM. This is typical of the retrospective sensemaking described by Weick (1979, 1995, 2001).

Participants in focus groups and interviews saw this ‘silence’ as “a smart marketing move,” (Respondent E, ZESPRI Green kiwifruit focus group), about a sensitive issue, because any discussion might be picked up by media, wrongly perceived by international markets to be an indication that New Zealand kiwifruit are produced using GM technology, and “have serious impact on our sales,” (Technical adviser, packhouse/supplier C). Any communication about GM was constructed as “a huge perception risk,” (Respondent F, ZESPRI Gold kiwifruit focus group), that might draw attention, destroy the image of the industry, and involved “playing big games,” (Innovation spokesperson E). The reference to “big games” particularly indicates awareness of the strategic global nature of kiwifruit industry communication about GM.

Participants identified the somewhat emotive nature of the likely international response in their representation of GM communication as “tricky,” and one participant commented, “If you start talking about it, you’re sort of hexed” (Respondent D, ZESPRI Green kiwifruit focus group). Another participant referred to ZESPRI as “keeping quiet about it,” and described reporters as “wide-eyed,” likely to pick up on any hint of controversy (Respondent F, ZESPRI Green kiwifruit focus group), demonstrating awareness of news values (Galtung & Ruge, 1973) and the possible role of media as risk amplifiers or risk minimisers (Palfreman, 2001).

ZESPRI International was viewed by other industry members as *correctly* assessing that dialogue within the industry about GM would actually be disruptive in marketing terms. Industry members were prepared to accept this bounded rationality (see Simon, 1976); that is a rationality based on previous investment in an activity, and forfeit their preferred active voice in industry decision-making in recognition of the importance of a wider issues management communication strategy of silence. As discussed in Chapter Five, the preferred stance of the ZESPRI executive groups was for a “simple statement” which did not open up the ZESPRI GM position for debate (Innovation spokesperson D). This was a response to the values demonstrated by international markets, and avoided alienating international stakeholders.

One Communication spokesperson indicated that ZESPRI deliberately engaged in a minimum of communication about GM in the international marketplace because *translations* can be problematic, sometimes resulting in the opposite rhetorical positioning from that originally intended:

If you think about the risk of a global marketer communicating worldwide, translations are a nightmare and something like ‘GE free’ in English—the mere mention of GE or GM can actually sometimes work the reverse for you.
(Communication spokesperson B)

Yet, although GM issues management involved less rather than more communication, this communication spokesperson indicated the existence of extensive other communication programmes with customers and consumers. For example:

We run PR programmes, consumer programmes, customer relationships are worked on account management and it’s personal, that’s the biggest strength . . . we run specific stakeholder programmes, we run issues programmes where need be . . . And you know we make it as easy as possible to be approachable, contactable and of service. (Communication spokesperson B)

However, the ZESPRI position on GM did not involve an extensive proactive public communication campaign, as other industries and government institutions have attempted (see Henderson, 2005; Motion & Weaver, 2005; Murphy & Dee, 1992; Weaver & Motion, 2002) because the policy did not represent any *change* in current practices.

The policy not to develop GM food products was communicated to external publics more as a short-lived *crisis* management strategy following concerns that ZESPRI Gold kiwifruit had been genetically modified, as explained in Chapter Five. As Conrad and McIntush (2003) suggested, organisations may find it threatening to negotiate policy development *in public*, and sometimes keeping issues *off* the public policy agenda is as important to the organisation as getting them implemented.

The ZESPRI strategy is evidence that the industry is actively managing GM issues by continually adapting the industry practices and identity (see Gioia, Schultz & Corley, 2004) to harmonise with the expectations and values of all stakeholders (see Cheney & Vibbert, 1987; Heath, 1997). Industry members rhetorically constructed the industry as actively building a culture of participation in decision-making within the industry through the excellence of their interactive communication. The level of associated trust allowed them to rationalise the lack of consultation about GM policy, and gave ZESPRI executive management the luxury of not communicating on this specific issue.

Unlike in Cheney's (1999) account of the Mondragón cooperatives in Spain, the market rationality of the kiwifruit industry that underpinned its GM position did not threaten the industry members' perceptions of their overall participation in decision-making; the market justification for the GM policy did not result in the marginalisation of these organisational values.

In contrast, the dairy industry decision to proceed with research and development in the areas of biotechnology and GM represented a *change* in strategy which meant they had to ensure that this policy was endorsed by industry stakeholders (see Crable & Vibbert, 1985). As Cheney and Vibbert (1987) pointed out, increasingly organisations have recognised the importance of their communication with employees who then may present the 'face' of the organisation through their own contact with other key stakeholders.

The next section discusses the specific strategies adopted by the NZDB to generate wide industry support for investment in GM technologies.

Bringing Stakeholders 'On Board': Issues Management Strategies and Tactics in the Dairy Industry

In contrast to kiwifruit industry strategies, the dairy industry marketing organisation, the NZDB, chose to pursue pro-active communication strategies to ensure that industry stakeholders were *persuaded* about the benefits of GM for the industry. Two distinct projects were developed, the 'Marketing Biotechnology Taskforce' and the 'GM Issues Operational Team.' The projects were given specific names, and specific staff members were designated responsibilities within each project, indicating their strategic importance to the industry positioning on biotechnology and GM. As Cheney and Tompkins (1988) have pointed out, names and titles often indicate the priorities for action identified by an organisation. That is they are condensed symbols that attempt to represent the core values underpinning the activity.

The Marketing Biotechnology Taskforce.

The Marketing Biotechnology Taskforce (MBT) was set up in 1999 following a consultants' report by McKenzie, McKenzie & Co. recommending research and development into biotechnology, and the consequent setting up of ViaLactia, a dedicated research company for biotechnology and GM research. The overall aim of the MBT was to manage communication and policy development in relation to biotechnology, and particular taskforce members were assigned responsibility for communication with specific target groups:

We needed to work out how we were going to manage the communication of that aspect of it [biotechnology] . . . So there were several groups that were identified that we needed to involve and they were the legislators, regulators, the marketers, producers, shareholders, and the press. (NZDB/Fonterra communication spokesperson)

The NZDB legal specialist had particular responsibility for the preparation of the submission to the Royal Commission and played a role in communication with legislators and regulators. Communication with other stakeholders and publics external to the industry, through the media, was less pro-active, and was delegated

considerably to the Life Sciences Network (LSN)¹ (Motion & Weaver, 2005).

The strategies and tactics adopted in communication with legislators, regulators, and the LSN will be discussed later in this chapter.

The MBT project manager was appointed particularly because of her science/marketing background in technical product development: “They wanted somebody who actually understood a little bit about how to interpret what was going on in order to pull together the sort of information that we needed” (NZDB/Fonterra communication spokesperson). From the outset, then, specific scientific/technical and marketing perspectives of GM were privileged by the NZDB; the MBT initially reported to the NZDB marketing team; although, it now reports to the Fonterra corporate strategy team.

The overall brief of the MBT was described as:

[To] spearhead the biotechnology communication in the marketing organisations . . . We added in looking at competitor activity, conducting research regarding the attitude of our marketers towards biotechnology, and holding workshops within the development sections of the organisation. (NZDB/Fonterra communication spokesperson)

The tactics developed by this taskforce to communicate with *farmers and marketers* in the dairy industry involved surveying them to check their understanding of and attitudes to biotechnology, then providing them with information about biotechnology issues relevant to the industry, then resurveying the groups to see if their understanding and attitudes had changed. Different booklets were written

¹ The Life Sciences Network (LSN), formed in 1999, represented 22 industry, research, and scientific groups actively in favour of significant investment in GM in New Zealand. The aims of the group were to exchange information, discuss common challenges, participate in public debate, and positively influence public policy (Life Sciences Network, 2001). The LSN made a lengthy submission to the Royal Commission and issued media releases on every aspect of GM, both international and national. It maintained a particularly comprehensive GM website that included copies of media releases and reports from a wide range of other sources as well as their own. Since the lifting of the moratorium on applications for the commercial release of GM in New Zealand, the network has disbanded.

specifically for farmer and marketer groups within the industry, as discussed in Chapter Five.

The information provided was thus expected to change perceptions in the operating environment (Sethi, 1977), to increase these industry members' identification with and support for the proposed biotechnology initiatives. The MBT provided information, while monitoring stakeholder understanding and attitudes through feedback processes—that is the emphasis was on two-way asymmetrical communication (Grunig, 2001; Grunig, Grunig, & Dozier, 2002). The persuasive intent of the project is evident in the description of its overall aim as to achieve “buy-in” and to “educate,” (NZDB/Fonterra communication spokesperson) such that industry stakeholders would identify positively with this new initiative.

Dairy industry management communication about GM was positioned as needing to be objective and balanced, but a further reference to “educating” marketers by the ViaLactia spokesperson suggests that the MBT considered there was a *correct* view of GM which others should be persuaded to adopt. However, this spokesperson acknowledged that increased knowledge does not necessarily change an individual's belief:

Now I'm not a believer of the proposition that if you educate the people more that problems will go away . . . There's some recent work which has shown that the more people know, the more they doubt because they've realised some of the questions that they didn't know . . . If you fundamentally mistrust the source of the information you could be quoting the most absolute black and white truth and it still wouldn't be believed. (ViaLactia spokesperson)

The belief that people need to “trust” sources of information about GM is consistent with other research findings (Frewer, Howard, Hedderley & Shepherd, 1999; James, 2003; Hornig-Priest, 2001; Wynne, 1992, 1996), but the ViaLactia spokesperson rhetorically constructed such trust in terms of encouraging “sensible” viewpoints through providing “authoritative” statements, which demonstrated an *expectation* that the MBT information would be trusted. This was somewhat at odds with the generally dialogic approach to debate implied by his concern for “respecting others' point of view” (ViaLactia spokesperson).

The tactics developed by the MBT to respond to *market* concerns about GM attempted to change the perceptions of stakeholders and consumers, to allay their fears about GM, and align their attitudes with the pro-GM industry biotechnology strategy. This would again reduce the legitimacy gap (see Sethi, 1977) between the industry biotechnology policy and customer and consumer expectations surrounding product development. The early expectation of the NZDB was that customer and consumer concerns about GM would be short-lived, that such concerns would be allayed if the context and direction of proposed GM research and development was accurately portrayed by marketing staff, and understood. If stakeholders within the dairy industry could be convinced of the worth of the GM policy, then it was expected that through them, customers and consumers would be convinced. This tactic can then be said to represent a rhetorical struggle over meanings (Kuhn, 1997).

The pro-active nature of this strategy is evident in the following excerpt from an industry document quoted during an industry manager's account in a research interview:

To facilitate the link between the direction of our research and the views of our customers and consumers the MBT has been set up. It's been formed to spearhead biotechnology communication globally to the marketing organisations, acting as a communications conduit between the marketing company, biotechnology company, and sales and marketing staff, being NZMP and New Zealand Milk. . . . We'll also provide input around biotech policies and protocols, and information to assist tactics at a sales level. (NZDB/Fonterra communication spokesperson)

However, the MBT also recognised that the industry would have to *respond* to customers and consumers; for example:

Success of the MBT will depend on the ability with which the team can act and make decisions which accurately portray the contexts in which ourselves and marketing staff work. (NZDB/Fonterra communication spokesperson)

This suggests an awareness that an organisation's publics may also define the issues (see Crable & Vibbert, 1985).

The MBT's first step was to survey marketing staff to check their understanding of biotechnology. This was followed by presentations to staff in marketing, manufacturing, and operational groups, and the booklet, *What is Biotechnology? Biotech Brief*, was sent to all staff globally. This document was described by the communication spokesperson as an "information" bulletin: a

“balanced” document that was not “biased” in any way. Its intent to persuade, however, is evident. A second survey was sent out after this document, and the word “improved” in the following account betrays the persuasive intent:

We surveyed where people were at. We put out this information bulletin and then we resurveyed to see if their understanding had *improved*. (NZDB/Fonterra communication spokesperson, emphasis added)

This tactic then draws on a ‘deficit’ model of scientific understanding, an approach shared by Rabino (1994), Wohl (1998), and Wansink and Kim (2001). This presumes that the understanding of lay publics will increase if they are provided with further information about a scientific issue. However, Wynne (1992, 1996) critiqued this model, arguing that lay publics have their own understandings of scientific issues which are equally valid and are marginalised by the privileging of particular scientific perspectives.

The resurveys of marketing staff, which involved self-assessments by the marketers, indicated that both their awareness of biotechnology and their understanding of GM had increased. They acknowledged that they now had enough information to respond to customer queries and were more positive about the potential benefits of GM to the industry. However, marketers were still cautious about the possible impact of GM on the reputation of the company, and on the product image, and were cautious about consuming GM food themselves. In social and political terms, the MBT communication tactics were not wholly effective in achieving attitude change in marketing staff. These staff continued to draw on, and identify with other value systems, rather than accepting the sensemaking and rationalities of the MBT.

Farmers were also surveyed before receiving information about biotechnology. Farmers owned 100% of the shares in the earlier dairy industry cooperatives, and since the dairy industry merger now own 100% of Fonterra. The 35 million dollars per year to be invested in biotechnology, which represented an increase in research and development spending of more than 50%, was farmers’ money and their risk. It was paramount that the dairy industry had farmer/shareholder support for biotechnology policy. This is indicated by the

representation of the communication as “We very actively talked to our farmers . . . We needed to take our farmers along with us . . . We knew we had to do some work,” and representation of the policy on GM as “an extremely brave decision” and “stepping into the unknown” (ViaLactia spokesperson).

Different booklets were sent out to farmers from those used with marketers, and were the basis for presentations and discussions coordinated by ViaLactia, involving both farmer focus groups throughout New Zealand and speaking at farmer conferences. The ViaLactia spokesperson commented that farmers needed to be ‘straightened out’ about various issues from time to time:

We talk to them [farmers] about it [GM], they know what’s going on out at the public, and you know every now and again we’ve got to go and straighten them out because they get some strange ideas about what we’re doing and what we’re not doing. (ViaLactia spokesperson)

This suggested that NZDB/Fonterra constructs dairy management as ‘experts’ conveying information to ‘uninformed’ farmers, that although there are opportunities for farmers’ feedback and discussion particularly at the Shareholder Council level, communication is most often only in one direction. This is evidence of the dairy industry hierarchical organisational structure and decision-making, and marginalises the farmers’ own expertise as *producers*. A similar attitude was reported by Wynne (1996), after the Chernobyl disaster in the UK in 1986, when scientific ‘experts’ failed to acknowledge farmer’s knowledge and experience.

The ViaLactia spokesperson indicated that farmer attitudes changed to be more supportive of the industry GM policy after the focus group discussions in 2000, in contrast to some “very negative sentiments” apparent in surveys undertaken in 1999. This was despite the fact, as he commented, that other organisations’ research still reported concerns in rural New Zealand about GM, particularly with respect to food, and a preference amongst farmers for organic methods over GM technologies (Cook & Fairweather, 2003).

Although there was a degree of consultation involved with industry stakeholders as the dairy industry policy on biotechnology/GM was being developed, the strategy was described as a “high level” NZDB initiative which was aimed at

providing “clarity”, both about GM and the NZDB/Fonterra position, as part of an “education programme” (NZDB/Fonterra marketing spokesperson). Farmers and sales and marketing staff were viewed as needing to be persuaded of the benefits of GM. They were not expected to participate cooperatively in decision-making but were represented as employees in a hierarchical organisation. This is consistent with Douglas and Wildavsky’s (1982) discussion of hierarchical organisational structures and decision-making that has bounded rationality. It is also consistent with Cheney’s (1999) findings that marketisation increasingly privileges the role of an executive group in decision-making, by marginalising other social values in favour of a market rationality.

The GM Issues Operational Team.

At the time the MBT was set up, the NZDB realised that marketers and operational staff, for example, in dairy factories, were already dealing with customer and consumer concerns about GM on an everyday basis. The management of such daily operations was not an objective of the MBT, so a second project team was established called the GM Issues Operational Team (GIOT) to provide marketers and technical staff with specific information appropriate for sharing with customers and addressing consumer concerns about GM issues. This was described as:

An operational team which would . . . manage all the issues relating to ingredients specs, customer specs, marketing specs, what the factories did, how they managed their processes in order to achieve a certain level of confidence in the final product. (NZDB/Fonterra communication spokesperson)

The MBT and the GIOT were described as “cross-functional teams” working to communicate with both internal, and through them external, stakeholders, a process described by the NZDB/Fonterra marketing spokesperson as “gathering information” and “feeding information” in a way that again implied an asymmetrical although two-way approach to communication.

As the operations spokesperson explained, even *before* the biotechnology strategy was developed, there was some confusion as staff at different levels in different dairy companies responded to customer queries about GM. Systems of *integrated communication* were needed to cope with the demands of working with

GM, in terms of responding to customer/consumer attitudes, but also to meet the changing international GM regulatory environment for customers and suppliers. In this sense, the issues management communication was reactive as well as proactive. It had a pragmatic managerialist focus on efficiency and operational outcomes (see Capelli, Bassi & Katz, et al., 1997; Deetz, 1995; Hammer, 1999), rather than on market concerns about GM.

Operations staff realised that marketing staff were not the only ones with insufficient knowledge in relation to GM issues; there were operational concerns as well as marketing concerns. Understanding of GM issues in relation to the supply and use of ingredients in dairy manufacturing processes, and the interaction with suppliers, was described as “piecemeal,” (NZDB/Fonterra operations spokesperson). As a result, the GIOT set up a centralised database of ingredients and suppliers, that could be updated and provide a more integrated approach to working with suppliers. This gave some “measure of confidence” to both technical staff within the dairy industry and their suppliers and customers (NZDB/Fonterra operations spokesperson). The manufacturing identity of this technical sector of the dairy industry resulted in the prioritisation of technical issues, and contributed to the technical and scientific rationality for GM decision-making and policy evident in other dairy industry communication about GM.

After the merger, Fonterra facilitated more effective coordination of communication strategies and tactics in relation to GM. As operations staff dealt with queries, they realised they had to re-assess the ways in which GM already impacted on the industry. For example, a number of the ingredients used in the manufacture of milk-related products were already produced using GM. Such manufacturing processes had earlier been introduced without question, but now needed to be transparently audited to meet new regulatory demands from global markets. As the operations spokesperson explained, there was significant technical confusion in the *global* dairy industry, not just in New Zealand:

Well, initially, when the GM argument first hit nobody really realised that citric acid . . . has for quite a long time been made using a microbe that was GM modified. . . . We've used FPC [fermentation-produced chymosin] rennet . . . long before it

became an issue. . . . So we really needed to know exactly . . . where was GM then used in the first place. . . . We knew internally [that] we weren't actually using any GM process . . . but what the ingredients contained and what processes they used, we didn't know. (NZDB/Fonterra operations spokesperson)

As this spokesperson commented, the terminology associated with GM was inconsistent within New Zealand, and with international suppliers, and this created difficulties in establishing whether particular ingredients were GM free:

The difficulty that we faced for quite a period of time was in terminology and so . . . people would send out a questionnaire to the supplier saying, "Is your product GM free?" . . . Then you read the responses and they actually didn't make any sense at all. (NZDB/Fonterra operations spokesperson)

The New Zealand dairy industry was concerned at the time of the Royal Commission that the Commission's recommendations might impact on the regulatory environment which affected the *current* operating environment for the manufacture of dairy products, which to some extent already involved separately sourced GM ingredients, not just the *future* research and development which might involve GM. There was an indication from this technical spokesperson that the auditing processes had to be managed to satisfy both customers *concerned* about the use of GM in the manufacturing process and those who *accepted* GM in the interests of keeping costs down:

We have some customers would like us to use cheaper ingredients that are genetically modified and so . . . if we did that we would satisfy that customer but then what would it do in terms of us being able to use that plant for our other customers? (NZDB/Fonterra technical spokesperson)

However, the trend expressed by this spokesperson suggested that global customers were becoming increasingly demanding with respect to guarantees that dairy products are GM free:

I think if this gets more and more extreme which it appears to be doing—where people are demanding absolute certainty around lack of GM contact—we will need to go back to our shareholders as farmers within the cooperative and start applying some rules and policies there that can allow us to put hand on heart all the way through the chain. (NZDB/Fonterra technical spokesperson)

This comment acknowledges that the GIOT was an issues management strategy which was originally developed with an instrumental rationality. Yet, the dairy industry operational participation in the global manufacture and supply of ingredients and milk products meant that the industry also had to respond to the value-systems

and discourses influencing other suppliers and markets. The manufacturing identity of the industry was thus linked to the technical rationality behind its GM positioning, but so were the values it engaged with through its marketing identity, and aim of remaining a world leader in competitive international dairy markets. The ongoing negotiation of rationalities involved in this issues management (Heath, 1997), and the dynamic adaptability (Gioia, Schultz & Corley, 2004) required of the industry identity were then linked in the industry's complex communication environment.

This linking of identity and rationality suggests that the prioritisation of particular rationalities is in itself a value-judgement, linked to an organisation's identity, as well as drawing on specific discourses in the wider organisational environment. Tait (2001) argued that even supposedly interest-based representations of risk are based on value judgements, such as the privileging of scientific rationalities and marginalisation of other cultural values; although, she did not link such value-based rationalities to a discussion of identity. The complexity of the linking of interest-based and identity-based responses in this instance also suggests that Davenport and Leitch's (2004) attempts to distinguish such responses is unrealistic.

The existence of such distinct groups—farmers, ingredients suppliers, manufacturers, and marketers, as well as the technical and research groups—is an indication of the size and complexity of the dairy industry in New Zealand. Maintaining integrated communication with such a range of organisational stakeholders is particularly complex and involves management of the multiple identifications of stakeholder groups with various functional value-premises within an organisation (see Cheney, 1991). In the New Zealand dairy industry, this is achieved through a hierarchical industry organisational structure. In Douglas and Wildavsky's (1982) terms, the dairy industry's view of GM issues is typical of a blend of hierarchical and individualist institutional styles of thinking and decision-making. Douglas and Wildavsky suggested that organisational decision making by hierarchies often limits the framework for decisions, and tends to work with known processes within existing frameworks of operation—a very bounded rationality.

Changes made may be incremental, according to what is feasible in the timeframe and circumstances, and the organisation maintains complex traditions and regulations.

The following table situates the logics of participation drawn on by the kiwifruit and dairy industries as they managed the implications of their GM positioning for industry members.

Table 5. Logics of Industry Member Participation

Industry structure	Logic of Participation	Tactics	Objective
Cooperative (kiwifruit industry)	Full dialogue allows for the possibility of change in policy	Open consultation and participatory decision-making	Recognise diverse value systems. Foster identification of members with shared values to ensure support for developing policies
Cooperative operating as a hierarchy (kiwifruit industry GM policy development)	Minimal information given when policy represents no change in industry practices and there are existing shared values	'Silence' – relies on existing trust in management and a positive communication climate	Maintain trust and support of members for developing policies while keeping controversial issues off the public agenda
Hierarchy (dairy industry)	Persuasive communication campaigns foster industry members' support for changing policies	One-way information to 'improve' understanding. Surveys to check change in attitudes of members	Ensure members adopt new values linked to developing policies
Individualist (aspects of both kiwifruit and dairy industry)	Current market values determine future decisions. Cost-benefit analysis privileged with opportunistic time-frames.	Kiwifruit industry responded to consumer concerns. Dairy industry privileged technical risk management.	Manage multiple values and identities to ensure endorsement of GM policy by all stakeholders. Persuade all stakeholders to adopt preferred GM policy.

However, the dairy industry, as well as being a typical hierarchically-organised industry, is at the same time somewhat individualist (see Douglas & Wildavsky, 1982), given its endorsement of free-market values. It trusts technical and quantitative analysis, and has short-term, opportunistic, and future-oriented time frames, reacting strongly to trends such as those presented by GM.

Issues management strategies involving GM in the dairy industry thus deliberately set out to convince industry stakeholders of the benefits of biotechnology/GM using an instrumental technical rationality that privileged the voices of industry executive groups as experts. This was held in tension with a market rationality that privileged the identity of the industry (and the farmer/producers) as a competitor in the global dairy marketplace; yet, needed to respond to the value systems of international consumers. Dairy industry practice is also constrained by the perspectives and voices of dairy customers and consumers and the values of the international markets.

Issues management strategies in the kiwifruit industry displayed similar tensions. The customary cooperative decision-making practices within the industry were overlaid, in the instance of GM policy development, with the expert voices of ZESPRI International (marketing) and ZESPRI Innovation (science). The industry policy on GM, control of how the industry is positioned in the market place, and communication about GM issues were thus constructed by the industry operating as a hierarchical organisation. More often, ZESPRI took an individualistic approach to decision making. It privileged the voices of customers and the policy was justified by a market rationality that drew on neo-liberal discourses of public choice and rational choice. In so doing, the kiwifruit industry privileged the GM concerns of those markets, which drew on the sectarian values (see Douglas & Wildavsky, 1982) of environmental and social movements. In this sense both the kiwifruit and the dairy industries were engaged in communication that was inherently political and drew on the power constituted by the institutional identities of the industries, and their

associated values and rationalities, in their engagement with key industry stakeholders.

Rationality and Values: Industry Communication with Key Interest Groups

This section considers the engagement of the kiwifruit and dairy industries with key interest groups in the struggle to influence public policy about GM. It considers the implicit values and assumptions in their communication practices, and how the rationalities for each industry position are communicated and privileged.

As Kuhn (1997) suggested, a rhetorical perspective of issues management allows an examination of the process of influence—the struggle over meanings. In issues management campaigns, organisations may deliberately omit or misrepresent information (Baker & Martinson, 2001; Edgett, 2002; Fitzpatrick & Gauthier, 2001; Nelson, 1994), or may fail to see that their communication is self-referential—as a result of auto-communication—defining the publics they wish to communicate with and the messages they would like to hear in the terms of those that support their own strategic planning initiatives (Christensen & Askegaard, 2001; Cheney & Christensen, 2001a).

Rationality and Self-interest: Avoidance Strategies in the Kiwifruit Industry

This section discusses ZESPRI's tactics of engagement with key interest groups and the tensions exhibited in both the market and scientific rationalities underpinning the industry's GM policy.

Tactics of Engagement with Key Interest Groups.

ZESPRI chose to further limit communication in relation to GM, by engaging with key interest groups only on very specific aspects of the issues. The accounts of Communication spokespersons and Innovation team interviewees indicate that GM communication was not only limited within the industry, with the media, and with

international markets, but that ZESPRI deliberately chose an issues management strategy of limited involvement in the wider public debate in New Zealand. The kiwifruit industry submission to the Royal Commission was seen as the most important public forum, and once the industry GM position had been clearly explained in the submission, the strategy was to keep “as low a profile as possible” because the attempt to influence the Royal Commission was viewed as successful. The need for a cautious approach to GM was recognised by Government, and the moratorium on applications for the commercial release of GMOs was extended for a further two years (Innovation spokesperson D).

No further public communication or active political alignment with key interest groups was initiated. This ‘non-aligned’ position demonstrated a purposive instrumental rationality (see Giddens, 1972, Simon, 1976) aimed at maintaining the industry integrity within international markets. For example:

ZESPRI chose a non-aligned position . . . They did not want to be part of anybody’s lobby group . . . They had a market position, and that was important to them and to their shareholders, and it didn’t actually matter to them if they were the only person who said that . . . They didn’t lobby anybody else to join them, and they did not join in any other alliances . . . We just made our submission, said, “Here it is”. Nothing else was done. (Innovation spokesperson B)

This deliberate curtailment of kiwifruit industry communication represented a very careful issues management strategy that attempted to be apolitical, and suggests that the industry wanted its specific position to be heard unequivocally, without being compromised by other perspectives.

The kiwifruit industry chose not to engage directly in public debate with other more combative interest groups, for example the LSN, whose communication practices they saw as *unethical*:

We don’t want a high profile on this, we have representation on the appropriate forums, but we are not going get into a debate with Francis Wevers [Executive Director for the LSN]. You know, Life Sciences are absolutely to us unethical. They have said some appalling things . . . we are not going to be drawn into public debates. (Communication spokesperson B)

The LSN’s attempts to influence public policy by attacking the stance of other groups arguing against GM, such as the ‘GE-Free’ coalition and MAdGE, on an

individual basis were considered to be unethical; although, this practice is recognised as common, and acceptable, issues management practice (Heath, 1997).

Members of the kiwifruit industry specifically criticised the public relations communication of key interest groups about GM for being emotional, for misrepresentation, and for using information selectively (see Baker & Martinson, 2001; Edgett, 2002; Fitzpatrick & Gauthier, 2001; Nelson, 1994), with the intent of manipulating public opinion on GM. For example, the LSN were criticised for using “spin” and “lies”:

You’ve got something say like Life Sciences; it has so much money and it’s spinning. We don’t need a spin. Just give us some facts. . . . Give us everything from the business case through, but it needs to be done without lies.
(Communication spokesperson B)

The LSN’s communication was described as “despicable,” the behaviour of “supposed scientists” was described as “scaremongering” (Innovation spokesperson E), and activist groups were criticised for being ill-informed. The general feeling of kiwifruit industry spokespersons regarding the emotive polarisation of arguments for and against GM by key interest groups in the debate about GM in New Zealand is evident in the following comment:

I admire the resolve of people like MAdGE² which unfortunately to me is looking like a ladies’ lunch-a-lot club, with people with too much money and little dress sense, and I don’t think they’re adding to the debate because what they’re doing is in their ignorance, they’re slamming anything that is in-organic, well get a life, you know you can’t export, you can’t put anything into a retailer unless it actually meets

² MAdGE was set up by Alannah Currie, former member of the 80s band ‘The Thompson Twins,’ in 2002. This activist group aimed to gain the support of New Zealand mothers to prevent the commercial release of GM. MAdGE lobbied Government, and organised events involving high profile New Zealand ‘stars’ in music and television in a deliberate bid to gain media attention, and to raise public awareness about GM issues. MAdGE presented a legal case against an AgResearch project, aimed at introducing human genes into dairy cows, to create GM milk for medical purposes. MAdGE campaigns will be long remembered for their flamboyance. They included controversial billboards in Auckland and Wellington of a naked woman with four breasts—depicting a ‘human cow,’ and a group of women removing their tops in a Parliamentary sitting to reveal pink bras. Internationally renowned fashion designers Karen Walker, Marilyn Sainty, World, and Zambesi designed T-shirts in support of the campaign.

certain standards. I mean it's equally as bad as the scientist saying, "It's fine."
(Communication spokesperson B)

However, the tone of this comment about MAdGE, although not a public statement, is as emotive and derogatory as the communication that this spokesperson is criticising; for example in the sexist phrases "ladies' lunch-a-lot club," and the reference to "little dress sense."

ZESPRI then avoided confronting key interest groups to avoid engaging in a debate which was seen as unethical, emotive, and 'scaremongering.' Yet, this non-aligned position does not indicate the intent to work *positively* towards harmony, the preferred issues management strategy advocated by Heath (1997).

ZESPRI's unwillingness to engage in *confrontational debate* with other interest groups is, however, consistent with the recognition, and acceptance, of diverse viewpoints on GM expressed in the *Kiwifruit Journal* by ZESPRI spokesperson Jane Lancaster. This stance is also consistent with ZESPRI's demonstrated preference for two-way communication, consultation, and *dialogue* with industry members, as discussed in the previous section of this chapter. The industry avoided engaging in substantive *debate* about the risks, benefits, outcomes, and values associated with GM on broad terms in the New Zealand political context, on the grounds that the debate was unethical, that it was *not* a process of *dialogue* (Isaacs, 1999; Tannen, 1998). Despite increasing calls in the research literature for public dialogue about GM (Braun, 2002; Ellahi, 1994; Gregory, 2003; Nelson, 2001; Reiss & Straughan, 1996), ZESPRI paradoxically saw dialogue about GM as impossible, and saw debate as a risk to the continued positive perception of the industry in international markets.

This issues management strategy is then not so much about the GM issue, as a deliberate tactic to safeguard ZESPRI's own corporate identity and reputation. ZESPRI's preference for 'ethical' communication practice is consistent with its rhetorical construction of the industry identity as an industry with *integrity* and demonstrates the extent to which the organisation's identity itself is at issue in communicating with stakeholders (see Cheney & Christensen, 2001a; True, 2003). In

this respect, in an effort to retain their image of integrity, the ZESPRI Group deliberately avoided becoming embroiled in the mutual criticism evident in communication by other GM interest groups.

Tensions in the Legitimizing Market Rationality.

ZESPRI's market rationality for its GM policy had wide support within the industry. It recognised consumer concerns about food safety, and was based on environmental values; there were some *specific* common zones of meaning (Heath, 1997) within the industry. However, ZESPRI made no assumptions that these collective industry values represented the full, diverse range of individual values held by industry members. Paradoxically, one Innovation team member who had been directly involved in recommending the industry position on GM, and believed there was an industry mandate for the policy, clearly did not believe there was a mandate for lobbying for this policy through the media:

Well ZESPRI represents—have got a diverse range of growers. There are some who are organic growers and there are some who are not, so you can't be in a position of actively using the media to lobby because . . . there will be within that group of people a diversity of views. (Innovation spokesperson B)

This suggests that this industry spokesperson separated the industry position, what was beneficial for the wider industry at an international level, from the individual positions that might be taken by industry stakeholders, what was seen as beneficial or representing value systems at a more personal level. In this sense the market rationality privileging kiwifruit consumers was echoed by a public choice rationality that constructed individual industry members/New Zealanders as having the right to an individual stance on GM.

Lobbying for public opinion to support the ZESPRI position was represented by this ZESPRI spokesperson as being overtly politically aligned with key (anti-GM) interest groups in the debate, whose rationalities and value-premises might not be entirely consistent with the diversity of those of the kiwifruit industry. This was constructed as risking the alienation of kiwifruit industry stakeholders through the creation of competing zones of meaning, and the alignment of value systems that might not be shared by the wider industry. It was thought to risk understanding of the

ZESPRI position on GM, the ZESPRI corporate identity, and individual industry member identities. For example, many kiwifruit industry stakeholders are business investors, and deliberate alignment of the kiwifruit industry with radical anti-GM groups might impact on the credibility of these business people with other business groups who take a different position on GM. Yet other kiwifruit industry stakeholders, such as organic growers, might identify strongly with radical anti-GM environmental groups.

Anti-GM interest groups, such as the 'GE-Free'³ coalition and Greenpeace, which have a similar position to the kiwifruit industry on GM, often seek to represent consumers and also represent a rationality of the marketplace (see Henderson, 2005; Motion & Weaver, 2005). However, the rhetorical position of these anti-GM interest groups is underpinned by the values and social norms associated with environmental social movements, and they attempt to influence the values that underpin market consumption, rather than endorsing the individualistic approach of the free-market.

No key interest groups share all zones of meaning or core values with the kiwifruit industry; the zones of meaning of some interest groups overlap, and some compete. By focusing on a purely market rationality and avoiding debate ZESPRI attempted to manage the multiple identities and identifications of industry stakeholders (see Cheney, 1991; Cheney & Christensen, 2001a).

³ The 'GE-Free' coalition comprised nine environmental interest groups who joined together after the Royal Commission's report in July 2001. The members included Biodynamic Gardening and Farming Association of New Zealand, Bio-Gro, GE Free New Zealand in food and environment (Rage), Greenpeace NZ, Green Party, Jews for GE-Free food, Pesticide Action Network NZ, Safe Food Campaign, and Soil and Health Association of New Zealand (NZ). All of these groups, except Jews for GE-Free food, made submissions to the Royal Commission. The GE-Free coalition established regional contacts in ten different geographic regions of New Zealand, and co-ordinated national initiatives with Greenpeace and extensive local action. One of the strengths of this coalition was the diverse representation of separate groups, at local grassroots levels. Together, these groups were able to effectively use existing networks to mobilise support for joint action.

The market rationality of the kiwifruit industry position specifically reflected the current free-market, individualist, normalised discourse at the time of the Royal Commission (see Devine, 1998, 2001; Kelsey, 1997; Miller, 2003). The kiwifruit industry arguments thus had a legitimacy, which was likely to have influence, both on the Commission and on wider audiences in New Zealand. However, business groups, which share the market perspective of the kiwifruit industry on other issues, are largely pro-GM. They argue that producers will benefit from GM (Stevenson, 2002), that food production involving GM is little different from current food production methods (Saul, 2002, July 16) and that New Zealand will “fall behind the rest of the world if commercial production involving GM does not go ahead” (Riordan, 2002, March 6, p. E1).

It is evident then that although the positioning of New Zealand interest groups and industries on GM may be consistent at a macro level through the use of a similar market rationality, this rationality may draw on multiple perspectives that actually exist in tension at the micro level. At the micro level of the specific organisation or industry, or at the level of particular industry groups or individual industry members, complex multiple identities and values systems are represented. Public choice and rational choice theorists would argue that this very complexity is the reason why there should be a minimum of government regulation. They argue that Government should intervene less in the management of public policy, leaving ordinary citizens and consumers to make decisions for themselves (see Dalziel, 2003). They suggest that the market should decide issues such as GM, rather than trying to create a complex government-regulated public policy. However, such theorists have been critiqued for failing to account for the formation of social norms, and collectivities (see Aune, 2001; Moloney, 2003). Individuals or industry groups may identify with, for example, social movements such as environmentalism, and key interest groups in the GM debate in New Zealand such as the ‘GE-Free’ coalition and MAdGE that demonstrate altruistic concerns for health and the environment.

Tensions in the kiwifruit industry members’ endorsement of free-market perspectives are apparent historically, as well as in their GM stance. Paradoxically,

participants wanted little government or “political interference” in the affairs of business, a very free-market/public choice perspective (Dalziel, 2003) as indicated by the following comment:

We certainly do not need political interference into the way we run our business, whether it's on orchard, at supply level, or at ZESPRI . . . if we did want political interference we would go and ask them for it. We don't want them imposing it on us. (Respondent F, ZESPRI Organic kiwifruit focus group)

Yet, historically, the kiwifruit industry fought a long battle with the politically neo-liberal Government in the early 1990s, resisting Government interference in the way they ran their business, but in fact arguing for the right to ‘single-desk marketing’, to a regulated industry which ran counter to the neo-liberal free-market political and economic climate at the time, which favoured de-regulation of industry. This experience perhaps explains the paradoxical positioning of many industry members in relation to free-market Government and business agendas.

Tensions in the Legitimizing Scientific Rationality.

The kiwifruit industry has links with other key interest groups in the GM debate in terms of its science perspectives. Yet, common science perspectives do not necessarily mean that other values are shared, and common values do not necessarily mean that science perspectives are shared. Although anti-GM interest groups share environmental concerns with the kiwifruit industry, they assert that GM foods have not been scientifically tested as *safe*; for example, Greenpeace⁴ publishes a *True Food Guide* enabling consumers to check which supermarket brands are GE-free (Greenpeace, 2005). The kiwifruit industry position is slightly different: that there is no scientific evidence GM foods are *unsafe*, but that it is important to pay attention to market perceptions that this may be so. This demonstrates a less radical anti-GM

⁴ Greenpeace New Zealand campaigned actively against the commercial release of GM. It aimed to increase public awareness and support through its website, magazine, media releases, and lobbying of Government. It made a submission to the Royal Commission, and produces a consumer guide to GE-free food in supermarkets. Greenpeace joined the ‘GE-Free’ coalition and MAdGE in high profile campaigns involving sending pre-printed postcards to Members of Parliament, purchasing T-shirts, joining marches, signing petitions, and registering private homes as GE-free zones.

stance on the possible scientific rationalities for GM. The zones of meaning (Heath, 1997) of these anti-GM interest groups then overlap those of the kiwifruit industry, for example in relation to concern for the environment, but do not share all of the same common starting points (van Riel, 1995) for the scientific rationalities that underpin beliefs about the safety of GM foods.

Anti-GM interest groups, such as MAdGE, are frequently represented in the media as radical activists and as anti-science, or anti-technology; although, in reality these interest groups are supportive of genomic and genetic science in laboratory containment. It is the release of GMOs into the environment that they are concerned about. MAdGE's billboard depicting a woman with four breasts was cited in the media as an example of "unscientific claims," for example, by the vice-chancellor of Victoria University, Dr Stuart McCutcheon (Collins, 2003, October 14). As an industry with a high degree of science-based research and development, the kiwifruit industry recognises that the science associated with GM is contested (see Brown, 2001; Segerstrale, 2000) but is clearly not against GM *per se*, or laboratory-based research, and not anti-technology. For example:

ZESPRI is not anti-technology. . . The only other lobby groups that have really taken positions of caution [on GM] have probably been more extreme in the political sense. (Innovation spokesperson B)

The kiwifruit industry, then, did not wish to be aligned with more radical activist groups that were *portrayed* as being anti-science or anti-technology;

However, the ZESPRI stance was different from the majority of other (science-based) *primary industry* groups in New Zealand, particularly at the time of the Royal Commission. The kiwifruit industry was the *only* primary industry group making a submission advocating that New Zealand did not proceed with commercial production of GM foods and crops. Although, interestingly, the apple and pear industry, and the viticulture industry have indicated support for the ZESPRI position since the Royal Commission (Collins, 2003, August 26; "Wineries to join GM-free campaign", 2003), and the Kiwifruit New Zealand spokesperson commented that the New Zealand Fruitgrowers' Federation changed its original stance on GM in

response to the advocacy of the kiwifruit industry (Clements, 2003; Silcock & Clements, 2001).

ZESPRI's stance on GM was also different from that of other scientific *research* groups which are largely pro-GM and frequently argue that environmental and food safety concerns are unsubstantiated (personal conversation, Gavin Ross, Business Development Leader for Research, HortResearch, February 18, 2003). The discrepancies between the GM stance of the kiwifruit industry and that of HortResearch⁵ required active issues management, since the kiwifruit industry works closely with HortResearch on a day-to-day basis. For example, the research carried out by HortResearch for the kiwifruit industry that resulted in the development of ZESPRI Gold kiwifruit did *not* involve GM (Webby, 2004, p. 148). Yet, two ZESPRI scientists criticised HortResearch for “looking for a little piece of fame,” (Technical adviser, packhouse/supplier A) by following funding opportunities for research that were not necessarily the best research avenues for the kiwifruit industry. As this interviewee commented:

I think that money is muddying the scientific waters a little bit . . . and GMO is such a trendy thing and probably one of the areas that has taken some of that funding. (Technical adviser, packhouse/supplier A)

HortResearch's submission to the Royal Commission supported commercial GM production of crops and foods; although, it identified consumer resistance to GM,

⁵ HortResearch is a commercially-focused Crown Research Institute focusing on horticultural research, and particularly technologies associated with plant genomics to produce new fruit varieties. This research is expected to have applications across all major crop plants, worldwide, as well as in other “emerging high value sectors such as nutraceuticals and health” (HortResearch, 2001).

HortResearch made a submission to the Royal Commission arguing for continuing research and commercial development in GM. It has conducted extensive research in conjunction with the kiwifruit industry, including the development of Hort16A, marketed as ZESPRI Gold kiwifruit; and *Actinidia arguta*, marketed as Kiwiberries—neither of these are GM products. Its research on disease control and pest management for kiwifruit has contributed to the development of the KiwiGreen integrated pest and disease management programme.

and, like kiwifruit industry members, commented that annual GM crops might be easier to manage than perennial ones. “Closing the door” on GM was represented as having a “detrimental effect” on “the reputation, standard and existence of NZ’s scientific community,” “the ability to protect the intellectual property in NZ’s products,” and “ultimately the NZ economy as a whole” (HortResearch, 2000, Executive Summary, point 3). Unlike ZESPRI, HortResearch were members of the LSN, lobbying in favour of the commercial development of GM.

The kiwifruit industry, as an industry with a significant research and technical science base, thus found it difficult to rationalise its GM stance to the New Zealand scientific community. There were some early *assumptions* in media reports that the kiwifruit industry was involved in commercial applications for GM research like other science-based industries (“Claims ‘put kiwifruit exports at risk’”, 1999; “Menace in the miracle”, 1999; “Public’s right to know”, 1999), which were corrected by the media release, entitled *Kiwifruit New Zealand says no to GM* (Kiwifruit New Zealand, 1999).

However, the prevalent scientific voice in the public debate at the time of the Royal Commission, and up until the lifting of the moratorium, in October 2003, was that of pro-GM interest groups, including large industry and research organisations whose scientific rationality was further legitimated by virtue of their economic importance to New Zealand. The influence of these groups—including most of the primary industries in New Zealand, the major Crown Research Institutes, and two Universities, all members of the LSN—thus resulted in a process that can be described as discursive closure (see Deetz & Kersten, 1983, p. 153). This put “political and ideological limits” (see Mumby, 2000, p. 72) on dialogue about GM. The exclusively scientific/technical rationality of the pro-GM interest groups is, however, increasingly questioned by members of the New Zealand general public who see scientists being influenced by commercial business agendas of self-interest (Henderson & Weaver, 2003).

In contrast, the arguments of environmental scientists, which are more compatible with the kiwifruit industry position on GM, are frequently used by radical

activist groups, yet these arguments are often constructed by corporate businesses as irresponsible (Napp, 2001) in strategies described by Ehrlich and Ehrlich (1998) as “brownlash,” a reaction to increasing public expectations for the ‘greening’ of corporate businesses. Although cautious about GM, the kiwifruit industry is concerned to maintain an identity that focuses on integrity and carefully controlled production methods, and is wary about being aligned with radical environmentalists, and scientific interest groups that are seen as irresponsible by the wider scientific community.

The ZESPRI position then was both different from, and similar to other groups that expressed concerns about GM in the public debate, and shared some zones of meaning but not others with those groups who were pro-GM. Because of this paradoxical position, ZESPRI’s choice was to keep their message on GM simple, to avoid getting involved in debates about the science of GM and the wider risk discourse. They did not attempt to set the *agenda* for the issues through public discourse (Crabbe & Vibbert, 1985).

Additional Tensions: Agendas of Self-interest and the Public Good.

Kiwifruit industry members in all focus groups and two of the technical advisers from packhouse/suppliers were concerned about possible agendas of scientific, commercial, and Government self-interest.

Industry members identified the contested meanings in scientific rhetoric, referring to “so-called scientific proclamations that . . . in any way, shape or form pretend to . . . control nature,” and the way in which “evidence can get you know twisted and turned” (Technical adviser, packhouse/supplier A). In recognising that science is contested, one participant was wary of believing any scientist:

The scientists are against scientists now, so who’s saying who and what; why believe any of them? (Respondent C, Whangarei kiwifruit focus group)

Industry members wanted to be able to “trust” scientists (Respondent B, ZESPRI Gold kiwifruit focus group), but only two industry members specifically made comments demonstrating that trust. As has been noted in other research, trust in scientific institutions is an important factor in determining favourable attitudes to

science and biotechnology (see Blaine & Powell, 2001; James, 2003; Moon & Balasubramanian, 2001; Hornig-Priest, 2001; Wynne, 1996).

Kiwifruit industry members also represented business agendas as exploitation: “I feel that we have been used by big companies overseas to experiment” (Respondent F, ZESPRI Green kiwifruit focus group); as compromising scientific integrity: “Commercial interests have pushed it [GM] . . . faster than it should scientifically progress (Respondent C, ZESPRI Organic kiwifruit focus group); and as greedy: “My perception is that’s motivated by the multi-nationals, the greed factor, control . . . They want more money” (Respondent C, Whangarei kiwifruit focus group). The benefits of GM were constructed as likely to accrue to “rich Western companies,” rather than to the people or environment where development occurs (Respondent D, ZESPRI Organic kiwifruit focus group). Such references draw on GM discourses that critique the political and social impacts of GM and the marginalisation of minority social and cultural groups (Glasner & Rothman, 2001; Hindmarsh & Hindmarsh, 2002; Ho, 1999; Shiva, 1997, 2000).

There was equal concern about Government agendas for GM, despite Government’s generally neo-liberal, free-market policies. Industry members were distrustful of Government “spin” about GM, thought to be “driven by a narrow range of values,” (Technical adviser, packhouse/supplier B), and felt that neither politicians nor big companies could be trusted (Respondent A, ZESPRI Green kiwifruit focus group). It was felt that Government should take a cautious approach rather than considering research and development of GM as a “race,” as in the dairy industry (Respondent C, Whangarei kiwifruit focus group).

Paradoxically, then, kiwifruit industry members represented their own position on GM, and their own industry identity, in opposition to that of other groups’ self-interest. Although the kiwifruit industry members’ endorsement of a market rationality for the industry policy on GM *implicitly* recognised business self-interest was the driver of their own industry policy, only one industry member *explicitly* recognised that financial returns are also driving the kiwifruit position:

Now, you might say this is money driving us. Yes, it is; I'll be right up front. It is money driving it, because if you don't get money you can't produce the crop. (Respondent A, ZESPRI Organic kiwifruit focus group)

Kiwifruit industry members' failure to identify their own position on GM as self-interested gives credence to Cheney's (2004) assertion that the market is increasingly seen as amoral in practice while being sanctified as a whole in an *a priori* fashion. This further demonstrates that the kiwifruit industry's rationale for its GM position had become part of the industry discourse to the extent that it became self-enhancing, auto-communication, as conceptualised by Cheney and Christensen (2001a).

The substantive content of ZESPRI's submission to the Royal Commission, other articles, and positioning statements on GM refer to specific facts, information, and arguments specifically in terms of the *market* for kiwifruit. This issues management positioning attempts to use *only* the rationality of the marketplace in justifying its position on GM, and could be said to be *omitting* aspects of the bigger picture (for tactical reasons) in overall debate over public policy—to be self-interested. Yet, industry members frequently acknowledged other values that contributed to their very specific stance. Their accounts expressed a number of core values: a concern for environmental integrity, a concern that other peoples' diverse values should be engaged and respected, a concern for the public good (in terms of the economic benefits to be accrued by not pursuing GM technologies, and for safe and healthy food), and a concern that information should be transparent, for ethical communication practice. The recognition that other interest groups have valid arguments, values, and interests that must be considered in the development of public policy on GM would also suggest a pluralist approach; that kiwifruit industry members wanted to create dialogue and negotiate understanding. Yet, they defined the terms of their own dialogue about GM very specifically by choosing not to engage in public debate.

The kiwifruit industry, thus demonstrates strategic ambiguity (Conrad & McIntush, 2003; Eisenberg, 1984; Leitch & Davenport, 2002) in its GM positioning. There are tensions between its identity as a science-based industry like other primary industries in New Zealand, and its alignment with the value-premises of

environmental science endorsed by other GM interest groups cautious about GM. There are similar tensions between its business identity as a primary producer and its alignment with value-premises privileging consumer choice associated with an individualist, free-market rationality. There are tensions between self-interest, and concern for the public good. Yet, the kiwifruit industry position on GM is at times reflexive and aims for transparency and integrity; the organisation appears to be reflexive about its own identity and to understand its operating environment (Cheney & Christensen, 2001a). Kiwifruit industry members recognised that their interests might *not* be influential in determining public policy; they accepted other viewpoints were valid and might have equal influence.

In contrast, the dairy industry took a technical/scientific approach to communication about GM that specifically separated out communication about social and cultural values from scientific arguments in favour of GM. Notwithstanding this approach, the industry spokespersons were concerned that their communication should be transparent and to some extent again limited their engagement in the public debate about GM.

Building Goodwill, the Use of a 'Front Group', and the Role of Experts: Dairy Industry Engagement with Key Interest Groups

In this section, the dairy industry's attempts to build goodwill, its choice of an industry 'front group' to manage communication with the general public, and its privileging of the 'expert' status of science and legal perspectives are examined.

Persuasion and Building Goodwill through Transparent Communication.

The dairy industry, like the kiwifruit industry, had to manage a number of tensions in its communication about GM that indicate the interrelationships between industry identities and rationalities. As discussed in the previous section, dairy industry communication about GM was deliberately strategic; it was intended to persuade stakeholders such as farmers and marketers to support the industry GM position, but at the same time it was intended to reassure customers, consumers,

manufacturing, and operations staff, and to build support through creating goodwill.

A comment by the media spokesperson indicated the strategic intent to both persuade and establish goodwill:

I started to form a [media] position [about GM], when asked about the industry's attitude . . . that was truthful, which was plausible, which sounded common sense . . . That was to say - we see great potential in this technology. (NZDB media spokesperson)

A "plausible" GM position was thought to ensure its acceptance by intended audiences, yet a position that "sounded common sense" is indicative of the organisation's attempt persuade, to legitimate particular value-premises (see Cheney & Frenette, 1993), in this case about GM technology.

Industry spokespersons represented their communication practices as clear and transparent to gain support, for example, from *international customers*:

From our customers' point of view we like to be very transparent about what we're doing . . . because we don't want to be in a situation where we over-promise in terms of our capability to determine to the absolute degree whether some of our ingredients have been exposed to GM organisms. (NZDB/Fonterra operations spokesperson)

Transparent communication was both practical and expedient. Yet, the industry always intended to *influence* stakeholders and interest groups. Dairy industry marketers were expected to reassure international customers in ways that "resonate best" that the industry position was a "cautious" one (NZDB/Fonterra marketing spokesperson); although, in other industry documents the emphasis was on the race to develop GM technology.

Dairy industry manufacturers were equally concerned to reassure *staff* through transparent communication processes:

So we're at pains to ensure that if our staff want to know about our policies on genetically modified foods then they've got access to those, that they understand the position that we've taken . . . They may not necessarily personally agree or disagree with it, but . . . at least . . . it's transparent. (NZDB/Fonterra operations spokesperson)

Perhaps surprisingly, given this desire for transparency and goodwill, there was no suggestion that alternative staff viewpoints would be accommodated or lead to a change in the industry position:

I think the main thing is that they know what the organisation that they belong to is doing and they can choose . . . [to] stay with that organisation or, if they are violently opposed, they can go. (NZDB/Fonterra operations spokesperson)

This acceptance that staff opposed to GM might leave the industry organisation represented the NZDB/Fonterra GM position as the only rationality consistent with the dairy industry identity. Industry members were *expected* to identify with this expert perspective.

The NZDB/Fonterra also recognised that staff were involved in local *communities*, and that their support would maintain local goodwill, and manage the industry reputation:

We have people in the community where our factories operate who are concerned about the issue, and we have farmers who are around us, in our environment, who are concerned as well. So we have to have a communications vehicle that reaches those people, because . . . the worst thing you ever want to have is . . . some rumour starting from one of our staff. (NZDB/Fonterra operations spokesperson)

These are actions intended to pro-actively shape the public policy discourse environment (Cheney & Frenette, 1993; Crable & Vibbert, 1985). Yet, interestingly, none of these issues management communication strategies was positioned as *lobbying* in favour of GM technologies; their instrumental rationality was positioned as pragmatic and operational in approach.

Three of the dairy industry managers commented specifically that the NZDB/Fonterra chose not to communicate proactively with the New Zealand general public because their main markets are in fact international. Communication with publics within New Zealand was selective, concerned more about maintaining the identity of the industry and the goodwill of stakeholders, rather than proactively attempting to influence public opinion about GM. Public opinion was thought to be hard to influence directly; industry perspectives would be assumed to be biased, and this might then undermine the dairy industry positioning on GM:

If we were seen to be going out and educating consumers, probably the first reaction would be oh they're biased. (NZDB/Fonterra communication spokesperson)

The preference of the dairy industry was, like the kiwifruit industry, to avoid direct engagement in the public debate, and to avoid confrontation with anti-GM activist groups.

The Role of an Expert Industry 'Front Group.'

The dairy industry chose to leave the 'education' of the New Zealand public, and engagement with anti-GM interest groups to a 'front group': the LSN. As Rowell (1996) noted, front groups are set up by businesses, and given names that convey no allegiance to any specific organisation or perspective. They act as spokespersons for business perspectives in an attempt to convince publics of the need for the preferred action or legislation which is pro-business. As the ViaLactia spokesperson commented:

We did not see it our role to educate the public in biotechnology . . . Now what we did do though was to invest in the Life Sciences Network who we knew were going to do that. (ViaLactia spokesperson)

The NZDB/Fonterra was concerned it would be seen as self-interested if it lobbied the public directly. Cheney and Christensen (2001b) pointed out that a proactive approach to issues management can potentially precipitate "the very situations that organizations seek to escape" (p. 171). In this case, given the generally cautious view taken by the New Zealand public over GM issues, proactive involvement in the New Zealand-wide GM debate was seen as potentially alienating the public rather than gaining its support. The dairy industry preference was for intra-organisational and inter-organisational public relations/issues management, such as involvement in the LSN, to coordinate their strategies with other like-minded interest groups (see Cheney & Christensen, 2001b).

The NZDB/Fonterra was equally cautious about engaging with the arguments of activists. For example:

Tell an agricultural story (because it's an agricultural story not just a dairy industry story). Focus on legislators, regulators, farmers, and marketers. Get the facts out but do not go head to head with activists. Be absolutely honest. (ViaLactia spokesperson)

Evidently, this spokesperson considered that an "agricultural story" would be based on values held in common with legislators, regulators, farmers, and marketers, such that these groups would be more likely to identify with the dairy industry's rhetoric and discursive positioning. However, this spokesperson's assumption that such a story would deliver "facts" that were "absolutely honest" fails to recognise the ways

in which particular identities and rationalities can be used to socially construct one particular strategic position as more worthwhile than another (see Cheney & Christensen, 2001b).

The media spokesperson also had a surprisingly reactive rather than proactive approach to the media:

We didn't go out there in a structured way to get stories into the paper, but it didn't matter. I've always believed that there's much to be taken from using natural momentum in communications. (NZDB media spokesperson)

“Natural momentum” in this case, would come from being associated with media stories drawing on similar values and rationalities to those underpinning dairy industry policy. This spokesperson again indicated that the dairy industry position on GM could be represented by the LSN, without compromising the industry identity. The industry did not want to appear biased and one-sided by being identified as an extremist lobby group in heated political debate:

I think it was shrewd for the dairy industry to have been . . . connected but not instantly associated within the public mind with . . . that lobby group [LSN]. . . It appears to be . . . closed-minded . . . campaigning down this route and not listening . . . not as balanced as the dairy industry needed to appear to its various stakeholders. (NZDB media spokesperson)

The LSN was much more combative in its approach to GM issues and engagement with activist groups than the dairy industry was prepared to be, describing public debate about GM as a “battle” (personal conversation, William Rolleston, Chairperson, Life Sciences Network, September 16, 2002), and specifically stating in their submission, “We believe a decision which withholds the application of biotechnology is not only ethically and morally unjustified but wrong” (Life Sciences Network, 2000, Section B (c) (i)). Heath (1997) suggested that the ‘combative attitude’ typical of the LSN is a

. . . rhetorical stance [that] implies the company is correct, protesters are wrong, and through punishment, the public can be bludgeoned to understand and accept the difference. . . . This adversarial, or win-loss, posture occurs when the sides presume to have an exclusive grasp of the truth and want to silence their opponents or bait them into making statements that key segments of the public will find offensive. (Heath, 1997, p. 157)

This adversarial attitude is clearly evident in the *emotive* rhetoric of the LSN submission to the Royal Commission:

In our view a decision to *wilfully* stop or even slow down the pursuit of knowledge in this or any other scientific endeavour imposes a penalty on generations yet to come which cannot be ethically or morally sustained [emphasis added]. (Life Sciences Network, 2000, Section A (1)).

The dairy industry chose not to risk the possibility of alienating key publics directly, and the use of a front group supported its strongly pro-GM stance, but protected the industry identity from being seen as extremist.

However, the dairy industry media spokesperson admitted that he was criticised by the LSN for not proactively communicating with wider publics to lobby for the industry's pro-GM position. He commented that at this time he was actually involved in crisis management over the controversial proposed dairy industry 'merger' which resulted in the formation of Fonterra:

We . . . were fighting a tooth and nail battle . . . politically right through the period of the debate, the Royal Commission and so on. The priority was to get Fonterra over the line and it damn near didn't get there. My major task assignment was to stop the . . . vessel from sinking and to have Life Sciences out there . . . was very advantageous . . . but I understand from within Life Science there was some criticism about the effort . . . that I, at least, didn't put into it. (NZDB media spokesperson)

The dairy industry then, at the time of the most intense debate about GM issues in New Zealand was managing its changing industry identity as the merger of the NZDB, the New Zealand Dairy Group and Kiwi Cooperative Dairies into the new industry organisation, Fonterra, was negotiated.

Perhaps again out of a concern to avoid becoming involved in controversial debate, AgResearch⁶ was never mentioned in either NZDB/Fonterra formal industry

⁶ AgResearch is a Crown Research Institute involved in agricultural research and commercial product development, in three key areas: "Creating new biotechnology-based food industries; 'clean, green' food industries; [and] a healthy, safe environment" (AgResearch, 2002). This includes genetics, new food and pharmaceutical-related industries; food safety and food processing technologies; biocontrol of animal parasites, and pasture pests and diseases, in research centres in Hamilton, Palmerston North, Mosgiel, Lincoln, and Upper Hutt. AgResearch made a submission to the Royal Commission arguing for continuing research and commercial development of GM. Its most controversial research has been aimed at inserting human genes into dairy cows to produce milk products to be used for medical purposes.

documents referring to GM policy or comments by interviewees and focus group members. The industry organisation could little afford to become publicly embroiled in an intense debate about GM which might polarise stakeholder opinions in a way that adversely impacted on the management of the merger. The industry relied on the minimum of public statements about GM, to manage GM issues in the face of the crisis management strategies needed to negotiate the merger.

The Expert Management of Risk.

The dairy industry also avoided becoming involved in public debate about GM because industry managers believed that decisions about GM were best left to ‘experts.’ This was consistent with their separation of technical and scientific risk assessment, as the realm of technical experts, from the cultural and social values associated with GM. The legal spokesperson commented that the NZDB submission to the Royal Commission was about “giving a story to the rest of New Zealand via the Royal Commission.” The term ‘story’ implies a creative tale designed to convince an uninformed public. Interestingly, this spokesperson represented the Royal Commission as a “quasi-legal” process, the realm of legal experts. She suggested that the New Zealand public had been extremely lucky to be involved in the Royal Commission process, which she described as “extraordinary” because it was “so laid back” (NZDB/Fonterra legal spokesperson).

This spokesperson again emphasised the need for a case-by-case assessment of GM research and development, based on scientific principles, as the best, and only, way to proceed. That is—the technical, regulatory, and legislative control of GM was preferable to extending the moratorium on applications for GM commercial developments, even though the currently incomplete understanding of GM technology was acknowledged:

We were very keen to ensure that people understood why the case-by-case assessment was better . . . A ban is a very, very blunt instrument . . . and I mean you’re dealing with a technology that is . . . different, it’s changing, it’s new . . . you can have principles applying, and processes and procedures, but at the end of the day, until you have a build-up of understanding of the technology, it has to be dealt with by a regulatory authority. (NZDB/Fonterra legal spokesperson)

Interestingly, this privileging of ‘experts’ and regulatory processes, relies on a technical rationality which argues that risks are calculable and can be managed by regulation (Burke, 2004; Tait, 2001; Wilkins, 2001). This is at odds with the de-regulation of science and industry favoured by a free-market rationality, and is evidence of the tensions in the dairy industry management of multiple identities and rationalities. Science-based industries, as at the Asilomar conference in 1975, frequently argue that government regulation of research and development should be minimal (see, for example, Rabino, 1994). Yet, in this instance, regulation was represented as an expedient alternative to a complete ban on GM research and development; it also suited the industry need to provide transparent auditing procedures of their manufacturing processes to international customers.

Primary industry experts in New Zealand have power by virtue of the economic assets that they manage, since the financial returns from primary industries benefit the New Zealand economy. In both the kiwifruit and the dairy industry members’ accounts, there was evidence that they used this power to lobby extensively with Government and legislators for their respective positions on GM. However, organic groups within both the kiwifruit and dairy industries argued against commercial development of GM, and played a more active role in the debate than other producer groups. The limited participation of both the kiwifruit and dairy industries in the wider public debate about GM is explored in the next section of this chapter.

Organic Activist Groups and Lobbying: Influencing GM Public Policy

Neither the dairy industry nor the kiwifruit industry undertook deliberate campaigns to influence public opinion in New Zealand directly, for example with specific media campaigns, unlike other interest groups, such as the ‘GE-Free’ coalition (see Henderson, 2005) or Greenpeace (see Motion & Weaver, 2005b), but within each industry, particular individuals and industry groups were actively involved in lobbying—within the industry, within local communities, or at a government or regulatory level.

Governments do not decide public policy in isolation (Heath, 1997); in Western democracies, their dependence on public opinion for a favourable political climate for re-election means that increasingly public policy is decided by a process of public debate. As Conrad and McIntush (2003) noted, the policy *agenda* may be contested; interest groups may both raise policy issues in the public domain, or attempt to redirect them. In the case of GM, the issues were firmly on the policy agenda at the time of the Royal Commission, and contested from a variety of perspectives; although, since the lifting of the moratorium on applications for commercial release of GMOs, the issues have faded considerably from public view.

Rhetoric imposes limits on people's interpretations of reality, their individualised worldviews, through the use of specific "terministic screens"—that is terms that act like filters to create a basis for identification (Burke, 1966, p. 44). If such meanings, about, for example, science and economics, are 'taken-for-granted', the interests of particular groups may be privileged in ways which marginalise other choices. These groups and the resulting normalised discourse then have power, and issues are seen as instrumental rather than social or values-based (see Cheney & Frenette, 1993; Deetz & Kersten, 1983; Foucault, 1988; Mumby, 2000). For example, the market, from a public choice theory perspective, is seen as amoral—that is exempt from moral judgement—as natural, or the best, or to be preserved, and is unquestioned as an indication of public good (Cheney, 2004).

Yet, as Beck (1992) has argued, in a 'risk society,' the values and rationalities associated with scientific industrialisation are increasingly questioned; for example, the risks associated with GM, which are global, largely invisible, and possibly irreversible. Old models of political consultation and the role of experts are problematic because the interplay between opinions only hardens the divisions and conflicts. Beck (1994) suggested that groups for whom decisions are relevant must be able to participate in decision making, not just experts, and this may require that new processes of dialogue and decision making must be agreed on and sanctioned. In the meantime, interest groups frequently rely on activism and lobbying as strategies to influence policy debate.

Evidence of Activism in the Kiwifruit Industry

There was strong evidence in the accounts of organic kiwifruit growers that they (and the industry generally) had a history of being politically active. At a time when neo-liberal policies resulted in the de-regulation of many industries in New Zealand, the kiwifruit industry took on a political battle to preserve the single-desk marketing which had resulted in significant industry growth (Webby, 2004). Organic growers linked this political action with current debate about GM, as a time when participants identified so strongly with the industry position that this took precedence over any conflicting national or international commitments. One participant clearly lobbied actively, and successfully, against his wider political affiliations in support of this campaign:

I was involved with the National Party at the time that they were in government as local branch chairman and in the interests of the industry I had to lobby hard within the party against their proposed deregulation and we rallied an enormous force within the local branch to oppose this crazy logic. (Respondent A, ZESPRI Organic kiwifruit focus group)

A second participant commented that growers would “stand fast” on single desk marketing even in the face of opposition from the WTO, who see such stances as a “trade barrier” (Respondent F, ZESPRI Organic kiwifruit focus group). This participant articulated the strength of feeling about de-regulation of the industry that had previously generated substantial activism and direct engagement with politicians. He commented that, “Growers opened up their cheque books and just said no,” and that “busloads of people going to Wellington to talk to politicians” demonstrated the strength of growers’ activism (Respondent F, ZESPRI Organic kiwifruit focus group). The coordination of such ‘grassroots’ activism requires extensive networking (see Henderson, 2005), and is also evidence of the effectiveness of kiwifruit industry communication practices, and the collective identification of individual growers with the cooperative industry.

The organic growers’ comments about Government policy on GM, in the context of the above comments, indicate the potential to be politically active, and indeed a certain relishing of the “battle” involved:

If you're asking where to from here, we may have lost the battle [over GM] but I don't think we've lost the war. (Respondent F, ZESPRI Organic kiwifruit focus group)

Two of the packhouse/suppliers' technical spokespersons held similar strong feelings. One described the Chairman of the Kiwifruit Marketing Board at the time of previous political battles as "pretty astute," and his involvement as "ferocious discussions down in parliament" (Technical adviser, packhouse/supplier A). This participant was confident that industry leaders were particularly skillful in lobbying Government, and had the support of growers:

They [kiwifruit growers] pull no punches and they are not too interested in frills . . . Kiwifruit growers would just come in behind ZESPRI's wing. (Technical adviser, packhouse/supplier A)

A second technical spokesperson would have liked ZESPRI, as an expert industry voice, to take more of a lead politically in voicing the concerns of those cautious about proceeding with GM at a commercial level. She commented:

When it really does strike home that we are allowing GE crops in New Zealand and hey down the track Japan is saying right we took five million trays but look honestly fellows we just don't want them any more, that's when the boots will really start sort of hitting the floor. (Technical adviser, packhouse/supplier B)

The phrase "the boots will really start sort of hitting the floor" suggests that a more political ZESPRI stance on GM would have the active support of industry members.

This spokesperson was also prepared to take an active *individual* role in the debate:

Even if I'm not out there advocating with my chief executive that this is an issue that we've got to have in everybody's faces . . . if I need to trigger anything I will, and I'm sitting in a position where if I need to I can. (Technical adviser, packhouse/supplier B)

These kiwifruit industry members' accounts indicate that some industry groups were potentially prepared to lobby Government directly, if commercial development of GM threatened their own interests. The combative stance evident in the rhetorical positioning of ZESPRI's GM positioning as a 'battle' and the level of action envisaged in these accounts is, however, somewhat at odds with the pluralistic perspective on GM taken by other industry members, and the wider tactics of 'silence' adopted by ZESPRI management.

Organic kiwifruit growers were the most politically active group in the kiwifruit industry. They had the most of all the industry groups to lose, since their certification as organic growers could be threatened by contamination with GM crops, and as a minority group were used to representing their perspective to mainstream industry groups. Similarly, in the dairy industry, the organic farmers were the group actively involved in debate about GM both within the industry and at a local community level.

Evidence of Activism in the Dairy Industry

Like organic kiwifruit growers, organic farmers campaigned *against* the use of GM in agriculture, and in favour of organic farming methods, demonstrating that their identity as organic producers was stronger than their identification with the dairy industry.

Organic farmers organised meetings about GM in their local communities, but commented that rural communities were entrenched in their pro-GM beliefs, possibly because they are traditionally National Party voters and endorse the National Party pro-GM position. Rural communities frequently assumed organic farmers were politically aligned with the Green Party, and did not listen to organic farmers' arguments about GM because the farmers were thought to be activists. Even when organic farmers "tried to be very professional" in their approach, they "found it very difficult to even try and get a different perspective over to the community" (Respondent C, Organic farms focus group). GM issues were represented by these participants as involving a conflict of *political identities* as much as a substantive argument.

The organic farmers' focus group members aligned themselves with the 'GE-Free' coalition campaign tactics in calling for local councils to establish their region as a GE-free zone. The creation of GE-free zones and the lobbying of local councils were particularly effective tactics in the 'GE-Free' campaign (see Henderson, 2005). Although, in this case, this tactic was unsuccessful, other tactics within local communities were more effective:

They [local council] certainly wrote quite a reasonable letter to the Government and copies went to all the key ministers etc supporting our stance on keeping the moratorium on, so we did have a small victory with the Council even if we didn't have it with the wider community (Respondent D, Organic farms focus group)

Organic dairy farmers provided ongoing information and support in relation to organic farming to other dairy farmer groups, and relied on personal interaction with other farmers rather than, for example, attempting to change attitudes through mass media information campaigns (see Ledingham, 1993). They had an active lobby group, the *Organic Dairy Producers' Group*, promoting organic farming methods through "organising workshops and discussion groups"; for example:

As we get more farmers looking at our systems they will realise that they will learn more about 'nature', etc, and realise that it is actually probably easier to work with 'nature' than try and change it. (Respondent D, Organic farms focus group)

This comment demonstrates an ecological view of 'nature' as an integrated system (see Cronon, 1996; McNaghten & Urry, 1998; Merchant, 1992) and, in the context of this focus group discussion, implicitly constructs GM as *not* working with 'nature'.

Organic farmers saw the co-existence of organic farming and GM as problematic, and evidence for the viability of the co-existence of GM and non-GM primary production has been contested. For example, co-existence is supported by Federated Farmers, but challenged by the 'GE-Free' coalition, and was the subject of a Ministry of Agriculture and Forestry (MAF) report (MAF, 2003). Organic farmers' aim was primarily to change farming methods to include organic practices, rather than trying specifically to influence farmers' position on GM; In this sense the organic farmers' activism was driven by a principled value-based rationality rather than a purposive instrumental rationality, as distinguished by Weber (1978) and Giddens (1972).

Interestingly, the spokesperson from ViaLactia emphasised at the time of the research interview, in 2002, that while there might be good reasons for organic farming from a production perspective, there was no evidence of an international market for organic dairy produce:

In most parts of the world, farmers are now moving out of organic dairy production because the premiums are no longer there. So to say turn New Zealand into organic by 2020 ... wonderful idea and might have some very good spin-offs in terms of the

way in which we farm but we won't sell that product as organic. (ViaLactia spokesperson)

This spokesperson agreed that the future for organic farming was contested (see Campbell & Ritchie, 2002; Chamberlain, 2001; Cook & Fairweather, 2003) but strongly defended the dairy industry *expert* opinion that there was no market for organic farming:

We're the biggest marketer of dairy products in the world. We do know our market . . . We studied organics, we knew what the market dynamics were. (ViaLactia spokesperson)

Yet, by 2003, the marketing spokesperson commented that one reason why Fonterra had chosen to develop a small organic sector within the dairy industry was because it was a good *public relations tactic* to offset concerns about the dairy industry's pro-GM position:

I don't think that the emphasis on organics necessarily goes hand in hand with the GM position, but. . . it's linked in the media and it's linked by Fonterra's PR people . . . if there's fuzziness around the fact that there is some GM or GE type activities going on within Fonterra, then that can be offset I guess by the so-called positive images that organics would have . . . So from a PR communications point of view there is benefit in publicising the organics work that's going on. (NZDB/Fonterra marketing spokesperson)

The same marketing spokesperson acknowledged that there *was* a growing market for organic products:

In terms of the reasons why you actually do the organics work, that's got nothing to do with the GM position at all. That's arisen because there is a niche, that we can make quite good money out of, that is growing quite quickly . . . we've got maybe 25 farms right now and we're going to later need 160. (NZDB/Fonterra marketing spokesperson)

Indeed, recent media reports indicate a continuing "push" for more organic dairy production (Sheriff, 2005). This change in the NZDB/Fonterra's positioning on organics indicates that the activist tactics of New Zealand organic farmers, together with the growing preference of international and New Zealand consumers for organic produce (see Campbell & Ritchie, 2002), was very effective. Although the international market for organic dairy products may be small, the development of organic products is in part a deliberate strategic move by the dairy industry to placate New Zealand and international publics which were uncertain about the benefits of

GM, and to create a more positive identification by these publics with the dairy industry, and its positioning on GM.

The marketing spokesperson (interviewed in September 2003, a year after the interview with the ViaLactia spokesperson) suggested that there has been a shift in emphasis in the industry positioning on GM. Instead of the development of GM products *per se*, the emphasis is now on understanding the role of genes in providing particular nutritional benefits that might lead to the development of specialised value-added products:

ViaLactia, that's the company that was set up to do the GM work, has moved far more in gene identification. So they're not using GM techniques any more but they're identifying the genes that are responsible for the particular expression . . . Most of our research . . . will be focused on nutritional . . . benefits that we can derive from dairy products. (NZDB/Fonterra marketing spokesperson)

Such a change in positioning is consistent with the need to move away from a dependence on low-cost commodity products, and reflects the current privileging of health discourses internationally, and the values being promoted for specialised nutritionally-dense foods (see Katan & de Roos, 2004).

Organic groups in both the kiwifruit and dairy industries are 'activist'—that is they are actively engaged in contesting mainstream farming practices—and both the New Zealand public and international consumers are perceived as supporting organics. Managing the relationship with internal and external stakeholders, then, involves each industry in managing its identity in association with organics. Overall, however, both the dairy industry and the kiwifruit industry avoided taking an active position in the New Zealand public debate about GM, despite the preparedness of individual industry members to do so. Political activism was generally associated by both kiwifruit and dairy industry members with being *radical*; that is extreme and emotional, and therefore not credible for a large corporate industry organisation. Perhaps significantly, public relations literature has tended to position corporate public relations as *countering* grassroots activism (see L. A. Grunig, 1992; Heath, 2001; Smith & Ferguson, 2001). This instrumental perspective privileges the legitimacy of *corporate* and supposedly 'apolitical' discourses, and implies that best practice lobbying is to use 'insider' tactics of influence with governments and key

interest groups, rather than risking the loss of that legitimacy by ‘active’ engagement in public debate.

Evidence of Lobbying in the Dairy Industry

Directing all public relations activity through a corporate communication spokesperson is common issues management practice, particularly in the development of issues management campaigns that take a ‘propaganda’ approach, and attempt to influence public opinion or the discourse environment directly (see Crable & Vibbert, 1983; Livesey, 2002; Pratt, 2001; Tilson & Stacks, 1997). However, issue management can also be conducted through ‘insider’ lobbying, where the emphasis is on negotiation, on developing a relationship with key individuals or groups in government and government-run institutions in an attempt to influence policy decision-makers directly (see Coombs, 2001; Ginzler, Kramer & Sutton, 2004; Murphy, 1996; Taylor, Vasquez & Doorley, 2003; Vasquez, 1996).

Unlike the deliberate, proactive communication campaign aimed at farmers and marketers within the industry, the NZDB/Fonterra chose not to initiate engagement in public debate about GM, but did take full advantage of opportunities to lobby other interest groups, if invited to do so:

In terms of the public we decided not to be proactive but if Simon Collins [New Zealand Herald reporter] wants to talk to us we’ll talk to him . . . and we make no hesitation to write articles in magazines or journals that will be available to the general public . . . We’ll go and talk in schools about what we’re doing. We’ll go and talk to groups, Rotary groups, we’ll absolutely do that, but we weren’t actively looking for those opportunities. (ViaLactia spokesperson)

As well as strategic use of media, “one-on-one type meetings” with “government” and “officials” were preferred (NZDB/Fonterra marketing spokesperson). For example:

We invited all politicians to come and talk to us either here or at the Dairy Board or we will go to them . . . we arranged meetings with the various caucuses, or at least the agricultural or the science and education caucuses. (ViaLactia spokesperson)

Additionally, there was deliberate engagement with legislators in relation to GM issues, “We try to proactively inform the legislators about what we’re doing and what biotechnology is all about” (ViaLactia spokesperson). The lobbying of

legislators was frequently managed by the legal spokesperson, and it was clear that this was ongoing practice. The NZDB/Fonterra's preference was for industry specialists to engage directly in lobbying their specialist counterparts in Government and government institutions, rather than directing all public relations activity through a corporate communication spokesperson.

In farmer focus groups, farmers expressed confidence that dairy industry experts would lobby at a political level on their behalf. The Shareholder Council evidently took an intermediary role in conveying individual farmer opinions to dairy management groups and advising on the status of industry submissions to Government, and farmers had significant trust in the dairy industry record of powerful lobbying:

If Fonterra had something they could sell of GE they would be putting a hell of a lot of pressure on the Government to change their thinking and that's my impression of how a lot of decisions get made. (Respondent E, Smaller farms focus group)

This comment implies that the dairy industry *expects* to have significant influence on Government policy.

The strong alignment of dairy industry positioning on GM with preferred Government policy makes it particularly likely that the dairy industry lobbying on GM policies will be successful. The industry lobbying of Government draws on market and scientific discourses that privilege the knowledge of economic and technical experts. These discourses are currently those favoured by the Labour Government whose *Growth and Innovation Framework* focuses on economic and technical goals for New Zealand as a 'Knowledge Economy,' and includes prioritising developments in biotechnology and GM. In contrast, the kiwifruit industry had to work harder to demonstrate the threats to New Zealand's brand identity as 'clean' and 'green' and to present a viable alternative viewpoint on GM.

Evidence of Lobbying in the Kiwifruit Industry

Although the kiwifruit industry avoided being aligned with other interest groups and took no part in lobbying for public opinion in debate about GM, there is an indication that, as in the dairy industry, extensive lobbying went on *behind the*

scenes, out of the media. ZESPRI ensured that the kiwifruit industry GM position was clearly represented to Government and on relevant technical, regulatory, and advisory boards. One communication spokesperson constructed kiwifruit industry communication as developing a “constructive relationship” with the Government. She commented:

They’re a critical stake holder, so we make a point of ensuring that they are informed . . . We do fairly regular updates to the House particularly on performance. (Communication spokesperson B)

This represented the lobbying of Government as a strategy aimed at providing information and developing relationships, and some relationships were identified as “very close,” particularly those with the Ministry of Agriculture and Forestry (Communication spokesperson A). Interestingly, though, such relationships were *not* represented as lobbying:

It’s been our position not to actively lobby. We don’t like lobbying. Our feedback is that the ministers and the ministerial staff don’t like it. What they ask us to do is to formally keep them in touch with what the feeling is in the industry—not how our boards might feel but what is the grower feeling . . . We prefer to be able to have the lines in communication with the officials in the departments actually open. (Communication spokesperson A)

Lobbying, this spokesperson suggested, resulted in ‘closing off’ communication, and was identified as unproductive. Her emphasis on a dialogic relationship is consistent with recent conceptualisations of issues management practice (see Coombs, 2001; Ginzel, Kramer & Sutton, 2004; Murphy, 1996; Taylor, Vasquez & Doorley, 2003; Vasquez, 1996), rather than on traditional models of issues management that emphasise persuasive influence. She implied that it was unrealistic to try to *change* Government attitudes through overtly persuasive tactics, that it was more important to *exchange information* that might be mutually beneficial.

Policy bids but no surprises from either side if we can avoid it. And what we expect from that relationship is a similar flow of information . . . And that way you can all do what you need to do and if you’re caught out and you knew it was going to happen then that’s your own fault. You can’t expect to try and change them. (Communication spokesperson B)

The industry/Government relationship is thus represented as an interactive dialogue with attempts to appreciate different perspectives on specific issues (see Roper, 2005b) rather than as ‘zero-sum’ games of strategy (Murphy & Dee, 1992). This

perhaps identifies the challenges faced by the kiwifruit industry in trying to align their GM policies with those of Government, but is also consistent with the wider industry culture supporting diversity and recognising the plural perspectives of stakeholders.

A second, more junior Communication spokesperson did, in contrast, refer to engagement with policy-making and advisory groups as active lobbying:

What we do is we've already made it very clear what our stand is and we participate on a number of levels and a number of those advisory bodies or policy making bodies and, if we need to, we lobby very, very hard. (Communication spokesperson A)

This was again qualified, though, as involving “discretion,” with the stated outcome of creating a “dialogue” and having “your position known” (Communication spokesperson B). This construction of ‘best practice’ issues management is consistent with Heath’s representation of issues management as dialogic (1997), and as a rhetorical dialectic: “The good organization communicating well” (2001, p. 31).

However, despite engaging in deliberate strategic lobbying at a Government level, all of the ZESPRI Innovation team, one of the communication spokespersons, and some of the kiwifruit growers indicated that public policy decisions should be made by the New Zealand electorate, by citizens, rather than by experts. The preferred political stance was therefore *inclusive* and democratic, even if the outcome might not be ideal for the industry. For example:

From time to time we may not be happy with the outcome but we have to be involved in the process; there is a democracy still but most people don't know how to engage in that process. (Communication spokesperson B)

Industry members frequently identified the multiple discourses, perspectives, and value-systems underpinning particular rationalities for GM. These were described, for example, as a “huge diversity of opinions”:

. . . a wide range of views . . . from a technical, scientific area . . . from a commercial perspective and . . . cultural and social and environmental concerns. (Innovation spokesperson A)

This participant valued the role of the Royal Commission in providing the opportunity for “different people . . . to be involved in the debate” (Innovation spokesperson A).

However, the Royal Commission has been critiqued, with the suggestion that the ways in which it was set up, the processes involved in the collection of submissions, and the context of the analysis all reflected modernist world views and as such marginalised environmental groups' submissions (Rogers-Hayden, 2004; Rogers-Hayden & Hindmarsh, 2002). Hajer (1997) has also pointed out the advantages, in terms of status and credibility, and the disadvantages, in terms of restriction of dialogue, of quasi-legal forums like the New Zealand Royal Commission as a means of "societal enquiry" (p. 288).

One kiwifruit industry spokesperson identified the need for a forum where views with different values can be expressed; he represented GM issues as "almost a religious debate . . . because it is based on belief rather than necessarily on fact" (Innovation spokesperson E). Another Innovation scientist clearly had a social constructionist perspective of science, seeing scientific knowledge as contested:

Biological systems are never about black and white, they're about shades of grey and to have scientists on both sides and people claiming to be using scientific argument to say that there is a black and a white or a right or a wrong, is just to my way of thinking, just crazy. (Innovation spokesperson E)

The issues surrounding GM were then implicitly represented by kiwifruit industry members as inherently political or ethical (see Latour, 2004; Nelkin, 1984), in contrast to the dominant technical/scientific perspective amongst dairy industry members.

The dilemma for the kiwifruit industry is that active lobbying for environmental perspectives has frequently resulted in organisations being branded left-wing politically, and anti-capitalist, stances likely to alienate stakeholders and interest groups that the kiwifruit industry is keen to influence. For example, Dick Hubbard, founder of the New Zealand Businesses for Social Responsibility, was subjected in 1998 to quite personal attacks by Roger Kerr and the Business Roundtable, and accused of attacking the integrity of major businesses in New Zealand and of taking a leftist, anti-capitalist stance (Allen, 2004). ZESPRI attempted to align the kiwifruit industry position on GM with Government policy by drawing on free-market discourses to present a rationality based on the importance of

the New Zealand ‘clean, green’ brand identity to its economic prosperity. This prioritised the values associated with the Government’s ‘100% Pure’ campaign, a tourism brand identity which has been particularly successful for New Zealand economically. For example, tourism recently overtook the dairy industry as being the largest export-earning industry in New Zealand (Tourism Research Council, 2004).

Kiwifruit industry members demonstrated a range of diverse positions about public policy decision-making on GM. These included a preparedness to be politically active at a grassroots industry level, and a history of overt political lobbying. Yet management demonstrated a preference for developing mutually beneficial relationships with Government and regulatory bodies. Industry members also believed that New Zealand citizens should contribute to public policy decisions about GM, and should respond to the preferences of international customers.

In contrast, dairy industry representations of lobbying and decision-making processes consistently privileged the voices of experts, and positioned the dairy industry as an authoritative voice which expected to exert considerable influence on Government policy.

Conclusion: Industry Engagement with Stakeholders and Influences on Public Policy

The Kiwifruit Industry: Tactics of Silence Exist in Tension with Consultative Decision-making and Pluralist Perspectives

The kiwifruit industry represents its avoidance of engagement with stakeholders on issues related to GM as preserving the *integrity* of the industry identity, in that the industry position on GM is concerned to protect the multiple identities which might be adversely impacted by association with GM in New Zealand. As discussed in Chapter Five, the industry has an identity as part of a New Zealand which is ‘clean, green’, unpolluted, and ‘pure’—environmental integrity. It has an identity as a global market leader in kiwifruit exports, as a successful business, rather than as an activist organisation—commercial integrity. The industry

relies on the identity associated with its product: the quality, taste, and health-giving properties of a luxury raw fruit—the integrity associated with a high-quality product. The industry also depends on a complex identity in terms of production; with processes that are environmentally friendly, efficient, transparent in meeting audit requirements, and sophisticated technologically (although not GM)—integrity associated with high-quality systems. Finally, the industry highlights an identity which respects individual diversity, at the level of the grower, the supplier, the customer, and the consumer—an integrity of respect for individual values systems.

The kiwifruit industry issues management tactics of ‘silence’ have resulted in the successful management of multiple, diverse values, rationalities, and identities. The strategic decision to position the industry policy on GM only in terms of the commercial, business identity of the industry in the international marketplace effectively unites the industry by drawing on the common value most universally identified with by the industry stakeholders. This simultaneously protects the dynamic, complex identities and values represented in the industry, by minimising the tensions between rationalities drawing on multiple value-premises. The single marketing focus of the kiwifruit industry positioning manages tensions associated with rationalities drawing on market, science, environmental, social, and political discourses by constructing GM policy as based on the common values of respect and integrity. These abstract values have sufficient strategic ambiguity (see Eisenberg, 1984) to be endorsed by the majority of industry stakeholders.

The level of trust in the industry management and decision-making processes, built up through the consistent use of highly interactive and consultative communication structures within the industry, enabled the decision on GM policy to be made at an executive level with the support of industry stakeholders, despite ZESPRI’s tactics of ‘silence.’ The wide acknowledgement of, and support for, diverse values were seen as important at the level of industry decision-making, as well as at the level of public policy decision-making about GM. For this reason, the kiwifruit industry saw its own positioning on GM as *contributing to*, rather than seeking to *dominate* wider debate in New Zealand.

The Dairy Industry: 'United We Stand' – a Position Privileging the Role of

Experts

The dairy industry was managing the merger of the various cooperative dairy groups into the new corporate organisation, Fonterra, during the period leading up to and immediately after the Royal Commission. It was thus concerned to protect the identity of the industry as credible and coherent among New Zealand stakeholders, rather than 'fighting fires' on too many fronts. At the same time it was important that the dairy industry was positioned as a global leader, and seen to embrace GM, in its bid to set up the new single cooperative organisation. There was very strong lobbying within the industry by industry executives (both on issues related to GM and on the worth of the merger), to try to ensure the industry did not end up fragmented, and would emerge as a continuing global force.

There was less active lobbying of the New Zealand public in relation to GM; this could safely be left to the expertise of the LSN, since the creation of a united group representing industry and science perspectives resulted in a powerful resource base with considerable potential influence on public opinion and public policy. However, the dairy industry membership of this group clearly privileged the business and technical/scientific perspectives of GM evident in the industry rhetoric. The dairy industry did not itself need to seek popular support for its GM policy, since it felt it could also rely on having influence on public policy through having the ear of Government.

The hierarchical nature of the dairy industry structure means that the corporate executive group is much more distant from the level of the owner/producer than in the kiwifruit industry, despite the cooperative ownership. Dairy farmers' collective industry identity more resembles that of shareholder status in a corporate entity than a cooperative in terms of decision-making, and farmers are indeed referred to as shareholders on the Fonterra website. Dairy industry policy is developed and implemented with some consultation and feedback from producer groups, but is perceived by farmers to be driven by corporate expertise. The overall focus of the dairy industry positioning on GM draws on its corporate identity as a

global competitor in international dairy markets and prioritises pragmatic instrumental rationalities based on financial efficiency and the operational regulatory environment.

The dairy industry expected that its expert voice would be persuasive and influence public policy decisions about GM. Despite believing that decisions about GM should be made solely on a *technical* basis, the dairy industry was highly *political* in actively lobbying to influence Government policy. The industry privileging of technical/scientific rationalities in this political context only reinforces the viewpoint that science is socially constructed, that values inevitably underpin scientific rhetoric even when it is represented as value-free.

The tone of the dairy industry documents related to GM was overtly persuasive, and represented its GM position as both 'correct' and 'sensible.' The industry chose to engage in areas of the debate about GM that were wide-ranging, including the role of cultural and social values, which were represented as impeding research and development, and the regulatory framework, which was positioned as needing to be both minimal at the research and development level, and sufficiently prescriptive at an operational level.

The dairy industry is still managing the tensions involved in being market responsive both in terms of consumer expectations and competitor positioning. Interestingly, it is now making an attempt to further manage its international industry identity, and public image in New Zealand, by growing organic markets.

Both the kiwifruit industry and the dairy industry avoided engaging directly with the New Zealand general public on issues related to GM. For both industries, Government lobbying was the preferred form of action, yet this political action exists in tension with the preferred neo-liberal economic rationality of each industry. Each industry manages multiple identities to negotiate their relationships with the practices of GM and Government free-market policies, by privileging different aspects of the overall Government policy and New Zealand identity. They balance multiple industry voices and discourses in both New Zealand and in external markets.

This analysis of the kiwifruit and dairy industries' issues management communication about GM has demonstrated the preference of these corporate organisations to avoid open involvement in public debate about controversial socio-political issues, in efforts to avoid confrontations which might threaten their preferred identity and image. However, such organisations take a political stance in attempting to influence the public policy agenda through insider lobbying of Government, and may attempt to directly influence the attitudes of specific stakeholder groups. The analysis demonstrates the complexity and strategic nature of the kiwifruit and dairy industries' issues management communication, and suggests that issues management may usefully be explored as the management of multiple values, identities, and rationalities by the organisations involved.

CHAPTER EIGHT

CONCLUSION

In this concluding chapter, I review the research findings in the light of the aim of the thesis, and discuss both the practical and theoretical implications of the key findings. I acknowledge the difficulties I encountered in conducting the research, the implications of these difficulties, and what I might have done differently. I also discuss the implications of this study for future research and make some practical recommendations for organisations in their negotiation with controversial public issues.

This thesis has examined how two, seemingly similar, large primary producer industries in New Zealand negotiated very different relationships with the controversial practice of GM, at a time of intense public debate about the issues. This was in an effort to maintain their dominance in export markets, at a time when GM foods were on the one hand regarded as a liability in the marketplace, and on the other hand offered the apparent potential for innovation and economic gain. The thesis has presented case studies of the kiwifruit industry, which argued that New Zealand should *not* proceed with commercial development of GM, and the dairy industry, which argued that there was some *urgency* for New Zealand industries to engage commercially with GM technologies. It has looked in detail at the communication practices of these two industries with the aim of understanding the values and values-related tensions evident in their organisational communication about GM. The analysis has demonstrated that the social meanings evident in each industry's strategic positioning on GM were underpinned by two very different sets of identity management communication practices, for example 'tactics of silence' in the kiwifruit industry as opposed to specific public relations campaigns in the dairy industry. Yet, these industries negotiated similar tensions in the rationalisation of their respective policies, for example each industry attempted to align itself with other business groups while distancing itself from more radical groups taking similar

positions on GM, and each industry had to negotiate the tensions inherent in being perceived as both innovative and environmentally aware.

The theoretical framework for the research analysis has drawn on perspectives of identity and image, and organisational decision-making and rationality at the intersection of the diverse fields of organisational communication, public relations, and marketing. It has built on recent conceptualisations of communication as a “meta-concept” (Cheney & Christensen, 2001a, p. 239) to seek fresh understanding of the complex relationships between aspects of organisational identity and image management on multiple levels; both those traditionally seen as within the organisation, and those traditionally seen as external to the organisation.

The Implications of the Study for the Case-study Industries

The findings of this study indicate the complexity of the similarities and differences between the kiwifruit and dairy industries’ positioning on GM; that it is too simplistic to describe the kiwifruit industry and dairy industry as representing opposing positions in the GM debate. At a time when successive New Zealand Governments have espoused neo-liberal free-market economic policies, both the kiwifruit and dairy industries represented their strategic positioning on GM as *market-driven*, and both industries argued their respective positions in terms of the benefits for New Zealand, rather than simply for the industry concerned. This emphasis constructed GM policy as implicating the iconic identity of *New Zealand* in international markets, and attempted to align industry policy with New Zealand economic policy. It thus reflected the dominant political discourse, and ensured that industry positions would be seriously considered by Government. On a pragmatic level, both industries were also equally reliant on international customer and consumer support in purchasing their products, and both faced increasing demands from GM risk-averse customers for compliance with demanding audit procedures.

However, the kiwifruit industry sought to *retain* the trust of its international consumers, and its global leadership in the market. It represented its GM positioning in terms of its *brand identity*, which relied on both the luxury nature of the raw

product, ZESPRI kiwifruit, and the integrated pest management and production systems, the ZESPRI System. The kiwifruit industry highlighted *consumer* concerns about GM issues, and sought to influence the Royal Commission and the New Zealand Government directly, to ensure that there would be *no change* in the political environment that might change the current operating environment for the industry.

In contrast, the dairy industry sought to *assert* its position in an increasingly competitive global market. It represented its positioning on GM in terms of protecting its *corporate identity*, which was particularly vulnerable throughout the timeframe of this study as the industry was re-structured. The industry represented its GM positioning as essential to its continuing participation, and potential role as a leader, in international dairy markets. The dairy industry thus needed stakeholder support at an international and national level, both for its GM positioning and for the credibility of the new industry merger. It highlighted *producer* concerns about GM issues, and directed particular communication campaigns at stakeholders, at Government, and through a ‘front group’ at the New Zealand electorate, to seek a *change* to a more supportive political environment for GM practices.

In both formal and informal communication in the kiwifruit industry, diverse value systems and multiple viewpoints on GM were acknowledged as valid, and industry members generally accepted that they might not in the end influence the outcome of GM debate in New Zealand. This is consistent with the industry’s *individualistic market perspective*: as suggested by rational choice theory (Aune, 2001), consumers will decide whether to buy GM products on the basis of the costs and benefits of those products. It is also consistent with the industry’s *democratic perspective*: as suggested by public choice theory (Aune, 2001; Devine, 1998), citizens decide as an electorate on the direction of New Zealand GM policy, on the basis of their individual perception of, and support for, the costs and benefits of the GM policies espoused by Government or other political parties. The kiwifruit industry communication with diverse stakeholders was represented in terms that suggested the importance of *negotiating relationships*.

The dairy industry, however, represented its own position on GM as ‘correct’, privileging the voices of technical, scientific, legal, and economic industry experts, and marginalising the voices of uninformed lay publics. In comparison to the kiwifruit industry, the dairy industry has additional operating concerns at a technical level in relation to GM. At a manufacturing level, the industry is required to audit both its sourcing of other ingredients and its own final products in terms of its GM practices. This study suggests that the representation of GM as the province of ‘experts’ significantly influenced the communication practices of the dairy industry. Scientific discourses privileging technical assessments of risk underpinned all communication about GM, and represented social and cultural values as ‘distorting’ ‘true’ understandings of the issues. From this perspective, only ‘hard’ evidence about GM, and the voices of experts who understood that evidence were acknowledged as valid. This *prescriptive* assumption that ‘the industry knows best’ is consistent with its neo-liberal preference for economic and political business autonomy, but at odds with neo-liberal market perspectives of individual choice. Where the kiwifruit industry sought to *contribute* to the debate, the dairy industry sought to *dominate* the debate.

On a pragmatic communication level, the two industries’ different strategic positions resulted in quite different communication tactics with key stakeholders. The kiwifruit industry attained the luxury of *silence*, of *not* communicating extensively about its GM policy with its growers and suppliers. The high level of trust engendered by the consultative practices evident in the *cooperative* industry structure ensured stakeholder support within the industry for the GM positioning, despite the lack of consultation on this particular issue. Industry members appreciated the sensitivity to GM in international markets that dictated this.

The dairy industry equally demonstrated carefully controlled communication in relation to GM, but in this case, this involved deliberate, separately targeted *communication campaigns*. The dairy industry used a ‘front group’, the LSN, to ensure that its pro-GM positioning would influence the New Zealand electorate, while attempting to avoid direct involvement in public debate about GM, to protect

the somewhat controversial merger that created Fonterra from additional critical attention. Its two main campaigns, the MBT and the GIOT, directed respectively at marketers and farmers within the dairy industry, and at operational staff, specifically aimed to convince these stakeholder groups of the benefits of commercial development of GM products. The dairy industry is much larger than the kiwifruit industry and comprises more distinct industry sectors; for example, two manufacturing 'arms', New Zealand Milk and New Zealand Milk Products, farmers, the corporate administration, and research groups, such as ViaLactia. This diversity of function and product may be more easily managed through a *hierarchical* organisational structure and decision-making within the industry.

Alongside the organisational communication differences that underpin the multiple identities and rationalities negotiated by the dairy and kiwifruit industries, there are some specific differences over which they have less control. The kiwifruit industry produces a luxury raw fruit that has access to highly lucrative European markets, whereas the dairy industry produces a commodity product that is differentiated by its efficient low-cost production, and gains access largely to markets that cannot afford luxury products, for example, in S.E. Asia and Latin America. Yet, each industry has the choice of an alternative: the kiwifruit industry could choose to develop GM products in an effort to further dominate the world market, particularly since no other countries are as yet involved in the development of GM fruit. The dairy industry could choose to develop a wider range of non-GM value-added products for which they might find more lucrative markets. This would enable them to differentiate themselves from competitors already engaged in GM research and development, and, in fact, the development of 'functional foods' and an organic product range suggests that this is now seriously being considered. Each industry thus demonstrates different "logics of action" (Karpik, 1978) and rationalities for their GM positioning as a result of the management of multiple identities related to their organisational practices, different industry products, and markets.

In each industry, for example, the cooperative owners of the industry, the growers and farmers, are positioned differently in terms of the tensions associated with their own role in the industry and an industry identity as 'innovative'. In the kiwifruit industry, on the ZESPRI website, and in the recent centennial edition of the *Kiwifruit Journal*, images of growers as 'innovative pioneers' are constructed using profiles of individual growers, and international customers are invited to New Zealand to visit growers on their orchards. Individual growers are thus consistently represented as 'driving' the kiwifruit industry; it is the cooperative grower body, *Kiwifruit New Zealand*, which licences ZESPRI, the corporate marketing and development group. Growers additionally represented their own identity as consistent with the *environmental* values underpinning both the ZESPRI brand identity and their preferred industry identity for New Zealand. However, in the dairy industry, farmers indicated *regret* that the industry is becoming mechanised; that valuable traditional knowledge is being lost as farm production methods become increasingly specialised. The identity they construct for themselves is thus not entirely consistent with the implementation of *innovative* GM technology or the dairy industry preferred identity for New Zealand as an innovative 'knowledge economy'. Farmers are additionally referred to as shareholders, and the representation of the industry as a corporate organisation constructs the board of directors and corporate administration of the industry as 'driving' decision-making (Fonterra, 2004).

On a practical level, this study has suggested that industry organisations can benefit from being reflexively aware of the value-premises inherent in their communication practices. Kiwifruit industry communication practices provide an example of how the values of diverse stakeholders can be successfully integrated by the dynamic management of multiple identities, such that the adaptive instability envisaged by Gioia, Schultz and Corley (2004) is a working reality. This enables more flexibility in managing the complex tensions involved in negotiating both multiple industry identities and the consequent multiple rationalities for their positions on controversial issues. The dairy industry, limited by its identity as a hierarchical organisational structure, and the somewhat intransigent privileging of

technical/scientific and economic perspectives within a market rationality for its GM positioning, has resisted adapting its preferred GM positioning to acknowledge and respond to the diverse values of stakeholders. In contrast, by highlighting particular social meanings associated with 'integrity,' the 'environment,' and 'innovation' within its market rationality for GM, the kiwifruit industry effectively represented its position on GM as a rational choice, fostering identification with this positioning by multiple industry stakeholders holding diverse values. It will be interesting to see if the kiwifruit industry can maintain this reflexivity and adaptability longer term in relation to issues associated with GM, and how the industry might resolve future tensions in its identity management practices. For example, if commercial development of GM foods in New Zealand becomes widespread then ZESPRI's 'tactics of silence' might have to be abandoned and the kiwifruit industry might choose to enact an identity consistent with the potential for political activism demonstrated by industry members.

Limitations of this Study

The scope of this study was restricted to case studies of only two industries in New Zealand, but further research taking a similar critical-interpretive approach to understand the positioning of other interest groups on GM issues might provide additional insights that inform ongoing public policy development about GM. My original intention in this study, at the time that submissions were being made to the Royal Commission, was to explore the interaction of the kiwifruit and dairy industries with other interest groups in the New Zealand debate about GM in some detail. However, the limited engagement of these two industries in public debate about GM over the period of the study meant that many of the interviews that I conducted with spokespersons from other interest groups simply became useful background information for my understanding of the issues. As the study developed, I became more and more fascinated by the tensions evident in the complex interrelationships between aspects of the industries' identities and the rationalities they used to justify their positioning on GM. If I had appreciated this complexity

from the outset, it would have been interesting to interview both marketers and customers in the countries representing each industry's international markets. However, realistically, such international research would have stretched the financial resources of this doctoral study, and an extended study of these two industries remains to be completed.

In retrospect, I also appreciate why my first contacts with dairy industry staff seemed to raise questions concerning the credibility of my status and research. From the outset, the framing of my primary research question, that aimed to understand the *values and values-related tensions* evident in industry communication about GM, gave a clear indication of my axiological premises, and my social constructionist approach. Given my findings, that the dairy industry privileged a technical/scientific perspective of GM issues that marginalised the role of social and cultural values in decision-making about the related public policy, their hesitation about being involved in the research is understandable, and I am grateful to the staff concerned for supporting this study. Consistent with my preferred reflexive poststructural approach to this study, I would like to have been more open about my personal stance on GM with the research participants. My attempts to be perceived as 'objective' were in the circumstances pragmatic, but I am as a result much more aware of the limits of interview and focus group methods in structuring the research context.

An additional limitation in this study was the length of time taken to conduct all of the interviews and focus groups. Although this meant that the data was collected over a time period of intense debate about GM in New Zealand, which resulted in the establishment of a public policy direction, participants were commenting on events at different points in this period. Ideally, interviews and focus groups might have been conducted with all participant groups at the time of the Commission, again at the time of the announcement of Government policy, and again at the time of the lifting of the moratorium on applications for commercial trials of GMOs. However, the range of participants included in this study is also one of its strengths, and seasonal and international work commitments made access to these participants particularly difficult.

The Theoretical Implications of the Study

This study has demonstrated that the ways in which organisations and interest groups negotiate with controversial socio-political issues, such as GM can usefully be understood from the perspective of identity management. It has examined organisational communication about GM issues from the reference points of values, identities, and rationalities, and highlighted the complex relationships between these foundational concepts. In contrast to Davenport and Leitch's (2004) 'Issue-Impact-Action' model, which suggests that issues may generate stakeholder responses ranging from 'inaction' to 'interest-based action,' 'identity-based action,' and a combination of 'interest- and identity-based action,' this study suggests that attempts to separate 'interest-based' and 'identity-based' positioning strategies on controversial issues associated with GM are problematic. Both seemingly 'interest-based' and 'identity-based' strategies continually draw on value-premises that frequently exist in tension. These tensions are implicitly and explicitly represented both in the management of multiple organisational identities and in the negotiation of multiple rationalities as organisations construct social meanings which make sense of their positioning on controversial public issues.

The theoretical framework used in this study to examine the management of multiple identities in the kiwifruit and dairy industries thus demonstrates the complexity of the decision-making, strategic planning, and communication practices involved in the management of controversial public issues. The findings in this study are consistent with recent work suggesting that organisational identity and image are shaped by organisational communication, public relations, and marketing activities, requiring a conceptualisation of communication that transcends these theoretical barriers (Cheney and Christensen, 2001a). The study demonstrates that organisations manage the tensions involved in negotiating their relationships with multiple stakeholders through communication practices involving the management of multiple identities and images (Cheney, 1991; Cheney and Christensen, 2001a). As suggested by Hatch and Schultz (2004) and Gioia, Schultz & Corley (2004), organisational

identity is theorised in this study as dynamic: both continually constitutive of organisational culture and image, and constituted by that culture and image.

The findings suggest that organisations rhetorically construct and enact their positions on controversial socio-political issues through managing the tensions involved in the identification of stakeholder groups with multiple, key strategic value-premises, in complex discursive environments. Organisations construct multiple rationalities for their actions, often retrospectively (see Conrad & McIntush, 2003), that frequently exist in tension as they struggle to balance conflicting value-premises in their engagement with such issues on local, national, and global levels.

For example, a high level of shared value-premises that supported both the market focus of the GM policy and the environmental concerns evident in wider industry practices were expressed within the kiwifruit industry. The positioning of the industry in terms of *integrity*; that is, the high quality of the kiwifruit, the excellence of the production systems, environmental integrity, and respect for others, ensured that the diverse groups within the industry identified with these value-premises, and were perceived as *integrated*. If, as Christensen and Cheney (2005) suggested, ‘integrated’ is defined as uniting differences, the kiwifruit industry is an example of a highly integrated industry, with a unified brand identity. This integration afforded it the trust of its stakeholders, and certainly resulted, in this instance, in its attempt to control industry communication about GM. Yet, in contrast to Cheney and Christensen’s (2005) argument that such integrated communication suggests increasing attempts to control both employees and external images by the organisation, the integrated but *cooperative* nature of the kiwifruit industry seemed to provide some measure of *reflexivity*, and a *flexibility* of response: for example, the kiwifruit industry’s preparedness to acknowledge and respond to diverse viewpoints, its consultative approach to decision-making, and its preparedness to alter its GM position should there be a change in consumer attitudes. In this respect, the kiwifruit industry appears to be reflexively aware of the implications of the ‘risk society’ theorised by Beck (1992), adapting its practices to manage emerging sub-

rationalities, and widespread global resistance to an increasingly corporate, industrialised world.

The dairy industry, however, while it seeks to be seen as an integrated industry, relied on corporate, hierarchically-organised communication and decision-making practices in an effort to *control* its stakeholders and coordinate the distinct industry groups. It displayed the tendency toward *auto-communication* described by Christensen and Cheney (2000), Christensen and Askegaard (2001), and Cheney and Christensen (2001a), for example, privileging its own corporate perspective of GM over that of consumers. In contrast to the kiwifruit industry, the dairy industry appears still to be privileging the modernist technical perspectives that Beck (1992) suggested are increasingly problematic in a risk society.

This study then suggests that an organisation or interest group's negotiation with controversial public issues involves the management of multiple organisational identities and images, that is the identification of multiple stakeholders with the key value-premises used to rationalise an organisation or interest group's strategic positioning on the issues. An understanding of an organisation's engagement with the practices of controversial socio-political issues is thus broadened by considering this engagement as an ongoing negotiation of relationships involving the use of strategic ambiguity (Conrad & McIntush, 2003; Eisenberg, 1984; Motion & Weaver, 2005b) and adaptive instability (Gioia, Schultz & Corley, 2004). Additionally, this study suggests that an organisation's negotiation with controversial socio-political public issues, such as GM, is most successfully enacted when the organisation is both *reflexively aware* of the tensions that this involves, and prepared to be *flexible* in its strategic response to the issues.

Implications for Public Policy and Practice

Of particular interest in these research findings is that despite the similarities in their own identities, as recognised at the outset of this study, each industry draws primarily on separate identities for *New Zealand*. Both the kiwifruit and dairy industries need to manage the tensions inherent in their desire to be seen as

simultaneously business-focused, technologically innovative, environmentally aware, and responsive to consumers. However, the kiwifruit industry privileges a 'clean and green' identity for New Zealand which draws on environmental discourses that resonate strongly with their environmentally-aware European and Japanese customers. The dairy industry, in contrast, draws strongly on discourses of technological determinism which suggest that technological innovation represents inevitable social progress. It privileges an identity for New Zealand as a 'knowledge economy' that resonates with business interest groups both nationally and internationally (*Growing an innovative New Zealand*, 2002). Interestingly, in deciding to cautiously continue development of commercial applications of GM, the New Zealand Government has tried to reconcile the positions of both industries and both discursive identities for New Zealand in its GM policy.

Consistent with these contrasting positions, ZESPRI is a member of the Sustainable Business Network (SBN) in New Zealand, which comprises approximately 380 small businesses as well as large businesses. The SBN has a primarily environmental focus and puts environmental concerns as the outer overarching circle of three concentric circles, featuring environment, social, and economic concerns. In contrast, Fonterra is a member of the New Zealand Business Council for Sustainable Development (NZBCSD) which constructs the three concepts underpinning sustainability—social, economic, and environmental—as equal and overlapping. The NZBCSD currently only has 43 member companies, all members by invitation only, and is positioned as the voice of larger businesses in New Zealand. One of their objectives is to influence national policy development on sustainable development and their emphasis is on technological solutions to environmental and sustainability issues (see Allen, 2004). The struggle between the kiwifruit industry and dairy industry to influence the public policy environment in New Zealand in relation to GM perhaps is indicative of the political struggle between these two larger sustainability organisations as they seek to influence the political hegemony.

Interestingly, the kiwifruit industry decision to avoid engagement in the general public debate about GM issues in New Zealand means that they failed to take advantage of an opportunity to frame critical knowledge about GM, that is “knowledge that questions or resists legitimated or popular understandings” (Motion & Weaver, 2005b), leaving the way open for business interests like those of Fonterra and the NZBCSD members to maintain existing hegemonies. The knowledge of economic experts and scientific technical experts will continue to be privileged within current market and scientific discourses, rationalising the business agendas of influential companies, unless the critical knowledge of lay publics and other interest groups can gain sufficient credibility to influence communication practices and structures. Consumer groups’ widespread rejection of GM foods (Gaskell, Allum & Stares, 2003) has demonstrated the potential power of other interest groups to influence business strategies. Continuing political engagement with GM issues may yet create opportunities for wider groups to be involved in public policy dialogue and decision making, and build positively on the initial public debate created as a result of the Royal Commission on GM.

This study has demonstrated that a more complex understanding of the positioning of industries and interest groups in the GM debate in New Zealand, using the theoretical framework developed in this research, might demonstrate that other industries and interest groups at present expressing concerns about or support for particular aspects of public policy on GM are managing similar tensions to the kiwifruit and dairy industries. Industries such as tourism, wine, and apples, like the kiwifruit industry, explicitly celebrate a New Zealand identity drawing on a branding as ‘natural’ and ‘100% pure’ in their marketing communication. Other industries and interest groups such as the forestry industry and the Crown Research Institute Crop and Food Research, like the dairy industry, explicitly represent the importance of New Zealand maintaining its OECD status as a technologically-skilled and knowledge-based economy (*Growing an innovative New Zealand*, 2002). However, given the complexity of the values-related tensions managed by the kiwifruit and dairy industries, I suggest that there are likely to be complex overlapping “zones of

meaning” (Heath, 1997) between all interest groups in New Zealand in relation to their positioning on GM that might usefully be better understood from the reference points of values, identity, and rationality. If further research can assist such interest groups, including, Government, to reflexively appreciate the tensions involved in strategic positioning on GM, then the constellations of identities and rationalities involved might indicate common value-premises which give a clearer direction for specific aspects of GM public policy. For example, to date, research exploring the implications of GM for New Zealand’s ‘clean, green’ image has largely been from an economic perspective, which has failed to do justice to the complexity of the issues involved.

Further research which highlights the values and values-related tensions implicitly and explicitly represented in communication about GM, using the theoretical framework developed in this study, might indicate that interest groups currently represented as polarised—for or against GM—display complex similarities and differences in their GM positioning. For example, organisations and interest groups currently represented as pro-GM might display specific tensions in their value-premises that indicate shared concerns with interest groups more cautious about particular aspects of GM and vice versa. A more reflexive awareness of these similarities and differences might alter the ongoing GM positioning of interest groups and facilitate identification with, and support for, particular directions for public policy on GM by multiple interest groups in New Zealand. At a national policy level, the contested nature of this dynamic public policy debate might then be less problematic.

APPENDIX ONE - TRIGGER QUESTIONS FOR SEMI-STRUCTURED INTERVIEWS

1. Tell me first about your role in your organisation.
2. What does genetic engineering/genetic modification mean to you?
3. What issues are you aware of in relation to genetic modification?
4. How is genetic modification relevant to your organisation?
5. How do you expect that genetic modification technologies will impact on your organisation in the future? (You may choose to answer this in relation to your own industry, other industries, or to yourself personally.)
6. How would you describe your organisation's current strategic position in relation to genetically modified crops and foods?
7. How does your organisation justify this position?
8. How does your organisation consider ethical and social issues when deciding strategic policy in relation to genetic modification?
9. What future direction would **you** prefer for your organisation in relation to the introduction of genetically modified crops and foods?
10. How does your organisation communicate with you and other internal stakeholders about genetic modification? And with external stakeholders? And with the public?
11. What communication strategies does your organisation use to involve you in decision-making about the use of genetic modification in the industry? And what communication strategies are used to involve external stakeholders in decision-making about genetic modification?
12. How do current government policies on genetic modification impact on your organisation?
13. What direction would you like to see government policy take in the future in relation to genetic modification?
14. How does current legislation related to genetic modification impact on your organisation both in New Zealand and overseas?

15. How do international agreements impact on your organisation – for example, TRIPPS agreement, Cartagena Protocol?
16. How do you feel that the Royal Commission on Genetic Modification contributed to decision-making about genetic modification in New Zealand? How successfully did it consider ethical and social issues?
17. What role, if any, did you play in the submission made on behalf of your organisation to the Royal Commission on Genetic Modification?
18. How does your organisation attempt to provide information for the general public, or lobby the Government, and other interest groups about genetic modification issues?
19. What issues related to genetic modification are especially relevant for New Zealand and New Zealanders?
20. How would you like to “have your say”? How do you think individuals or groups should be involved in, or represented, in the debate about genetic modification?
21. Are there any other comments you would like to make?
22. Do you have any questions?

APPENDIX TWO – TRIGGER QUESTIONS FOR SEMI-STRUCTURED FOCUS GROUP INTERVIEWS

1. What issues are you aware of in relation to genetic modification?
2. What does genetic engineering/genetic modification mean to you?
3. How is genetic modification relevant to the kiwifruit industry/dairy industry/you?
4. How might genetic modification affect the kiwifruit industry/dairy industry/you in the future? (You may choose to answer this in relation to your own industry, other industries, or to yourself personally.)
5. How would you describe the kiwifruit industry/dairy industry's current position in relation to genetic modification (or the position of industry generally)?
6. How do you think the kiwifruit industry/dairy industry justifies this?
7. How does the kiwifruit industry/dairy industry consider moral and social issues in relation to genetic modification?
8. What future direction would **you** prefer for the kiwifruit industry/dairy industry in relation to genetic modification?
9. How does the kiwifruit industry/dairy industry communicate with you about genetic modification? And with the public?
10. How does the kiwifruit industry/dairy industry involve you in decision-making about the use of genetic modification? And how does the industry involve the public in decision-making about genetic modification?
11. How do current government policies on genetic modification impact on the kiwifruit industry/dairy industry/you, if at all?
12. What direction would you like to see government policy take in the future in relation to genetic modification?
13. How does current legislation related to genetic modification impact on the kiwifruit industry/dairy industry/you both in New Zealand and overseas?

14. How do international agreements affect the kiwifruit industry/dairy industry, if at all – for example, the TRIPPS agreement, Cartagena Protocol?
15. How do you feel that the Royal Commission on Genetic Modification contributed to debate and decision-making about genetic modification in New Zealand? How successfully did it consider ethical and social issues?
16. What role, if any, did you play in the submissions made to the Royal Commission on Genetic Modification?
17. What occasions are you aware of when the kiwifruit industry/dairy industry/ or any other interest groups have attempted to provide information for the public, or lobby the Government, in relation to genetic modification?
18. What issues related to genetic modification are especially relevant for New Zealand and New Zealanders?
19. How would you like to “have your say”? How do you think individuals or groups should be involved in, or represented, in the debate about genetic modification?
20. Are there any other comments you would like to make?
21. Do you have any questions?

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