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Place, Provenance, Protection: Alignments, Challenges, and Opportunities for Māori Future Foods

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Abstract

This thesis examines key alignments, challenges, and opportunities for Māori future foods, conceptualised as food production processes and outcomes that positively impact Māori and kinship networks. Beginning with a focus on plant-based future foods, a scoping interview study with Māori enterprise revealed strong alignment with Māori aspirations, including fulfilling kinship responsibilities, bringing together multiple forms of value, advancing collective wellbeing, and protecting and expressing Māori rights and interests - particularly in cultural and intellectual property. Participants identified place branding as a promising avenue to protect and develop cultural landscapes and enable future foods. The second study developed a content analysis protocol to explore the branding of Māori food and beverage packaging, with a focus on the prevalence and potential functions of place elements. Findings show that place branding is widely used by Māori enterprises, affirming its relevance to Māori future foods, while also highlighting a need to understand perceptions of Indigenous place elements. The third study used means-end chain laddering interviews to examine how critical consumers in Aotearoa New Zealand and Singapore perceive Māori place elements. It found a range of positive and negative perceptions across both contexts, which suggest viable approaches to place branding by Māori food enterprise. The thesis presents three key messages: plant-based future foods are relevant to Māori on multiple levels; Māori future foods can be enabled through place branding; and Māori place branding can support enterprise development and the protection of Māori rights and cultural property. These findings have implications for advancing Māori future foods and for growing the research and practice of decolonial Māori and Indigenous place branding. By exploring these interconnections, the thesis contributes to a deeper understanding of how Māori aspirations can shape and benefit from future food systems. It also critiques the ongoing appropriation of Māori culture by government and industry to advance broader agricultural and economic agendas. This research offers a transdisciplinary approach, addressing gaps at the intersection of Māori enterprise, future foods, Indigenous place branding, and consumption studies.

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Glossary

Aotearoa: Initially the Māori name for New Zealand's North Island – now used as the Māori name for New Zealand

Aroha: affection, sympathy, charity, compassion, love, empathy

Atua: ancestor with continuing influence, supernatural being, deity

Hāngi: in-ground earth oven

Hapū: kinship group, clan, tribe, subtribe – section of a large kinship group and the primary political unit in traditional Māori society

Harakeke: a native plant used for fibre and medicine

Hue: Polynesian bottle gourd

Iwi: extended kinship group, tribe, nation, people, nationality, race – often refers to a large group of people descended from a common ancestor and associated with a distinct territory

Kai: food, meal. Also prefix added to verbs which express some kind of action to form nouns denoting a human agent

Kaitiakitanga: guardianship, stewardship, trusteeship, trustee

Kaupapa: topic, policy, matter for discussion, plan, purpose

Kaupapa Māori: Māori approach, Māori customary practice, Māori institution, Māori agenda, Māori principles, Māori ideology – a philosophical doctrine, incorporating the knowledge, skills, attitudes and values of Māori society

Koha: gift, present, offering, donation, contribution

Kūmara: sweet potato

Mana: to be legal, effectual, binding, authoritative, valid, expression of responsibilities

Māori: normal, usual, natural, common, ordinary, native, Indigenous

Māra: garden, cultivation

Mātauranga: knowledge, knowledge system, wisdom, understanding, skill

Mauri: life principle, life force, vital essence, special nature, a material symbol of a life principle, source of emotions – the essential quality and vitality of a being or entity

Pā: fortified village

Pōhā: kelp carry bag

Puku: stomach

Rangatira: to be of high rank, esteemed

Rourou: food basket

Tangata whenua: local people, hosts, Indigenous people

Taro: a plant with edible, starchy corms and large, edible, fleshy leaves

Te Ao Māori: the Māori world

Te Moana-nui-a-Kiwa: the Pacific Ocean

Te reo: Māori language

Te Tiriti o Waitangi, Te Tiriti: the Māori language text of the 1840 treaty, between Māori and the British Crown government, signed by a majority of Māori signatories. The Treaty of Waitangi refers to the English language text. The texts differ in meaning.

Tikanga: correct procedure, custom, habit, lore, method – the customary system of values and practices that have developed over time and are deeply embedded in the social context

Tino Rangatira: paramount chief

Tino rangatiratanga: self-determination, sovereignty, autonomy, self-government

Tītī: mutton bird, sooty shearwater, a native bird

Tuna: longfin eel, a native fish

Waka: boat

Whakairo: carving
Whakapapa: genealogy, genealogical table, lineage, descent, to layer
Whakataukī: proverb
Whānau: extended family, family group
Whenua: land, but also refers to waters, mountains, and other environmental elements

List of abbreviations

Aotearoa NZ	Aotearoa New Zealand
Feast	Food Experience and Sensory Testing (Laboratory)
HVM	Hierarchical value map
IM	Implication matrix
MEC	Means-end chain
PBFF	Plant-based future food
SIFBI	Singapore Institute of Food and Biotechnology Innovation

Chapter 1

Introduction & Narrative Review

1.1 Introduction

1.1.1 Overview

This research was part of an overarching programme funded by a Ministry of Business, Innovation, and Employment Catalyst: Strategic fund. The programme funded four projects, each of which focused on future foods and sought to encourage collaboration and development of future foods capabilities between Aotearoa New Zealand and Singapore. This thesis sat under the project Te Rangahau Taha Wheako mō ngā Kai o Āpōpō: Consumer Dimensions of Future Foods. It focused on consumption aspects of future foods, with an emphasis on plant-based alternatives to animal-based food products. The rationale for this focus stemmed from an understanding that plant-based alternatives to animal-based products could facilitate transitions to nutritious diets that are less resource-intensive, while providing economic opportunities. The research was hosted by Massey University, Feast Lab, Edible Research Ltd, and Clinical Nutrition Research Centre at the Singapore Institute of Food and Biotechnology Innovation in Agency for Science, Technology and Research (A*STAR), in association with a variety of food industry partners. As part of its Vision Mātauranga goals, the project sought to enable Māori participation and leadership as researchers and sector partners. This included funding a PhD for a Māori doctoral candidate; this thesis is the outcome.

The initial topic of this PhD was to 'explore the unique value proposition of Māori-made plant-based future foods'. Over the course of the research, the scope of the thesis both broadened and narrowed in different respects from the initial prompt. This thesis comprises three interrelated studies, each building on the last. The first study directly informed the second, which in turn provided the rationale for the third. A narrative literature review in Chapter 1 broadly contextualises Māori food and food systems in a cultural and historical context of Aotearoa New Zealand. The first study presented in Chapter 2 focused on Māori-made plant-based future foods from a Maori enterprise perspective. It aimed to scope Māori plant-based future foods by interviewing individuals from Māori organisations involved in the Te Rangahau Taha Wheako mō ngā Kai o Āpōpō project. This approach was intended to respond to the initial PhD topic prompt by characterising Māori plant-based future foods from the perspective of Māori producers and enable analysis of the wider Aotearoa New Zealand food production context, which may have been limited by a strict consumer science lens and contribute a future foods perspective to Māori enterprise literature. This study identified key opportunities, alignments, and challenges for Māori enterprises producing plant-based future foods and included emphasis on the potential role of place branding for Māori. The second study extended the focus on place branding by analysing Māori food and beverage packaging. Here,

the scope shifted from strictly plant-based future foods to future foods and Māori food more broadly. This shift allowed for greater inclusivity of various Māori future food products, offered broader applicability of findings for Māori food enterprises, and reflected that many challenges identified in relation to plant-based products in Chapter 2 were relevant across the food and beverage sector. Chapter 3 gave further resolution to the relevance of place branding for Māori future foods, and at this stage, place branding emerged as a central organising concept of the thesis. The third and final study explored perceptions critical consumers towards Māori place branding in a food context. The research collaboration with Singapore enabled comparative research in both domestic and international contexts relevant to Māori enterprise. The thesis concludes with a discussion chapter encompassing the findings of each study, and includes recommendations for Māori enterprise and research.

1.1.2 Future foods

Foods of the future have much to address. Food is a key organising force in all ecosystems and societies (Beardsworth & Keil, 2002), and its far-reaching implications are evident in the global human food system, which occupies a critical nexus interlinking planetary wellbeing, human health, and justice (Caron et al., 2018). Dominant food systems are dramatically transforming the environment, human health, and relationships with food and one another to drive highly complex and unprecedented challenges. Addressing these challenges requires a multidimensional approach that examines current systems and identifies pathways toward alternative futures.

'Future foods' are a way of thinking about future trajectories for human food systems. They are receiving attention for their potential to address problematic contributions of human diets to poor outcomes on multiple levels. The characteristics of a future food can vary according to how they are defined, and how the problems they are trying to address are characterised. Future foods typically take the shape of nutrition sources that can simultaneously reduce reliance on animal foods and improve human and environmental health. In food scholarship, there are diverse terms for describing concepts that have parallels to future foods or are versions of future foods, such as 'sustainable foods', 'alternative proteins', or 'plant-based foods', or the concept is not specifically named and is part of wider 'diet transition' discourse (Thompson & Palfreyman, 2021; Willett et al., 2019). When the term 'future foods' has been used, it has described responses to the negative impacts of mainstream foods in wealthy countries, with a focus on moving away from animal-sourced foods because of their outsized contribution to poor planetary and human health (De Boer et al., 2018). Common categories include plant-based foods, functional foods, alternative proteins or meat-mimics, cultured meats, milks and other products, fermented foods, and foods derived from fungi, seaweeds, insects, molluscs and other sources of novel foods and ingredients (Barzee et al., 2021; Baune

et al., 2022; De Boer et al., 2018; Lange & Nakamura, 2021; Pissia et al., 2021; Rajpurohit & Li, 2023; Sim et al., 2021). Future foods also express ‘food futures’, which signify the sites, mechanisms, and conditions through which future foods might be produced and consumed (Castle & Macdonald, 2022).

Despite recent growth in the recognition of food-related problems and the need to look for multifaceted solutions, Indigenous peoples are often marginalised from the resources and power required to inform and enact change (Hutchings et al., 2020; Smith, 2000). Additionally, the historical context of Indigenous peoples as they relate to previous and current food systems is often not meaningfully addressed (Lopes et al., 2023; Vijayan et al., 2022). Indigenous peoples often experience disproportionately poor health outcomes, which are strongly linked to unhealthy diets and inequitable food systems (Browne et al., 2020; Whyte, 2017). As food intersects culture, society, and ecology, the development of future foods could serve as a vehicle for Indigenous wellbeing and justice across each of these areas. Indigenous knowledge systems draw on deep-seated relational knowledge of the environment and foods and may offer pathways to alternative futures that are appropriate for particular places. Indigenous leadership in food futures is therefore warranted on multiple levels.

Māori are Indigenous¹ to Aotearoa New Zealand (Aotearoa NZ).² Future foods that are made by Māori are of imminent relevance for several reasons, in addition to the above. First, improving food production and consumption can contribute to wellbeing of communities, environments, and culture, which, for Māori, are interrelated. Second, and related to the first point, Māori future foods could constitute unique offerings that coalesce multiple types of value. Third, the significance of Māori foods has garnered attention from the government, where Māori culture is increasingly used to articulate a future food story for Aotearoa NZ (Hutchings et al., 2020). There is a need to protect the value for Māori in future food systems and narratives that derive from or utilise their cultural heritage. To protect such value, it needs to be understood; there has been limited examination of Māori future foods and how they might function in the wider food production and consumption landscape of Aotearoa NZ. In this thesis, Māori future foods are conceptualised as those that respond to present problems and have characteristics amenable to better outcomes for the future, in a way that is specific to Māori perspectives and priorities. The term ‘future foods’ is used in this thesis because the

¹ Designation of a people as ‘Indigenous’ is a modern exercise (Cobo, 1986), forged out of resistance (Grey & Patel, 2015), and is delineated by a continuous relation to a place.

² Aotearoa is a Māori word that has come to signify the land that also constitutes New Zealand and references European participation in the country Mutu, M. (2004). The Humpty Dumpty principle at work. *For better or worse: Translation as a tool for change in the South Pacific*, 11-29. and they can be referred to together or separately. “Aotearoa New Zealand (NZ)” will be used to signify the contemporary multicultural nation.

rationale behind future foods may align to Māori imperatives and aspirations, the term provides temporal specificity, it enables the unique contribution of Māori future food scholarship to the literature, and Indigenous food futures are a valid way of talking about theoretically-informed food systems (Grey & Patel, 2015).

This chapter comprises a narrative review of context that is relevant for scene-setting Māori future foods. The review begins by examining Māori worldviews of food, followed by a brief historical account of the colonisation of Māori food systems. This context provides a critical reference point for understanding past and present food systems while underscoring the need to envision and develop Māori future foods. Potential characteristics of Māori future foods are described, and consumption and place branding research are introduced as relevant research foci for Māori future foods. Finally, the research orientation of the thesis is summarised in relation to the content of the review. The narrative review enables conceptual grounding across transdisciplinary research areas related to food, consumption, place branding, and Indigenous scholarship. The potential scope of Māori future foods also aligns to a narrative review approach for contextualising the research and focus of the thesis.

1.2 Food in Aotearoa, New Zealand

1.2.1 Food as kai

In Aotearoa NZ food has played a major role in shaping society and the environment. The first settlers of Aotearoa were the Polynesian ancestors of Māori, who arrived in waves, having navigated across Te Moana-nui-a-Kiwa (the Pacific Ocean) in ocean-voyaging waka (boat). Customs remembered from across the Pacific were transformed to suit new climates and soils through experiential knowledge, which reshaped people and place to become distinctly Māori (Carter, 2019; O'Malley, 2017). Māori organised themselves as whānau (family) which comprised hapū (sub-tribe) units, which also affiliated to Iwi (tribe/s) and waka (O'Malley, 2017).

1.2.1.1 Food and whakapapa

Kai³ (food) can also be understood from Māori philosophy. For something to exist and be known is for it to have a whakapapa (genealogy), which is an organising construct in Māori worldviews (Mahuika, 2019; Murton, 2012; Tau, 2001). Whakapapa is a system of pattern

³ Kai translates to food, meal, and to consume, and is also a prefix added to some verbs to denote action. Kai is used in this thesis to infer a Māori worldview of food; kai is embedded in human, physical, and spiritual realms; kai is grounded in important concepts of whakapapa and self-determination; and kai is manifestation of the relationships between Māori and their places.

recognition and attribution of meaning (Murton, 2012) and was described by Mere Roberts (2013) as “a philosophical construct [that] implies that all things have an origin (in the form of a primal ancestor from which they are descended), and that ontologically things come into being through the process of descent from an ancestor or ancestors”. In the Māori cosmogeny, it is from two primordial ancestors Papatūānuku and Ranginui that everything on Earth descends, and so all earthly things are ultimately related to each other. For the Māori subject, this means that they are immediately ‘placed’ in a world and a set of relationships, where all kin from animal to plant to ocean possess their own qualities and relations (Casey, 2001; Murton, 2012).

Roberts (2013) recounts the whakapapa of kūmara, the starchy vegetable brought to Aotearoa from Polynesia and likely traded from South America. The origins of kūmara, as well as protocols associated with its consumption, are laid out in its descent from atua (deity) and previous interactions with other entities in the environment. The whakapapa of kūmara provides a historical record, a map of relevant ecosystems, a taxonomy, and empirical knowledge and moral guidelines concerning its use, which criss-cross material and immaterial planes. Whakapapa of non-humans like kūmara also reveal a contextual, subjective engagement with the world, as opposed to Western objectivity of ‘looking at’ something (Gillett, 2009, as cited in Roberts, 2013); giving rise to “I relate therefore I am” versus “I think therefore I am” (Bird-David, 1999; Garuba, 2013, as cited in Reid & Rout, 2016). The whakapapa construct has been likened to animist perspectives (Reid & Rout, 2016; Wolfgramm, 2007), which view reality as a field of relationships in which beings of all kinds enable each other (Ingold, 2006), and in which humans are not exclusive to nature but rather intrinsic to it (Sullivan, 2013). Relationships that unfold between humans and other entities are contextual and multidirectional (Reid & Rout, 2016).

Wehi and Roa (2019) describe the ‘colossal metaphor’ from a Tainui⁴ oral history of ‘Te kete rokiroki a Whakaotirangi’ (the storage basket of Whakaotirangi) that also provides insight into Māori worldviews of food. Whakaotirangi travelled on Tainui waka and looked after a variety of seeds and plants from her tropical homeland, among them kūmara (sweet potato), taro (a root vegetable), and hue (Polynesian bottle gourd). Having left a tropical place for a subtropical one, Whakaotirangi had to conduct experiments to ensure the survival of her plants, and people. Her garden, named Hawaikinui, was successful, and she is regarded as the first horticulturalist of Aotearoa. For Wehi and Roa (2019), Whakaotirangi embodies food as a relationship, where food is an expression of responsibilities to others – this expression is

⁴ Māori descending from the people who arrived on the Tainui waka.

known as mana. The mana of Whakaotirangi, and of her taro plants named Hāni and Puna (Figure 1.1), are expressed at Te Māra o Pūanga Kairau, a māra (garden) (Figure 1.2) developed by Wakatū (a multi-tribal incorporation from Whakatū, Nelson) to cultivate ancient crops as part of their aspiration and strategy to enact farming that is guided by tikanga (customary protocols) (Brown, 2022). The māra is part of a broader programme to enable the material and cultural dimensions of Māori food for human and environmental wellbeing; Māori enterprises are well-documented as often having multimodal goals and various stakeholders (Dell & Houkamau, 2016; Mika et al., 2021; Mika et al., 2022).



Figure 1.1: Hāni and Puna, two Taro plants and descendants of Whakaotirangi's Taro plants, living in Te Māra o Pūanga Kairau, Whakatū. Author's image, reproduced with permission from Wakatū Incorporation.



Figure 1.2: Te Māra o Pūanga Kairau. Author's image, reproduced with permission from Wakatū Incorporation.

1.2.1.2 Food and sovereignty

Māori notions of food are also reflected in some food sovereignty frameworks. The concept of food sovereignty was propelled into common usage in Spanish in Mexico (Grey & Patel, 2015) and then in English by La Via Campesina, a transnational grassroots movement of peasant and small-scale farmers (Martínez-Torres & Rosset, 2010; Via Campesina, 2003). Food sovereignty was first described at the global level at the World Food Summit in 1996 (Martínez-Torres & Rosset, 2010) as an alternative food regime that considers cultural, social, political, economic, environmental, and justice imperatives with overarching values promoting self-determination (Patel, 2005). To be food sovereign is to be self-determining in relationships with non-human kin, which is integral to the wellbeing of Indigenous peoples (Daigle, 2019; Wehi & Roa, 2019). Indigenous food sovereignties also articulate other priorities, such as kinship philosophies (Huambachano, 2019), treaty rights (Shirley, 2013; Whyte, 2017), immaterial conceptions of value (Whyte, 2016), and health equity (Jernigan et al., 2023). The 'sovereignty' in Indigenous food sovereignties also often takes particular forms that are place-specific (Grey & Patel, 2015).

Kai sovereignty is a Māori involution of food sovereignty and a developing area in Māori scholarship and practice (Hutchings, 2015; Wiremu, 2022). The scope of Māori kai sovereignty, and some Māori food production more broadly, includes the same multimodal

imperatives as food sovereignty, where protection and restoration of food-producing landscapes also overlap with protection and restoration of ecosystems, cultural knowledges, language, and identities (Hutchings et al., 2012). Kai sovereignty has also been articulated in relation to concepts of kaitiakitanga, rangatiratanga, and mana motuhake (Hutchings et al., 2020), which are each multifaceted concepts that can be difficult to translate into English. Kaitiakitanga connects across “ancestral, environmental and social threads of identity, purpose, and practice” and is used to denote customary values and practices, ways of managing sets of relationships (between people, place, atua, across time and space), as well as contemporary actions that ensure spiritual, economic, and political survival (Kawharu, 2000). Rangatiratanga is the authority for kaitiakitanga to be exercised by people at a place (Kawharu, 2000). It refers to decision-making capacities, and relates to Māori rights to self-determination and independence (Nikora, 2001), and is articulated in relation to challenges faced by Māori that have occurred via colonisation (Te One & Clifford, 2021). Mana motuhake also describes autonomy and sovereignty and has been used as an analytic frame to detail how various aspects of Māori life are political (Hokowhitu et al., 2022). Mana motuhake is relevant for kai because it highlights that Māori activities are inherently political because Māori wellbeing and ways of life, especially food production, are contested (Hokowhitu et al., 2022); (Campbell, 2020; Durie, 1998b; Hutchings et al., 2020). These concepts do not exhaust Māori perspectives of food but help pre-empt an understanding of food as kai, which is simultaneously political, spiritual, cultural, and material.

Indigenous peoples worldwide are diverse but often share two characteristics: relationships to their places and associated bundles of rights and responsibilities, and the experiences of colonisation and imposition of capitalist modernity on their places (Grey & Patel, 2015). Indigenous food sovereignty was, and is, a norm, but in modern times is often also an aspiration because Indigenous ways of life have been severely disrupted (Whyte, 2017). To understand what a Māori future food might be, it is necessary to unfold the story of how kai systems were disrupted, and modern food systems installed in Aotearoa NZ.

1.2.2 Food and colonisation

The role of food and agriculture in the history of Aotearoa NZ is often overlooked (Brooking & Pawson, 2007). After the arrival of Māori, it took some time to develop the experiential body of knowledge needed to transition from a mostly subsistent food system to a more agricultural one, at everlasting cost to some whakapapa (Walker, 2004). The later arrival of European settlers and installation of a British Crown (also ‘Crown’) government brought a scale and scope of transformation to land and food that was unprecedented (Carter, 2019). These transformations are imbricated in colonisation, which is understood as a relationship of domination over Indigenous people and their pre-existing institutions and ways of life by

settlers, and is imperialism operationalised (Osterhammel & Frisch, 2005). Colonisation is understood as being perpetuated by the Crown against Māori through a variety of instruments, with impacts continuing today (Moewaka Barnes & McCreanor, 2019; Reid et al., 2014; Walker, 2004).

The arrival of European visitors, traders, and settlers to Aotearoa began in the late 1700s and increased slowly during the early 1800s (Orange, 2015a). As Europeans forayed into the Māori world, so too did Māori into the European world, and engaged fruitfully with different objects and modes of trade (O'Malley, 2017). Whalers, millers, and missionaries were among the several hundred Europeans permanently based in Aotearoa before 1840 (Orange, 2015a). At this time, Europeans were a minority presence and depended for sustenance on local Māori populations, who took up the production of new foods like potatoes, wheat, and pigs (O'Malley, 2013). As the European presence grew, cash-based trade became increasingly dominant, and more sought permanent settlement – and land. Gun warfare and novel diseases were also major forces that were reshaping Māori populations and politics (Orange, 2017). Hapū and Iwi recognised a need to set terms of engagement with the wider world, and for European settlers to be properly governed amid their increasing lawlessness (Mutu, 2004). After thorough debate, He Whakaputanga o te Rangatiratanga o Ngā Hapū o Nu Tirenī, also known as He Whakaputanga, and its English text as The Declaration of Independence of New Zealand (Waitangi Tribunal, 2014), was agreed and signed by 34 rangatira (chiefs) at Waitangi on 28th October, 1835, and signed by a further 8 rangatira up until 1839 (Mutu, 2004; O'Malley, 2017). The declaration asserted the mana (power, authority, dignity) and tino rangatiratanga (paramount sovereignty, self-determination) of Māori tino rangatira (paramount chiefs) and acknowledge the political organisation and authority of hapū (Mutu, 2004). The Crown recognised a need to control settlers and legitimate their power and a treaty with Māori was sought, which in 1840 was written up in te reo (Māori language) as *Te Tiriti o Waitangi* and in English as *The Treaty of Waitangi* (Orange, 2015b), but the intent and legitimacy of these documents differed (Mutu, 2004). Te Tiriti o Waitangi, which was signed by almost all Māori signatories, was an assertion of tino rangatiratanga and in some respects flows on from He Whakaputanga, but The Treaty of Waitangi was seen by the Crown as cession of Māori sovereignty (Waitangi Tribunal, 2014). The balance between Māori and Europeans was set to tip. The intent of te Tiriti o Waitangi and apparent guarantees of Māori tino rangatiratanga and territorial authority would not be honoured by the Crown, and Aotearoa was annexed by Britain (Brooking & Pawson, 2020; Pool, 2015). After 1840, Crown and private acquisitions of land increased dramatically with the establishment of policies and institutions that legitimated land purchase and confiscation by the Crown (Figure 1.3).

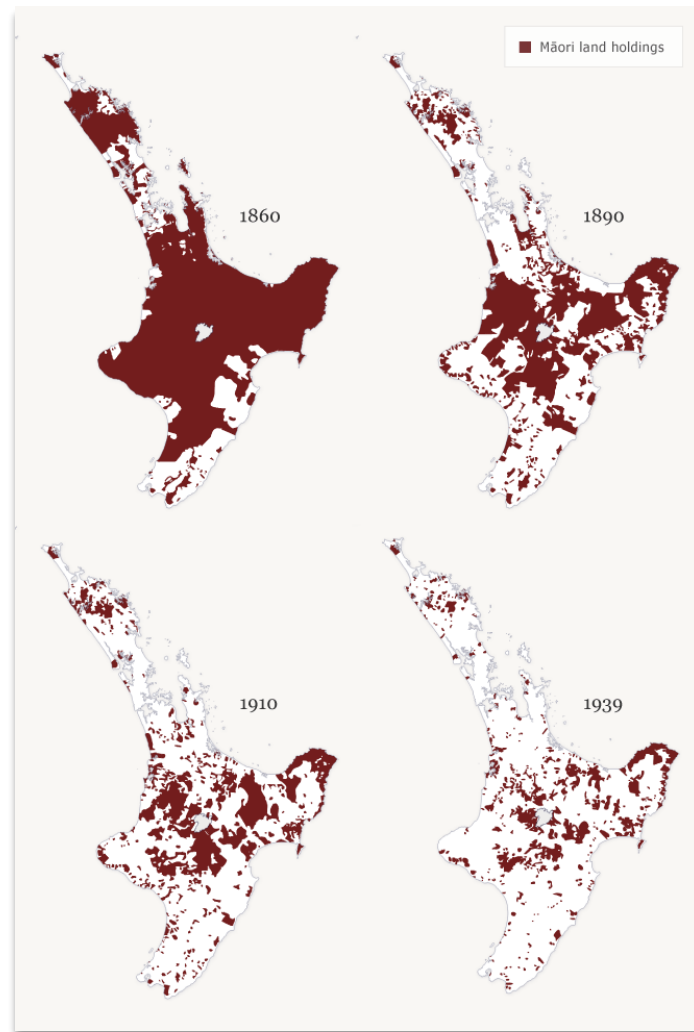


Figure 1.3: Alienation of Māori land in the North Island of New Zealand from 1860 to 1939 (Orange, 2015). Reproduced by permission of Bridget Williams Books.

While European societies were engrossed in developing individual freedoms à la liberalism, they instigated some of the most devastating social events ever witnessed (Strakosch, 2016). Near the same time as New Zealand was proclaimed the ‘world’s most advanced democracy’ (Coleman, 1982) the Crown invaded and confiscated swathes of Māori lands under the guise of controlling Māori rebellion (Thom, 2022). ‘Engines of destruction’ like the Native Land Court (Kawharu, 1977), underpinned by an ideology of private property and commodity ownership, contrasted with customary land management and occupation practised by hapū (Durie, 1998a). Other policies such as the Tohunga Suppression Act 1907 sought to suppress transmission and use of Māori practices and knowledge (Taiuru, 2020). Māori alienation from lands and knowledges not only destroyed economic bases, but also dislocated Māori political, cultural, and social life (Moeke-Pickering, 1996; Moewaka Barnes & McCreanor, 2019) and, consequently, kai systems.

Removal of Indigenous food systems is a common strategy of colonisation (Whyte, 2017). The British empire had a worldwide habit of appropriating foreign lands for global colonial food chains (Chou, 2014; Raschke & Cheema, 2008; Tarulevich, 2020). Indeed, confiscations of Māori land by the Crown were definitively targeted towards lands that had high economic potential for pastoral agriculture (Thom, 2022). Part of the 'great land rush' (Brooking & Pawson, 2020) included widespread punitive confiscation of land from Māori who were seen as rebelling against the Crown (Gilling, 2020). As an example, the confiscation of Waikato lands involved a series of violent invasions by Crown forces, one being at Rangiaowhia, in Waipa District of Waikato. The pā (fortified village) was a 1000-acre village inhabited by various hapū and containing gardens, fruits, root crops, wheat mill, cows, and pigs, as well as a mission station. Rangiaowhia was the major agricultural base for the Kiingitanga, the Māori King movement, which constituted a sovereign challenge to the British Crown (Ministry for Culture and Heritage, 2021). Rangiaowhia was refuge to women, children, and elders during invasions being perpetrated in the north, and was itself invaded on 21 February 1864. Women were raped and killed in front of their children, people barricaded and burned in their houses, and the land surrounding the village was confiscated and given to European settlers (Maitland, 2017). Rangiaowhia was only once such instance in a series of invasions and thefts – this example will be returned to in section 1.4.

As European land ownership grew, pastoral agriculture became more widespread. Meat, wool, and dairy, the principal products of pasture, were cornerstones of British economics and enfolded distant imperial territories on every continent into colonial trade networks (Brooking & Pawson, 2007; Chou, 2014). The advent of refrigeration and growing consumption of meat in increasingly industrialised and wealthy Britain drove the conversion of forest to pasture (Brooking & Pawson, 2007). By the 1920s, there was more pasture in New Zealand than all of England, converted in a matter of decades rather than over 1000 years as occurred in Britain (Brooking & Pawson, 2020).

In tandem with the rise of European diets and export of European foods, pre-European Māori diets became increasingly difficult to maintain due to land loss, and removal of ecosystems such as wetlands and bush, which were major food providers (Shirley, 2013). The fragmentation of ecosystems and access to ancestral places meant that knowledge related to food, environment, and self, was limited and much of it lost. The proliferation of intensive European farming also reduced employment opportunities for Māori (Waitangi Tribunal, 2004), many of whom moved to urban areas and had to assimilate to the NZ European diet after being dispossessed of their land, which further destabilised tribal societies (Mutu, 2011; Shirley, 2013). The breaking-down of relationships between people and place and traditional food systems is at the heart of settler colonialism (Whyte, 2017). This can be understood as

‘food injustice’, where “one human group systematically dominates one or more other human groups through their connections to and interactions with one another in local and global food systems” (Whyte, 2017).

The financialisation of land and food as commodities was another important aspect of how this transition from the traditional Māori way of life functioned because of how it disrupted pre-existing relationships Māori had with lands, foods, and other people. Rather than elements of kinship networks, food objects were entered into the economic logic of the commodity, which was to be traded for profit (Zerbe, 2018). While Māori readily took up new types of trade, increasing European hegemony after 1840 and loss of land made non-monetary trade more difficult. This commodification of food is a global phenomenon and not a natural outcome of human progress; it is the result of contested and often violent processes (Zerbe, 2018). Where ancient wetlands and forests were annihilated and Māori removed, grassland was erected in their place. The rapid transfiguration of Māori landscapes and replacement with pasture was not at all inevitable, but is still rarely questioned (Brooking & Pawson, 2020), at least by the dominant society, and is therefore an important context for Māori future foods.

Framing foods in their historical context is necessary because future foods of Aotearoa NZ require historical reference points from which to develop and in order to envision specific futures emanating from them (Sinclair-Thompson, 2022). Among these historic reference points, identifying colonialism as an ongoing set of institutions and power also means revealing a loss of Indigenous power, as well as potential pathways that future foods could take to address these relations and imbalances (Grey & Patel, 2015). Indigenous food perspectives thereby concern issues of justice, cultural continuity, and the manner in which problems are addressed; and, when issues experienced by Indigenous peoples are understood as disruptions to relationships (Jones et al., 2022; Whyte, 2020), a critical function of Māori future foods may be to understand and restore relationships.

1.3 Future foods

1.3.1 Impetus for future foods in Aotearoa New Zealand

Discussions about food system change are gaining momentum globally (Grey & Patel, 2015; Willett et al., 2019). The negative impacts of human diets on human, planetary, and animal wellbeing have driven academic, consumer, government, and industry attention towards future foods. These impacts provide impetus for investigation of future foods and may also compel Māori interest.

1.3.1.1 Health impetus

Healthy foods and diets are crucial for human health across all life stages, and support cultural, relational, environmental, social, mental, and physical wellbeing (Holder, 2019; Kuhnlein, 2015; Nordström et al., 2013; Willett et al., 2019; Woodhill et al., 2022). However, in Aotearoa NZ, diet is the leading modifiable risk factor for health loss (Ministry of Health, 2013). Despite a steady supply of local and imported foods, wealthy countries like Aotearoa NZ consistently create the complex issue of food insecurity (Reynolds et al., 2020), which disproportionately affects Māori and is directly connected to loss of land and foodways (Beavis et al., 2019; Reynolds et al., 2020). Māori also experience an inequitable burden of diet-related diseases like type II diabetes mellitus and cardiovascular disease (Atlantis et al., 2017). The health of a person is also connected to the health of their environment (Durie, 1999, 2004). Aotearoa NZ is creating and experiencing planetary health crises on every front, including climate, biodiversity, biogeochemical flows, land use, and water use (Hoff, 2021). The country produces more than five times and consumes more than six times its fair share of emissions at the level required to avoid catastrophic climate change (Hoff, 2021); half of emissions produced are from agriculture, and of these, most are from livestock (Ministry for the Environment, 2023). Globally, food systems make up to 30% of all emissions (Li et al., 2022; Romanello et al., 2024) and a revolution-level change in food production is essential to limit climate change and heating to below 1.5 degrees (Willett et al., 2019). At present, no country evenly meets the dietary needs of its populations in a sustainable manner (O'Neill et al., 2018; Perignon et al., 2016). Plant-based foods are not necessarily healthier or more environmentally positive than animal-based foods (Tso & Forde, 2021), though this varies from product to product. Nevertheless, there is a clear human and planetary health impetus for future foods.

Animals that are raised as food for humans and wild animals also suffer due to modern food systems. The extent of food-animal use and oppression is colossal, causing poor health, suffering, and death at such a scale that it is often inestimable, though it is at least in the tens of billions per year for aquatic animals alone and at least 80 billion for farmed land animals (Mood et al., 2023). Food systems are a driving force of land use change and consequent loss of habitats (and life) for wild animals. Agriculture covers over 40% of the total land area both in Aotearoa NZ (Hoff, 2021) and across the world (Ritchie & Roser, 2019). Historical land use change in Aotearoa NZ has been largely tied to agriculture (Proce et al., 2006) with biosphere integrity currently being severely transgressed (Hoff, 2021), contributing to a widely acknowledged biodiversity crisis that is among the worst in the world (Hare et al., 2019; Weeks et al., 2016). The domination and desolation of animal-kind is not only immensely harmful to animals themselves, but also to human health in terms of direct effects, for example, food

contamination, and less effects, for example, antibiotic resistance and psychosocial damage (Matsuoka & Sorenson, 2013). Recognition of animal welfare issues is a documented trend in consumer perception of foods (Alonso et al., 2020; Clark et al., 2016; Schröder & McEachern, 2004), and provides further impetus for future food development.

1.3.1.2 Economic impetus and policy outlook for future foods in Aotearoa NZ

There is domestic awareness of and interest in challenges posed by the current food system, and the government has set out several roadmaps and strategic documents for change (Manatū Ahua Matua & Ngā Pouwhiro Taimatua, 2021; Ministry for Primary Industries, 2020, 2023b). The importance of food system change has also received significant interest across academic and public spheres in Aotearoa NZ (Jones et al., 2019; Shirley, 2013).

Commonly referred to, collectively, as the food and fibre or agri-food sector, this sphere of the economy accounted for 81.9% of merchandise exports in 2023 (a record high) and employed 13.1% of the total workforce (Ministry for Primary Industries, 2023d). Meat, dairy, fisheries, wine, forestry, and horticulture are the largest parts of the sector, and are primarily export oriented, each exporting 70–95% of their output (New Zealand Foreign Affairs and Trade, 2023). Official estimates of food and fibre's GDP contribution is about 13% (Ministry for Primary Industries, 2023d), while others estimate it as closer to 25% when accounting for indirect contributions (Saunders et al., 2016). However, the agrifood sector has various vulnerabilities. Climate change and extreme weather are already affecting food production (Ministry for Primary Industries, 2023d) and are expected to worsen (Royal Society of New Zealand, 2016), with disproportionate impacts on Māori economies (King et al., 2010) and Māori society at large (Awatere et al., 2021; Jones, 2019). Current government agrifood strategies also recognise a need to reduce environmental externalities of food production, and to increase regenerative agriculture practices (Ministry for Primary Industries, 2021a, 2022).

Recognition of Māori rights and interests and a need for co-governance between Māori and the Crown in the national agrifood system has also grown, as evident in recent and current strategic documents related to food production. The Primary Sector Council was established in 2018 by the Minister of Agriculture and existed for 2 years to advise government on sector issues (Ministry for Primary Industries, 2020). The Council commissioned a situational analysis of the national food and fibre sector that described a nexus of food production in Aotearoa NZ and major factors to consider for future food systems (Dalziel, Saunders, & Saunders, 2018). The Council then produced the Fit for a Better World Plan (2019), which it described as “the first time a vision has been developed for New Zealand's primary sector as a whole”. This report was then iterated by the Ministry for Primary Industries (MPI; the primary government ministry that oversees food production) in the subsequent 10-year plan Fit for a

Better World: Accelerating our Economic Potential (2021a). Both plans recognised the impetus for future foods and were underpinned by a “Te Taiao” (the environment) framework (Primary Sector Council, 2020), which describes a Māori perspective of the environment that prioritises environmental and social wellbeing in primary industry activities. The Te Taiao framework outlines the role of co-partnership, as in a meaningful Te Tiriti o Waitangi relationship between Māori and the Crown, for future food production. It expounds a role for mātauranga Māori (Māori knowledge and knowledge system) to inform food production, and a role for government in building capability in mātauranga Māori across the agrifood sector. MPI’s Fit for a Better World Plan also led to the establishment of a food and fibre think tank, Te Puna Whakaaronui, which has produced reports on food sector (2022b) and alternative protein (2022a) opportunities. The former document recommended a future food system that prioritises a relationship with Māori to produce a collective value proposition that would enable food export from Aotearoa NZ by all domestic food producers, and where the long-term focus of Māori enterprise can influence food production more widely. MPI’s Fit For a Better World plan is also accompanied by Rautaki mo te Taurikura (2021), a plan for the Māori food and fibre sector, which was created in partnership between MPI and Ngā Pouwhiro Taimatua (the Māori Primary Sector Forum). As with the framework of ‘Te Taiao’, this document also references Māori perspectives of the environment and describes how the food industry interfaces with ecological and social systems. It outlines an intention to tailor investment and support for Māori food innovation, with attention towards Indigenous knowledge development, emissions reduction, and other outcomes. The 10-year horticulture plan by MPI (2023b) also signals a need to progress the development and utilisation of native plant species by Māori, in a manner underpinned by appropriate protection and controls. While these policy developments are promising in some regards, there is also risk where the essence of Māori concepts are inhibited when applied in settings that are not controlled by Māori (Nuttall, 2023).

There are several potential transition pathways for food systems in Aotearoa NZ, but what these futures could or should entail remains contested. The current situation is described as a turbulent transition period where, despite promises of diverse future foods, the dominant regime is largely incrementally optimized and has yet to undergo meaningful transformation (Klerkx et al., 2022). Competing priorities, with some interests more powerful than others, alongside dependencies on global trade networks and the pervasive influence of modern neoliberal political-economic systems, stifle transformative change (Klerkx et al., 2022). The role of Māori future foods in these potential pathways remains unclear, but their inclusion could provide greater resolution for an equitable transition toward better food futures.

In summary, there is a clear need for future foods that reflect the intentions of both government and the Māori food sector. While the term “future foods” is not widely used across these

domains, the focus is often on enhancing food production to achieve the immense task of balancing economic growth with environmental protection, with cultural protection receiving more variable attention. Investigating Māori future foods could shed light on areas within these strategies that require further consideration and define ways to strengthen them.

1.3.2 Potential alignments and characteristics of Māori future foods

The overarching drivers of interest in future foods at a global and national level have been discussed. Māori may find additional motivators and alignments to future foods. Concepts of food sovereignty and self-determination may be relevant and will be briefly discussed in terms of how they could inform Māori future foods. Then, potential characteristics of Māori future foods will be canvassed.

1.3.2.1 Food sovereignty and self-determination for understanding Māori future foods

To be kai-sovereign is to be self-determining in relationships with human and other-than-human kin, which is integral to the wellbeing of Indigenous peoples (Daigle, 2019; Wehi & Roa, 2019). Kin include all those in tribal connections, tribal entities, and whakapapa networks that have been documented as important for Māori agrifood (Rout et al., 2020) and could enable, and be enabled by, future foods. For Māori, animal and plant species represent unique links in whakapapa networks (Erueti et al., 2023; Jefferson, 2022), and so their use for future foods could link to goals for protection of those species, their environments, and associated knowledge. Māori kinship philosophy with regards to animals can also be enacted via a vegan or plant-based diet (Dunn, 2019). Kin can also include places and features, such as a river or mountain, and are part of food-producing and consuming landscapes; their protection and restoration could also align to future food production. Here, a food sovereignty framing is relevant because it encapsulates self-determination in food systems (Patel, 2005) and for reasons discussed in section 1.2.1.2. Additionally, Māori future foods could be the material outcomes of food sovereignty and, at a conceptual level, the principles behind them (as positioned in this thesis) are largely synonymic with food sovereignty. Self-determination and sovereignty also relate to issues of Indigenous rights,

In framing potential alignments between Māori and other Indigenous peoples to future foods, a lens of self-determination is useful because this concept is often central to articulation of Indigenous aspirations and ways of being (Durie, 1998b; Manatū Ahua Matua & Ngā Pouwhiro Taimatua, 2021). The 1991 Wai 262 claim and the associated 2011 Waitangi Tribunal report (Waitangi Tribunal, 2011) highlighted challenges for Māori access to and control over taonga, including knowledge and culture. The Wai 262 claim is one of the most complex and far-reaching in the history of the Waitangi Tribunal, an entity established under the Treaty of

Waitangi Act 1975 to provide a legal process by which Māori Treaty claims could be investigated. It was the Waitangi Tribunal's first whole-of-government inquiry, first pan-iwi inquiry, and examined the policy areas of more than twenty government agencies. The claim asserted Māori interests in, and rights to, taonga and cultural property (Adcock, 2015; Henare, 2005; Houghton, 2021) and requested a recommendation from the Tribunal for an ethical framework for resolution of the issues around the use of taonga Māori (Wai262, 2024). The resulting Waitangi Tribunal report, *Ko Aotearoa Tēnei Waitangi Tribunal* (2011), came out 20 years later and, despite being criticised by some Māori for being too conservative in its approach (Adcock, 2015), was groundbreaking in many respects because it recommended reform of laws, policies or practices relating to every aspect of government and was the first to consider a Treaty relationship evolved away from grievance and towards partnership. However, successive governments have yet to meaningfully enact the recommendations of the report (Houghton, 2021; Mead et al., 2022). *Te Pae Tawhiti* is the government's first public engagement with the Wai 262 claim or report (Houghton, 2021), and is currently in progress but promises to be a long process over many years (Tuffery-Huria & Gibson, 2020). In the absence of substantive government action, Māori future foods could play a role in addressing challenges related to cultural property and offer pathways for better protection of taonga.

1.3.2.2 Potential characteristics of Māori future foods

Māori may look to progress future foods in accordance with the concepts described in the previous section. Additionally, literature on Māori enterprise demonstrates how Māori economic activities often seek to maximise collective benefits, while minimising environmental and social externalities (Amoamo et al., 2020; Awatere et al., 2017; Wolfgramm et al., 2020). Ngā Pouwhiro Taimatua, The Māori Primary Sector Forum, has articulated that economic growth via food production by Māori should be underpinned by Māori values and centre self-determination, integration and improvement of knowledge systems, and the building of domestic and international relationships (2021). Māori enterprise and economies are reported as operating according to cultural protocols in a manner that can engender wellbeing and capital in various forms (Awatere et al., 2017; Mika et al., 2022; Mika & Ross, 2019; Reid et al., 2021; Wolfgramm et al.). Therefore, Māori future foods may also operate through such frameworks and principles.

As for the foods themselves, they may contain various native plant and/or animal species, given the multidimensional relationships Māori have with native and introduced species⁵ as taonga (Dana & Hipango Jr, 2011; Waitangi Tribunal, 2011). Ingredients could be foraged,

⁵ Kūmara is not a native plant and was introduced by Māori, but is considered taonga in ways similar to native species.

cultivated, and caught (Barr et al., 2018). In addition to opportunities to protect taonga and cultural knowledge, there is significant global focus on plant-dominant diets to reduce the harm of contemporary food systems (Willett et al., 2019). Māori veganism and plant-based diets have also been described as aligned to Māori worldviews and wellbeing (Dunn, 2019). There has also been recent acknowledgement of Indigenous plant-based food products for diet shifts (Cardoso et al., 2022). Therefore, taonga plants may feature in Māori future foods. Plants with which Māori do not have historical relationships could also support Māori future foods if they have favourable nutritional or environmental qualities, thereby aligning to more general characteristics of future foods. High-protein crops or those with other nourishing qualities, adaptable to Aotearoa NZ climates, could serve as ingredients in plant-based alternatives to animal foods (Sutton et al., 2018). Gathering and hunting of native and non-native animal species, such as tuna (Longfin eel), could also feature in Māori future foods.

It is essential, however, not to constrain possibilities for Māori and Indigenous future foods. It is important not to freeze Indigenous food in the past, as this obfuscates the role of food innovation in tradition (Grey & Patel, 2015) as observed in the horticulture of Whakaotirangi (Wehi & Roa, 2019) and ignores the dynamic nature of mātauranga Māori. Some future foods may take the form of novel and processed foods, use imported ingredients, or may be made for export. Māori cannot be categorised as either capitalist or non-capitalist, but rather are a deeply entangled mix of Indigenous and capitalist realities and the binary view of Māori as Indigenous-Capitalist and commercial-cultural has been challenged (Barr et al., 2018; Dell et al., 2018; Henare, 2005; Lambert, 2008; Manganda et al., 2023; Reid & Rout, 2016). Wholesale disparagement of any engagement with commodity markets misses potentials for expanded ideas of food sovereignty (Lambert, 2008) and Indigenous marketing (Love & Hall, 2024). It has been argued that undertaking market-based food entrepreneurship should not be dismissed as antithetical to broader political projects such as food sovereignty (Hutchings et al., 2020; Morris & Fitzherbert, 2016), and Māori enterprise and people are able to hold concurrent values and priorities (Barr et al., 2018; Henare, 2005). Food sovereignty is often described in terms of what foods to grow and how, but inherently it is also about the ability to connect networks of materials, knowledge, technology, and people to leverage power (Iles & De Wit, 2018). Commodification of Māori knowledge and native species has been described by some Māori as not inherently exploitative, and even necessary to capture and shield the value of species and practices for the benefit of Māori (Dana & Hipango Jr, 2011; Waitangi Tribunal, 2011).

In summary, future foods can align to various Māori goals and may take different forms. However, it is unknown precisely what types of alignments exist between Māori enterprise and future foods, and this information would be useful to encourage their targeted development.

Māori future foods may also be examined from many sides; the following section will explain consumption as a viable research angle and relevant considerations for this.

1.4 Consumption, branding, and future foods

Future foods have been examined from myriad angles, including food technology (McClements, 2020), consumer behaviour (Günden et al., 2024), nutrition (Green et al., 2022), and policy (Garnett et al., 2023). Research on the future of food also links to broader dialogues in diet and agrifood transition, and relevant system changes (Hebinck et al., 2021; Klerkx et al., 2022; Marsden, 2013; Swinburn et al., 2019). As examples from Indigenous perspectives, Indigenous Australian plant-based foods and practices have been scoped (Lopes et al., 2023), Indigenous crop production and potential industrial uses have been explored in Africa (Bvenura et al., 2019), and Indigenous knowledge and leadership have been mentioned as possible transformative agents for food systems (Mazac & Tuomisto, 2020). However, the consumption of Indigenous future foods, as a research field, has generated few contributions to the academic literature to date.

Consumption research is useful because it can highlight sociocultural contexts that reveal social problems and deepen understanding of them, as well as their potential solutions (Figueiredo et al., 2015). Additionally, while consumption and production are often presented as separate areas of activity, they are non-linear and are deeply interconnected (Isenhour, 2011; Princen et al., 2002), meaning that consumption research can simultaneously take a broader focus. Consumption and production largely occur in terms of markets, which is the key organising structure of our time, and how it functions is embedded in social and consumptive processes (Polanyi, 2002). Therefore, understanding consumption with attention to markets can reveal alternative ways of knowing, being, and organising life (Firat & Dholakia, 2017) and unlock the emancipatory potential of transforming consumption (Firat & Venkatesh, 1995). This also has potentials for Māori and Indigenous marketing thought (Love & Hall, 2022; Love & Hall, 2024). Understanding future food consumption and its marketing from Māori perspectives represents a significant opportunity to unfold Indigenous relations in markets and understand consumption from what are currently marginal perspectives in consumption and marketing research (Love & Hall, 2024). A brief history of consumption and marketing research below provides an essential context, outlining a conceptual foundation that underpins each study in this thesis in a transdisciplinary manner.

1.4.1 Consumption research

Consumption and consumer research are, perhaps surprisingly, only recent fields. Across the industrial revolution and into the 20th century, production was privileged as a site of enquiry far

and beyond consumption (Miller, 1995; Trentmann, 2012). Then, after the end of the Second World War, consumption research experienced a seismic shift, and became a prominent focus in sociology, economics, history, and marketing disciplines. Increasing accessibility of microeconomic data in the 1960s enabled focus on 'micro factors' in the consumption practices of individuals (McFadden, 2001), while, in parallel, 'macro' perspectives were propagated (Campbell, 2005), which attend to relationships between consumption and context (Leiss, 1983). Macro approaches in the 1970s and '80s challenged orthodox experiment-driven consumer research (Belk et al., 1989; McCracken, 1986), and the notion of a consumer as a rational individual "homo economicus", instead framing consumption as multidimensional (Hirschman & Holbrook, 1982). Intense debates about what consumer research was, should, or could be, unfolded in waves of reflexive critique and 'social drama' in the later part of the 20th century (Sherry, 1991). Consumption scholars called for various shifts in research priorities, including expanding the study of consumption beyond purchase behaviour, (Belk, 1984), examining consumption within the context of production (Miller, 1995), recognising the implicit ideologies that influence consumer research (Dholakia & Dholakia, 1985; Firat et al., 1987), and addressing a widespread lack of contextualised consumption (Engel, 1985). Some of these threads culminated in the widely acknowledged (Cova & Elliott, 2008; Szmigin & Foxall, 2000) 'interpretivist turn' of consumer research, which saw qualitative, social constructivist approaches taken towards consumption enquiries (Sherry, 1991) and a broadening of disciplinarity (Elliott, 2000). The related 'cultural turn' positioned consumption as goods, activities, and representations that created and reinforced meaning, giving rise to consumer culture studies (Trentmann, 2012) and consumer culture theory (Arnould & Thompson, 2005).

Nowadays, conceptual approaches to consumption have broadened (Askegaard & Linnet, 2011). Despite developments, consumption and consumers are often referred to in a self-evident manner (Firat & Dholakia, 2017; Trentmann, 2012). Similarly, in what Venkatesh et al. (2014) term as "one of the stranger omissions of the discipline", marketing scholarship often does not describe what is meant by a market. Yet, consumption, consumer, and market are not objective terms, but reflect specific ways of thinking. It is important to define consumption, consumers, and markets within frameworks that make context and culture central, because this pre-empts an understanding of future foods that is contextually specific to Māori. This thesis adopts perspectives on these terms that align with Māori views of food and Māori scholarship to support research on Māori future foods.

Consumption encompasses how humans interact with objects and services (Trentmann, 2012) and involves the attribution of value and circulation of meaning in a manner that is coordinated by culture (Arnould & Thompson, 2005; Geertz, 1973). Consumption therefore

plays out in ways that are specific to places and people (Firat & Venkatesh, 1995). A consumer is a person who fulfils needs and wants through consumptive acts. When consumers are narrowly framed as individual rational subjects, as has been common in historical consumer research, this can obscure the roles of structural processes and contextual factors in consumption (Askegaard & Linnet, 2011). There are conflicting ideas about the role of people, as consumers, in systems changes such as those associated with future food imperatives. As has been discussed, consumption is not just a transaction and matter of free will; it is a pattern of cultural and social practices that are manifestations of local and global interdependencies, which themselves are the outcomes of history and context associated with particular places. Consumption, and consumers, emerge from, reflect, and reshape culture, systems of production and exchange, social institutions and political arrangements (Isenhour, 2011). When researching consumers, it is critical to recognise that they alone cannot drive transformative change and future food consumption requires change in the structures that dictate the conditions for possible consumption. Therefore, in this thesis, consumers are not taken as the central explanatory force for enabling Māori future foods. Rather, consumers are understood more as collective subjects, whose consumption plays out in a world that wraps around them and frames horizons for possible and likely actions (Arnould & Thompson, 2005; Askegaard & Linnet, 2011), enabling a more critical perspective on the role of consumption for Māori future foods. Additionally, consumption and production are often dichotomised and separated as distinct areas of activity (Stø et al., 2017; Tregear, 2003). However, if consumption is understood as occurring across production chains, rather than just as a linear consequence of production, then the consumer is part of a broader matrix of actions and actors (Isenhour, 2011; Princen et al., 2002).

Finally, a market is an economic and social arrangement that coordinates commerce, and marketing encompasses the actions and institutionalisation of practices and discourses that play out in the wider environment of the market (Venkatesh et al., 2014). Markets predate capitalism because, at a fundamental level, they involve transfer of goods, meaning, and values that has been ongoing across human civilisations (Venkatesh et al., 2014). Contemporary global markets of modernity are the predominant economic arrangement in wealthy countries, though their existence is often not acknowledged or is taken as natural phenomena, even by marketers, economists, and consumption researchers (Firat & Dholakia, 2017). The problem presented for future foods links back to the idea of commodification in section 1.2.2; capitalist markets in Aotearoa NZ were predated by Māori systems of exchange, and despite uncoiling in a contested manner are now the foundation of the current food system. To not acknowledge the presence and importance of contemporary markets constrains imagination for future foods, which may unfold within, or outside of the market (as

in customary food procurement in community gardens, for example). Additionally, more market-driven approaches to the agrifood systems in Aotearoa NZ such as those seen in the neoliberal reforms of the 1980s have had significant consequences for food innovation and food production (Turner et al., 2016), and understanding future trajectories necessitates acknowledgement of market influences. Therefore, modern markets are not taken here as a natural fact, but their existence is acknowledged, if only briefly.

1.4.2 Researching consumption and branding for Māori future foods

There are several reasons why researching the consumption of Māori future foods, with attention to marketing and branding, is a relevant line of enquiry. The practices of markets, i.e., market-ing, have warranted concern because they have been centred in extractivist and colonial economics and have institutionalised racism in support of imperialism, to extreme harm of Māori and other Indigenous peoples (Francis, 2023; Love & Hall, 2022). However, marketing need not be miscast only as a tool for capitalist economic arrangements, because marketing can articulate visual and semiotic worlds and how we come to know each other (Bauman, 2007; Firat & Dholakia, 2017) and can take decolonial forms (Eckhardt et al., 2022). Indigenous and decolonial marketing can critically examine markets and consumption, expose historical silences (e.g., *The Empire's Dairy Farm*), and make way for new perspectives (Eckhardt et al., 2022; Love & Hall, 2022; Love & Hall, 2024). Therefore, understanding markets and consumption in the context of future food agendas is essential.

1.4.2.1 Relevance of branding for Māori enterprise

The research and practice of branding usually seeks to understand how brand processes can communicate or add value to an object, to encourage its consumption (Liu, 2017). Branding occurs whenever any offering is identified and can be named (Levy, 2017), and enables the exchange of meaning and value that underpins market exchange. In this way, branding can also be 'consumed' and is a relevant focus for consumption research.

Branding is a major element for Aotearoa NZ agrifood success now and in the foreseeable future, due to the growing volume and variety of available foods, as well as opportunities for targeting consumers with specific attributes (Saunders et al., 2016). Māori brand elements have been described as increasingly valuable for capturing value (Dalziel, Saunders, Tait, et al., 2018; Hutchings et al., 2020; Lees & Saunders, 2015). Elements of Māori culture are taken up to an increasing extent both by Māori and by government to articulate shifts in food production (Ministry for Primary Industries, 2020) and a future food story for Aotearoa NZ (Hutchings et al., 2020). However, Māori culture and knowledge is inadequately protected from the market, as evidenced by the Wai 262 claim (discussed previously). Māori branding faces

unique challenges in balancing commercial needs with cultural protection and exploring Māori branding could uncover ways to achieve this balance in a future food environment.

Some brand elements may be particularly useful for Māori future foods. These can include cultural expressions like language, art, stories, and values (Harmsworth et al., 2009). Cultural distinctiveness of Māori offerings can be a product differentiating mechanism (Harmsworth & Tahi, 2008), which has been reported for other Indigenous branding (Ferguson & Sidorova, 2018). Māori enterprise can use branding techniques to highlight their production stories and convey the values that underpin them (McIntyre et al., 2019; McIntyre et al., 2022). On the other hand, complex Māori value systems can be difficult to communicate in-market and how they are perceived by consumers is not well understood. To address these challenges, origin, or place, branding has been described as an appropriate form of branding for Māori that balances outside intelligibility with authenticity (Ministry for Primary Industries, 2024).

1.4.3 The significance of place and place branding for Māori future foods

1.4.3.1 Overview of place and place branding

‘Place’ is an expansive concept. A place is simultaneously a material environment, a point in time, the people that experience it, and the culture that emerges from and reshapes the place (Dovey, 2009; Ingold, 2002; Tuan, 1977). A culture is a suite of those values, views, symbols, practices, language, institutions, and objects that shape worldviews, provide meaning, and guide individuals on how to perceive and interact with their worlds (Hofstede, 1984; Markus & Kitayama, 2014). As well as culture, a place is made up of its location, geographical borders, landscape features, social relationships, the relationship between people and places, language, and peoples’ pre-existing impressions (Campelo et al., 2011).

‘Place branding’ assembles various elements, including location, geographical borders, landscape features, social relationships, the relationship between people and places, culture, language, and peoples’ pre-existing impressions (Campelo et al., 2011; Kavaratzis, 2005), to create a situation where “the perceived characteristics of a given commodity are influenced by the perception of the commodity in relation to a place” (Andéhn & L’espoir Decosta, 2018). Place brands are multidimensional and often in flux because their various elements may be perceived in a number of ways by different people (Anholt, 2005). Place branding can also constitute ‘place-making’ when it influences the meaning attached to a place (Dovey, 2009; Dupre, 2019). In essence, place branding is about relational networks, and how they are navigated and communicated about (Lew, 2017; Pierce et al., 2011).

Practices of branding consumable objects in relation to places are not new; one of the first known instances of branding signified the origins of wine using uniquely shaped vessels in ancient Greece (Charters et al., 2017; Nevett & Nevett, 1987). However, the academic study of place branding is relatively new, with the importance of origin labelling being first described and tested in the 1960s, which was connected to broader shifts in consumption research (Dichter, 1962; Schooler, 1965). This research was influential because it put forth the idea that origin attributes are perceived according to consumers' prior knowledge of places, and these perceptions are part of how people engage with and evaluate a commodity (Andéhn & L'espoir Decosta, 2018). The academic study of place branding gained further momentum in the 1990s, in response to trends in rapid globalisation and liberalisation of food systems (Campelo, 2017; Delagneau, 1987). Major threads of place branding research have been in tourism, country of origin branding, and nation branding (Campelo, 2017), and place is a major facet of geography scholarship (Pierce et al., 2011).

It is important to clarify place branding in relation to other related concepts that are often referred to interchangeably in place scholarship. Boisen et al. (2018) draw on an array of place literature to differentiate between place promotion, place marketing, and place branding. Place promotion involves messages that raise awareness of an offering in the mind of a target audience, operating at the 'demand' end of place consumption. Place marketing has a broader and more complex scope than place promotion and refers to both the promotion and configuration of a place. Place branding is broader in scope and complexity, works through narratives and meanings, and is concerned with the purpose, identity, and values of a place. In other academic spheres, branding is seen as subordinate to marketing, which makes sense when 'marketing' is the name for the discipline where much branding study occurs, and the use of the terms is discipline specific.

Place can be mobilised through various branding mechanisms, such as provenance, terroir, and origin labelling, which each have relevance for food. Provenance refers to the origin and associated spatial, social, and cultural attributes of a product, as well as a process of communicating those qualities (Smith Maguire, 2013; Warman & Lewis, 2019). In consumer research, provenance has been conceptualised as a stable attribute that is acquired via specific production methods (Smith Maguire, 2013), which is reasonable given that provenance is about revealing the conditions of production. However, it is important to recognise provenance as socially negotiated qualities (Meah & Watson, 2013; Smith Maguire, 2013) and in the case of Māori food provenance, it is not inherent but acquires value as an outcome of relationships and transference of mauri (life force) between producer and consumer (Reid & Rout, 2016). Terroir is a narrower form of place branding than provenance, and has been commonly applied to alcohol products since the 1830s when the sensory

properties of wine became positively associated with soil qualities of certain areas (McGee & Patterson, 2007). Terroir, as well as other types of provenance, may designate the origins, raw materials, philosophy, knowledge, and human capital associated with the place from which it comes (Charters et al., 2017). Terroir can also afford legal protection when applied in geographic indications, which are a certification system for the origins of a product (Spielmann & Claire, 2011). Origin labelling is even narrower than provenance and terroir, and refers to the practice of attributing an origin to a product, commonly in the form of country of origin labelling, and is an important mechanism for conveying place to consumers (Thøgersen, 2023).

Overall, place branding in its various forms, has maintained practical and theoretical relevance (Andéhn & L'espoir Decosta, 2018; Newman et al., 2014; Usunier, 2006), though the field is still regarded as being in an 'adolescent' state (Fernández-Cavia et al., 2018). Authors seem to agree that place branding research is multidisciplinary in nature (Aguilera-Cora et al., 2024; Kumar & Panda, 2019; Lucarelli & Brorström, 2013; Vuignier, 2017; Zenker, 2021). Its development is also hindered in some places by a heterogeneity of place branding practices (Boisen et al., 2018), e.g., country of origin labelling and geographical indications can easily be considered elements of a place brand but are not usually described in terms of place branding (Lopes et al., 2018).

In 2023, the International Place Branding Association issued a manifesto with the intention of clarifying what place branding is. The manifesto highlighted that place branding necessarily has a future-focus, where it functions as a platform for articulating what kinds of developments are required for a place, with focus on human and ecological wellbeing (International Place Branding Association, 2023). Place branding is also a method for envisioning futures (Kaefer, 2021) and for relational ways of thinking about place politics (Pierce et al., 2011). Place branding has received focus in sustainable development literature because it is argued that to create a successful place brand, the material, social, and cultural elements of a place must be nurtured (Maheshwari et al., 2011). Therefore, place branding is also constituted of material processes, as well as communication about those actions and outcomes in the form of a brand. However, research on how place brands support sustainable economies, and related ventures like future foods, is limited (Aguilera-Cora et al., 2024). Nevertheless, theories and practices of place branding have relevance for future foods because place branding constitutes processes that occur all along the value chain and is attuned to multimodal outcomes that foreground future foods. Place branding does have a history of use in Aotearoa NZ, which presents challenges as well as alignments for Māori enterprise, which will now be explained.

1.4.3.2 Problematisation of place branding in Aotearoa NZ

Place branding has played an important role in erecting the New Zealand food regime. Before discussing the relevance of place branding for Māori future foods, it is critical to account for the colonial legacies of marketing practices, before they can be useful to Indigenous people (Francis, 2023).

The first shipment of frozen meat from Aotearoa NZ to Britain is described as “arguably the most significant event in New Zealand’s economic history” (Alsop & Stewart, 2013). From one viewpoint, this was significant because it heralded the shift NZ would make to an export-oriented agricultural nation; the other viewpoint has already been laboured, where its significance also resides in the fact that it transpired through settler colonialism. The British appetite for Aotearoa NZ meat and dairy was fuelled by extensive and vigorous advertising campaigns, intended to strengthen both the local agricultural sector and the imperial power of Britain (Alsop & Stewart, 2013). Advertising positioned all NZ agricultural exports as thoroughly British (despite contributions of Māori and Chinese farmers to dairying). At this time, future foods were “New Zealand Mutton – Meat of the Future” (Alsop & Stewart, 2013). The ‘Grasslands revolution’ also encouraged New Zealand productivism via scientific and technological efficiency (Jay, 2007). Branding of Aotearoa NZ as “Britain’s Farm” and “The Empire’s Dairy Farm” were forms of colonial nationalism that portrayed Aotearoa NZ as a distinctly British node in the global imperial food system (Alsop & Stewart, 2013; Brooking & Pawson, 2007). They were also instances of ‘nation branding’, a form of place branding that “calibrates geographical imaginaries in national terms and mobilises them in terms of sophisticated ‘integrated marketing’ and globalising political projects” (Lewis, 2011). ‘Britain’s Farm’ capitalised on previous New Zealand nation brand components (Figure 1.4). Painted ‘arcadia’ landscapes provided potential settlers with an Edenic promise of lush isolation, beyond society (Bell, 1997; Coyle & Fairweather, 2005). This “settler imaginary” of melancholic bush-conquering helped forge a national identity for rugged individualism and improvement of ‘empty’ landscapes (Boyle, 2016), displacing attention from the active suppression of Māori (Bell, 1997).



Figure 1.4: A scene of Britain's Farm in an Edenic landscape by artist Gerald Spencer Price in the Scenes of Empire series, reference number Eph-G-EXHIBITION-1924-01. Reproduced by permission of The Alexander Turnbull Library.

The “capital-driven place mythology” of grasslands and the British-NZ empire have scaled and coordinated Aotearoa NZ as an export-oriented growth economy (Lewis, 2011) that persists today. Such processes are not natural outcomes of human science and progress, because agriculture is not only a suite of discrete activities, it is also ‘culturally constructed’, whereupon it is informed by particular values and prioritises some outcomes over others (Liepins & Bradshaw, 1999). The nation brand heralded the new dominant order that was impressed on Aotearoa NZ, where Māori regimes of kai and land kinship were necessarily marginalised to make way for the Empire’s Dairy Farm. What stood now was the howling emptiness of a vast pasture. The colossal weight of the British Empire was balanced on blades of grass.

As described earlier, despite various problematic applications, marketing and branding are not inherently harmful, and can be an effective lever for Māori branding because they can directly and authentically communicate about Māori enterprise and culture (Ministry for Primary Industries, 2024). The relevance of Māori language and culture to constructing ‘placed’ commodities has not been missed by Māori and others (McIntyre et al., 2022; Reid & Rout,

2016; Rout & Reid, 2019b; Rout & Whitehead, 2024). Understanding Māori foods with a lens on place and provenance has been described as of ‘immense importance’ to inform further research and policymaking for Aotearoa NZ food system transitions (Sharma et al., 2021). It is also important for protecting value for Māori enterprise, in a situation where Aotearoa NZ brands have generally failed to capitalise on place branding for agrifood (Rout & Reid, 2019b).

1.4.3.3 Relevance of place branding for Māori future foods

Place branding is of relevance to Māori future food enterprise for several reasons, in addition to brand effectiveness. First, Indigenous relationships to place are fundamental to Indigenous cultures and worldviews. Māori knowledges, language, and relationships emerge from and in place (Mead, 2003; Murton, 2012), and communicating about places is fundamental for Māori (Rout & Reid, 2019b). For Indigenous peoples, there are vested interests in protecting their places, both in terms of their material elements and symbolic representation, as place intersects identity, cultural protection, and survival. Place branding has been documented as a mechanism for protection of cultural landscapes (Hall & Piggin, 2012; Perry, 2023; Radosavljević & Kuletin Čulafić, 2019; Van Assche & Lo, 2011) including agricultural heritage (Lyu, 2024). Place branding may be a viable mechanism for Māori protection and reinvigoration of cultural landscapes associated with food production. A place brand, by its nature, belongs to the place and people who derive from that place (Aitken & Campelo, 2011), i.e., Indigenous people, and the creation of meaning and values from the place constitutes the basis of collective ownership. The concept of a brand having multiple stakeholders in a relational framework aligns with Māori understandings of ownership and interconnectedness, making place branding relevant to Māori at a conceptual level.

Second, as alluded to previously, place branding that is carried out on Indigenous lands in a colonised setting is invariably political because the acquisition of land and assertion over places is central to colonial projects (Potter, 2012). The construction of the New Zealand nation brand required mass alienation of Māori from Māori lands and social, cultural, and political subjugation, as well as the symbolic enfranchisement of Māori as an exotic other (Begg, 2012). Misrepresentations of Indigenous places and people can have enduring harms, such as historical revision or creation and perpetuation of stereotypes (Cassel, 2019; Pitchford & Jafari, 2008; Pomering, 2013). Extractive approaches to Māori and Indigenous culture for colonial place-branding have also been widespread (Johnsson, 2012; Shand, 2002). Place branding has typically been carried out by dominant groups controlling the identity of a subordinated group (Morgan, 1998); and so, for some, Indigenous place-branding presents emancipatory potential (Pitchford & Jafari, 2008). Place branding can construct impressions of a place, taking on a ‘place-making’ function (Cassel, 2019), and while there is a fundamental role for place-making in moving towards Indigenous sovereignty, it has so far been overlooked

(Goeman, 2008), and there is a paucity of Māori and Indigenous marketing thought in this area (Love & Hall, 2022; Love & Hall, 2024). Indigenous peoples deploying their cultural expressions and traditional markers in commerce can be appropriate if those same people and groups benefit, and this is done with agency (Heith, 2015). While some may believe that Māori place elements, including origin and cultural attributes, belong to New Zealand and can therefore be used in all local enterprise (Thomson, 2015), Māori scholars familiar with place branding say this is a “gung-ho” attitude (Rout & Reid, 2019b), and others argue that Māori control and protection of cultural property is necessary for Māori survival and wellbeing (Mead et al., 2022).

Third, re-placing Māori food landscapes through acts of marketing and branding could inform wider discourses of sustainability and influence food production in Aotearoa NZ (Hutchings et al., 2020), as has been documented in the dairy sector (Knook et al., 2022). Māori food provenance has been described in terms of its ability to communicate Māori philosophies, and place the food, the consumer, and the producer in a shared relational network, which is beneficial for both the producer and consumer (Reid & Rout, 2016; Sharma et al., 2021). Reconciliation of land, national identities, values, and agriculture has been acknowledged in wider Aotearoa NZ future foods discourse as a necessary step for improving food production at a systemic level (Sinclair-Thompson, 2022). Therefore, future foods that utilise place branding may be able to fulfil these political functions.

Successful Māori agrifood place branding has played out in Ahikā Kai, a Māori traceability scheme run by the Ngāi Tahu Iwi (Barr et al., 2018; Rout & Reid, 2019b). The programme provides a platform for Ngāi Tahu food producers to verify their products as being of Ngāi Tahu, which also contributes to cultural revitalisation by platforming customary foods and Māori places, demonstrating possibilities for Māori future foods. The role of Māori place branding for future foods is unexplored; investigating this could reveal ways to protect Māori value and shape alternative food futures.

Barriers to the potential positive effects of place-branded future foods include ongoing colonialism, and marginalisation of Māori knowledge and approaches in food production (Reid et al., 2021). Branding and marketing are also implicated in colonialism and heterodox marketing practices that have harmed Indigenous peoples, and do not have established Indigenous approaches to their research and practice (Francis, 2023; Love & Hall, 2022). Ironically, place branding food may doubly fetishise food as commodity (Watts et al., 2017), which is contradictory to the aims of provenance (Reid & Rout, 2016). Entering culture into a brand may create unreal images, chosen for their marketing value, but may not represent cultural expressions appropriately (Lew, 2017). When place branding focuses on the output,

and less on the place-making processes that generate that output, those products lose their transformative potential (Watts et al., 2017). However, Māori provenance does attend to relationships that precede the brand output, and so may avoid this pitfall (Reid & Rout, 2016).

In summary, there are known alignments and challenges for Māori place branding, and while cases of Māori place branding for agrifood have been documented (Rout & Reid, 2019b), a future foods frame has not been used before and could give new insight on Māori place branding. When viewed with a relational lens that is embedded in previous understandings of Māori provenance (Reid & Rout, 2016), place branding can be used to explore a wide array of topics that may be misconceived as being out of scope for place research (Pierce et al., 2011) to reveal heretofore unknown potentials, such as those of Māori future foods.

1.4.4 Consumers of Māori future foods

As an extension of exploring the potential of place branding for Māori, there is also a need to identify who would consume Māori future foods with place-brand elements to support future food development. Māori are likely consumers of Māori future foods, as offerings would likely already be culturally aligned. However, there is no predictable homogeneity of Māori consumers, and ethnicity and demographic characteristics alone are inadequate in explaining food consumption (Amine & Alexander Smith, 2009; Goyat, 2011; Verain et al., 2012). Rather, investigating consumers and consumption through values and attitudes can account for heterogeneity (Amine & Alexander Smith, 2009).

Future food consumers, in general, have been described in sustainable food research; they may be those who possess certain knowledge or values that make certain consumption behaviours more likely (Verain et al., 2012). Consumer values are frequently applied in sustainable food research to explain perceptions of credence attributes (Annunziata & Scarpato, 2014; Bryant & Barnett, 2018), including provenance (Kovacs & Keresztes, 2022), and to expose structural processes (Askegaard & Linnet, 2011). More specifically, 'Critical consumers' are a group that consider the ethical or political implications of production or perceived effects of consumption of goods in the use, purchase, or boycotting of goods and services (Gjerris et al., 2016; Yates, 2011). This group may therefore be interested in Māori offerings and place elements that communicate their ethical implications. Likewise, 'cultural consumers' are probably very similar to critical consumers, but also report authentic cultural origins as being important for food choice and therefore may also consume Māori products (Ministry for Primary Industries, 2024).

While Māori exports are understudied (Mika & Ross, 2019), they can contribute to social and economic development for Māori (McKerchar et al., 2015; Rout & Reid, 2019b), support Māori food sovereignty (Rout & Reid, 2020), and align with aspirations for culturally appropriate trade

and alternative economics (Mika & Ross, 2019). Relevant consumers may be domestic or international. There are reportedly a higher number of cultural consumers overseas than in Aotearoa NZ, which widens opportunity for Māori export. Some export markets may have particular relevance, e.g., if there are culturally aligned value chains as reported in China (Rout et al., 2022) or if there are shared elements of cultural context that may heighten interest in Māori products. When combining Māori place elements with the ‘clean green’ place myth of New Zealand (Coyle & Fairweather, 2005), there are opportunities for value capture in export markets (Lees & Saunders, 2015). Māori branding may be successful overseas due to perceptions of connectedness to nature and authenticity, whether their origin is from a Māori business or not (Lai, 2010). As stated previously, global markets are the key organising structure of our time and require examination (Andéhn & L’espoir Decosta, 2018; Polanyi, 2002), and altogether, integrating export considerations into Māori future foods is also important.

1.5 Positionality and research approach

Positionality statements provide researchers with a platform to situate themselves in relation to their study, which is important because the researcher is an active agent in research and their decisions are shaped by the contexts in which they live (Beck, 2024; Corlett & Mavin, 2018; Holmes, 2020) and because it is important for research to account for its motivations (Robinson & Wilson, 2022).

The overarching purpose of this research is to contribute to Māori knowledge stores and enable better outcomes for Māori as peoples, including as hapū, Iwi, enterprise, and academic thinkers, by investigating future foods. This project is part of a broader programme, Te Rangahau Taha Wheako mō ngā Kai o Āpōpō: The Consumer Dimensions of Future Foods, which broadly aims to understand motivations and barriers to consumer engagement with future foods. The programme is underpinned by Vision Mātauranga, a government policy framework that informs the strategic priorities of research in a way that has positive impacts for Māori (Ministry of Research & Technology, 2007).

Research carried out by Indigenous peoples has broadly been described as relational intellectual practice oriented towards building ethical, social, and ecological worlds, having materialised out of Indigenous struggles for self-determination in the twentieth-century (Larsen & Johnson, 2012; Smith, 2003; Smith, 2000). Indigenous research aims to critically examine socioeconomic structures and power relations, with the goal of restructuring them in ways that improve the wellbeing of Indigenous peoples and the societies in which they live (Eckhardt et al., 2022; Larsen & Johnson, 2012). While some research areas feature prominently in areas of Indigenous scholarship, no one topic is pedestalled; rather, Indigenous research

“presupposes an entire genealogical cosmology in which knowledge is created, stewarded, and accessed via place-based relationships” (Larsen & Johnson, 2012). Indigenous research methods require the researcher to understand the role of Indigenous experiences and worldviews in the lives of Indigenous people (Makomenaw, 2012). Research by Māori in Aotearoa NZ is grounded in Kaupapa Māori (purpose, principle, in a research sense means by Māori, for Māori) approaches (Moewaka Barnes et al., 2021). Kaupapa Māori encompasses research methodologies that structure assumptions, values, concepts, orientations, and priorities in ways that benefit Māori (Smith, 2000). Kaupapa Māori emerged out of Māori political transformations in the 1980s (Smith et al., 2017), and has been informed by Western critical theory (Murton, 2012; Smith et al., 2017), while also being highly critical of the harm of some Western research practices on Māori people and knowledge (Mikahere-Hall, 2017; Smith, 2003). Kaupapa Māori has been debated and developed in a number of spaces; just being Māori may not suffice (Mikahere-Hall, 2017), but it is also expansive and responsive to the diversity of Māori (Pihama et al., 2002).

As the researcher and author of this work, my position has informed the approaches in this project and has been implicitly articulated at the outset of this chapter in foregrounding Māori future foods from Māori historical perspectives and events. I descend principally from Ngāti Maniapoto and European (French, English, Irish) settlers. I am a mokopuna (descendant) of a maternal ancestor, Mere Te Rongopamamao Hursthouse, who was present during the invasion of Rangiaowhia (mentioned in section 1.1.2), whose experiences have reverberated intergenerationally and inform my outlook on the past and future of food. I became interested in the implications of food while studying undergraduate Māori health and biomedical sciences. At that time, I developed an interest in the relationship between human diets, environmental health, and animal rights. I then studied nutrition and dietetics, with the aim of better understanding diets and food systems. In this recent academic journey, I have started to build an understanding of food in terms of health equity, multispecies justice, environmental health, physiology, and nutrition. Therefore, this foundation also arrived at this thesis and has also been configured throughout it.

Key concepts in this thesis include food, consumption, and place, which each have cross-disciplinary relevance. Locating their intersections from an Indigenous and Māori research standpoint necessitates a degree of transdisciplinarity, which promotes working across knowledges (Nicolescu & Ertas, 2008) and can simultaneously traverse Māori knowledge and other academic knowledge and perspectives (Moewaka Barnes et al., 2021). The research in this thesis utilises three qualitative methods that were selected for their ability to answer research questions in a transdisciplinary manner. The studies do not use techniques explicitly based on Māori customs, such as pūrākau methods (Lee, 2009). However, this research has

been made possible by Kaupapa Māori activism and policies like Vision Mātauranga and is Kaupapa Māori in the sense that it is Māori-led, centres Māori perspectives, and is transdisciplinary, with the primary goal of envisioning better futures for Māori and extended kinship networks. The research acknowledges contradictions that arise when concepts such as Indigenous knowledge, enterprise, and commodification rub up against each other, which have known contradictions in Māori research (Smith, 2007). It achieves this by contextualising concepts, examining their academic genealogy, and acknowledging limitations as they arise.

1.6 Conclusion

While there appear to be numerous opportunities for Māori in future foods, the specifics of these opportunities and how they might materialise remain unclear. Investigating future foods for Māori enterprise ideally would reveal specific alignments and give greater resolution to opportunities and challenges in this sector. Place branding and provenance may have a role for Māori future food producers and consumers, but it is unknown how this operates at a consumptive level. The intersection between Māori and Indigenous future foods, place branding, and consumption is novel. Therefore, using a combination of qualitative approaches, this thesis sought to establish a picture of Māori future foods, first by scoping the sector at a high level via interviews with Māori enterprise and building on known alignments and factors identified in this Chapter 2. The thesis then aimed to examine the branding of Māori food and beverages in order to determine what forms of content may support future foods, including an analysis of place branding usage (Chapter 3). The final study aimed to identify consumer perceptions of Māori place branding, in both domestic and international settings, to describe how place branding could support Māori future foods (Chapter 4). Drawing together key research findings, this thesis concludes by identifying important areas for Māori enterprise and future research (Chapter 5).

Chapter 2

Māori enterprise perspectives on navigating challenges and embracing opportunities in plant-based future food development

2.1 Introduction

Plant-based foods and plant-dominant diets are often central in discussions around future food systems. Like other forms of future foods, plant-based foods are receiving attention from policymakers, public health practitioners, and businesses due to their potential to improve planetary and human wellbeing (Sanchez-Sabate & Sabaté, 2019; Willett et al., 2019), reduce animal harm (Hopwood et al., 2020) and enable low emission economies (Sutton et al., 2018). Plant-based future foods (PBFFs) are defined here as those that have similar or better nutritional properties to animal-derived foods, are sensorially acceptable, and may mimic the properties of animal-derived foods, and which have lower environmental and other externalities compared to other types of foods.

For Māori, PBFFs may also represent opportunities to restore and revitalise their lands, knowledges, and stewardship systems and practices, which are priorities for Māori and other Indigenous peoples in food systems change (Hutchings et al., 2020; Swiderska et al., 2022). For Māori, nascent food sectors like PBFFs represent an area where Māori enterprise approaches may align with overarching priorities and outcomes of PBFFs. Several alignments between Māori enterprise and values and PBFFs can be posited to justify Māori increasing their participation in the PBFF sector. First, Māori have an established history and tradition of kinship relationships to land, with horticulture long being of importance for Māori exchange (Lambert, 2008). Second, Māori horticulture is characterised by adaptability to new situations (Roskrige, 2011) and premium plant foods are increasingly viewed as attractive propositions to underpin alternative land-use strategies (Sutton et al., 2018). In a related point, PBFFs could support Māori economic diversification away from other primary industries vulnerable to climate change (Awatere et al., 2021). Third, a growing 'knowledge based' economy (Durie, 2011) signals potential for application of Māori knowledge in new and innovative ways in the PBFF sector. Finally, the reported environmental and health benefits offered by a plant-dominant diet (Willett et al., 2019) could align with Māori worldviews and support holistic concepts of wellbeing. Horticulture has long been central to Māori economies and is currently growing (BERL, 2020) but Māori enterprise development of plants processed into high-value foods, including those intended as an alternative to meat and dairy products, has not been explored.

In addition to the alignments between Māori and future foods discussed in the previous chapter, PBFFs may also have further compatibilities. Plant-dominant dietary patterns reduce the risk of food-related chronic disease (Springmann et al., 2018), which currently places significant inequitable burdens on Māori health (Grant et al., 2010). In Aotearoa, plant-dominant diets are shown to generate less emissions than animal-based ones (Drew et al.,

2020). At another level, PBFFs do not depend on animal commodities, and can align with emerging Māori kai ethics (Dunn, 2019). Further, PBFFs may enhance atua relationships related to plant cultivation and strengthen connections to native plant species. There is significant potential for Māori businesses to capture these multifaceted alignments in PBFF development, allowing clear communication of the credence attributes of Māori PBFFs (Rout & Reid, 2019b) and creating a provenance advantage related to the underlying production mechanisms of interest to some consumers (Reid & Rout, 2016). Other research has recently demonstrated the value of Indigenous leadership in PBFF for Indigenous aspirations and food system transformation (Lopes et al., 2023). At a nation-wide level, consumer research shows that key 'value-add' opportunities for PBFF products include capitalising on the established reputation of Aotearoa for delivering safe, nutritionally superior, and GMO-free products (Ministry for Primary Industries & Plant & Food Research, 2020).

Known challenges for PBFFs include lack of infrastructure and affordable scalability, workforce gaps, and stagnant legislation (Thompson & Palfreyman, 2021). Extrapolating from the Māori agribusiness setting, additional challenges for Māori may include ongoing alienation from land, difficulty accessing finance and capability (Phillips et al., 2016; Rout et al., 2020), difficulty accessing premium markets through existing supply chains (Awatere et al., n.d.), and complexities in communicating value to consumers (Rout et al., 2022). Additionally, some PBFF products may not have superior or equivalent nutritional benefits compared with their animal-based counterparts (Tso & Forde, 2021). Acceptability in terms of sensory appeal and affordability is a challenge across PBFF product types, and there is a lack of detailed longitudinal evidence on their acceptance and health impacts (Tso et al., 2020). PBFFs therefore face a range of challenges across the length of the value chain. Understanding whether there are additional challenges specific to Māori enterprise would provide useful information for Māori participation in the PBFF arena.

While there exists an established body of literature exploring the challenges and opportunities for Māori enterprise in general, and the Indigenous values underpinning Māori agribusiness are also well documented, there has not yet been any research investigating Māori enterprise approaches in the context of the emerging PBFFs sector. Therefore, this study aimed to:

- 1) identify the motivations for Māori engagement in PBFF production in Aotearoa New Zealand
- 2) describe how Māori enterprise approaches contribute to, and align with, the development of PBFFs
- 3) describe key challenges and opportunities that Māori businesses encounter across the PBFF value chain

4) highlight implications for export of Māori PBFF. Understanding the interface between Māori enterprise and PBFF opportunities is crucial for ensuring that Māori can actively and meaningfully contribute to this sector.

2.2 Methods

A qualitative approach via semi-structured interviews was adopted to investigate the experiences of Māori businesses with interests in PBFFs.

2.2.1 Ethics

This study sourced participants from Māori businesses that are existing partners on a wider MBIE-funded New Zealand-Singapore Strategic Catalyst Future Foods Programme, Te Rangahau Taha Wheako mō ngā Kai o Āpōpō: The Consumer Dimensions of Future Foods. The study was submitted to the Massey University Human Ethics process and deemed to be low risk (ethics registration 4000023729).

2.2.2 Participants & recruitment

Participants were recruited from Māori organisations partnered with Te Rangahau Taha Wheako mō ngā Kai o Āpōpō. These included Wakatū Incorporation, NUKU ki te Puku™, and MIHI (Movers in Hemp Innovation). Wakatū is a hapū-owned business based in Te Taihū (the top of the South Island of New Zealand). It represents the families of more than 4,000 whānau (family, kinship network) owners who descend from four tribes: Ngāti Koata, Ngāti Rārua, Ngāti Tama, and Te Ātiawa. Wakatū have a diverse food production portfolio, which includes specialist horticultural products and premium food and beverage products. NUKU ki te Puku™ comprises Māori-owned organisations who are focused on the development of innovative nutrition solutions. MIHI is a collaboration of Māori and non-Māori entities seeking to grow the hemp industry in Aotearoa. Each organisation has some degree of interest or participation in PBFFs. While not all participants had individual experience making PBFFs they were aware of the state of relevant sectors and had a breadth of experience in the national food value chain. Participants from these Māori-led organisations were both Māori and non-Māori; both were included to capture a diversity of experiences and reflect the multicultural nature of collaborative enterprise. Participants had a mix of roles across the businesses, but all occupied leadership positions. They were not deliberately selected for their leadership status but were referred to the study as being able to give a nuanced perspective on the experiences of the business by key contact points in the partner organisations.

2.2.3 Approach

Nine semi-structured interviews, each lasting about an hour, were held with 11 participants. Two interviews simultaneously involved two participants from the same organisation. Alongside the primary researcher (SW), a second researcher (MF) was also present during the interviews as an observer. Participants were thanked for their involvement in the study with a curated kai box containing locally made PBFF products.

An interview guide was developed iteratively according to a five-step framework (Kallio et al., 2016). The interviews began by establishing relationships, followed by broad questions asking why the participant was interested in PBFFs, and what it means to do this as a Māori business. Participants were then asked what value exists in PBFFs, and the key challenges and opportunities in making them and whether any of these were unique to their business or to Māori enterprise in general. A final question about the interest or participation of their business in export was posed. Audio files recorded for each interview were downloaded and transcribed and transferred to NVivo (QSR International Pty Ltd., Version 12) for analysis.

2.2.4 Thematic analysis

Data were analysed following a six-step approach to thematic analysis (Clarke & Braun, 2014). Themes and subthemes were iteratively created across engagement with the data. Within subthemes, some codes were grouped by general characteristic, i.e., whether they fell into challenge, motivation, or opportunity domains. Codes that did not have a uniting characteristic were not grouped further in the theme, in the interests of aiding clarity and presentation of results.

A hybrid deductive-inductive (Byrne, 2022) approach to thematic analysis was used to generate codes and themes from interview data. An entirely inductive analysis was not possible because a researcher always arrives at the project having been socialised across their life course and in a particular discipline, while an entirely deductive approach was not appropriate because not all findings could be predicted. Both semantic and latent codes were created; the majority were semantic and reflected the direct meaning of a quote, in line with an experiential research orientation seeking to report participant experiences. Latent codes required subjective interpretation by the researchers, which was useful because a constructivist approach is malleable to locally-specific knowledge including *mātauranga Māori* (Māori knowledges and knowledge system) (Eketone, 2008). Consequently, both direct reports from participants and interpretations of quotes are presented as results. While using a variety of methodological tools may create a 'messy' approach, this can reflect a more complete social reality (Taylor, 2018).

2.3 Results

Four hundred and twenty-seven codes were created through thematic analysis that reflected Māori business motivations for engaging in the PBFF sector, the opportunities and challenges in doing so, and associated implications for export. Three overarching themes were created to capture the experiences of Māori businesses in navigating food production and the PBFF value chain. The themes are: 1) value creation, 2) relationships, and 3) resources (Table 2.1).

Table 2.1: Overarching themes and their subthemes

Theme	Subthemes
A Value creation	Generation and protection of cultural and intellectual property
	Self-determination
	Production method & philosophy
	Export
B Relationships	Kinship relations
	Relationships with other businesses and research organisations
	Relationships with consumers
	Relationships with Government
C Resources	Capability
	Finances
	Infrastructure

2.3.1 Motivations for engaging in the PBFF sector

The reported motivations for PBFF spanned across the overarching themes. Participants described a range of motivations for engaging in the PBFF sector, including enabling connections and obligations to atua, land, people, plants, and culture. PBFF were also seen to represent a means to achieve self-determination and intergenerational outcomes through food production.

All participants discussed how their business approaches are informed by cultural values and how these align well with aspirations to create value via PBFFs. Some explicitly described their business approach as ‘tikanga-led’ (correct procedure according to values and practices), which creates multimodal value through the inclusion of whānau in strategy creation, education, and employment, guardianship practices for plants and the environment, and protection of culture through various processes.

2.3.2 Value creation in PBFFs

Opportunities and challenges described by participants that related to PBFF value creation were grouped according to four subthemes: 1) generating and protecting cultural and

intellectual property, 2) self-determination, 3) production method and philosophy, and 4) export.

2.3.2.1 Value creation via generation and protection of cultural and intellectual property

Participants emphasised that generating and protecting cultural property and intellectual property (IP) was important. Cultural and intellectual property encompassed various forms of knowledge and information, including traditional knowledge, language, branding, and scientific evidence.

Participants described the creation and use of cultural property and communication of unique narratives and values, the use of te reo, and responsibilities to taonga as opportunities for value expression. Food production that follows cultural protocols can generate authentic IP and PBFFs can appropriately be supported by some traditional narratives. Despite reported challenges with protecting Māori cultural property within conventional IP regimes, protecting IP was reported as a critical step for protecting Māori PBFF and associated narratives, which otherwise were seen as vulnerable on local and global stages. The cost to protect Māori IP was described as prohibitive, especially offshore, so intelligent strategies are needed. Good packaging design for food products was seen by one participant as critical to communicating a sound cultural narrative and care must be taken to avoid unintended negative consequences in misrepresentation of culture.

An important element of cultural and intellectual property described by participants was provenance, which reportedly enables Māori branding. Māori provenance was seen as vulnerable to misappropriation by non-Māori in Aotearoa NZ, with participants reporting that there was overlap between what constituted Māori provenance, and the nation-brand provenance, which is at risk due to incongruent clean green messaging and environmental realities. One participant stated that non-Māori should invest in their own place branding, rather than relying on te Ao Māori to prop up a national place story. One participant said that protecting Māori provenance was beneficial for Aotearoa NZ as a whole. Participants indicated that articulating Māori values and approaches through mechanisms such as provenance was associated with multisectoral and systemic shifts in national discourse and policy. These shifts have the potential to create an environment more supportive of plant-based future foods. In turn, the development of Māori future foods can further amplify the communication of Māori approaches, fostering additional transformative shifts.

Some participants emphasised that demonstrating proven health benefits of PBFFs is an important mechanism for creating value and meeting consumer expectations, though evidence for PBFF nutrition benefits is often limited. Others stated that a lack of available

evidence for the environmental benefits of growing particular crops in particular regions also impedes investment.

2.3.2.2 The importance of self-determination for value creation

Most participants discussed the importance of self-determination and sovereignty as a motivating factor for engagement with PBFFs. One participant was explicit about their aspiration for PBFFs and food systems to be created and shared among iwi to enable kai sovereignty. It was reported that sustainability is interwoven with goals for tino rangatiratanga and was achieved via PBFs:

“That’s tino rangatiratanga of what is, what it means to be Māori, to be iwi, and how we could create our own employment opportunities, and ensure that we were tika and pono [genuine] when it came to sustainability of our lands”. – Participant 9

2.3.2.3 Value creation via food production method and philosophy

Māori businesses want to create value across the whole value chain and recognise food has physical, cultural, and spiritual value. Participants discussed how sustainable values-based production can enhance value in PBFFs, and that each stage of production should occur through a cultural lens to ensure “culturalised commerce rather than commercialisation of culture” (Participant 6). It was noted that being both commercially and culturally successful is challenging. Participants stated that Māori businesses create value via Māori cultural perspectives and processes, because culturally grounded approaches to food production often have a multifaceted focus and outcomes. Some participants emphasised that PBFF development benefits from combining approaches embedded in mātauranga with non-Māori technology and methods, but it can be challenging to achieve appropriate alignment.

2.3.2.4 Value creation via export

Participants with an interest in exporting PBFFs discussed opportunities and challenges related to value creation via export. Participants described their aspirations for exporting PBFFs and numerous opportunities for a variety of offshore markets, where cultural distinctiveness, shared values, and geographic relationship can contribute to success. While Māori are dynamic when navigating the global milieu, some participants said that remaining true to hapū or region-specific customs and communicating these to consumers was difficult in a global setting. The requirements of some export markets for spray regimes were reported to make it difficult to grow crops for PBFF development and export through tikanga-led methods. One participant articulated that tikanga-led processes can be more difficult than conventional agriculture. There is also a perceived tension between ensuring kai sovereignty and security at home and exporting food.

2.3.3 Relationships across the PBFF value chain

Māori businesses reported navigating relationships with 1) kin, 2) other businesses and research organisations, 3) consumers, and 4) government. The scope and nature of these relationships are underpinned by a variety of factors, including characteristics of Māori enterprise, Māori status as Indigenous peoples of Aotearoa, and collective accountabilities to whānau and their environment.

2.3.3.1 Kinship relationships

Participants reported kinship relationships with whenua (land, but also refers to waters, mountains, and other environmental elements), whānau, and native plants, which were important aspects of their work. Participants involved in PBFF development said their businesses were motivated to provide tangible benefits to their communities and deliberately engage whānau by reconnecting them to land, involving them in production, and through co-design of strategies for tikanga-led farming. Employment and education opportunities both motivate and are the result of PBFF development:

“...we’re involving local hapū and iwi and whānau that are in those areas to be involved in the process, and they get to learn a little bit about the science of something they’ve traditionally harvested”. – Participant 3

The wellbeing of whenua, people, and nature were described as ultimate and interconnected aspirations that are motivated by atua and fulfilled through kaitiakitanga (guardianship practices). Environmental health was noted as a key indicator of business success. Conventional agricultural practices, though prevalent, were perceived as failing to meet the needs of future generations due to their significant impact on whenua, motivating substantial interest in the alignments between PBFF development and sustainability, and opportunities for food production deintensification and diversification. Participants reported challenges in the high cost of purchasing land and ongoing alienation from ancestral whenua. Land-related enablers of PBFF were in knowing what the land can support and a collectivist approach to land management. The small size of land titles was not seen as an inherent barrier:

“...small blocks can be incredibly productive. And we certainly know from what some of our hapū are doing around the country, you can produce a lot of food from, you know, from one hectare of land is massive, in terms of what it can do.” – Participant 2

Participants highlighted opportunities for native plant foods to generate environmental, economic, and human health benefits. Native plants were described in terms of taonga stewardship responsibilities, and their use was informed by their preservation and regeneration, as well as the protection and application of knowledge associated with those

plants. Growing native plants was of interest to some participants and accessing them on public lands was also mentioned as an opportunity for future food production.

2.3.3.2 Collaborative relationships with other businesses and research organisations

Participants aspire to build a collaborative PBFF sector and expressed the view that this can be well-supported through a relational economy. Participants said their organisations work through an economy of mana, koha (gift, contribution, reciprocity), and aroha (affection), and beyond basic trade into genuine, trust-based relationships. Māori collective power is achieved through pooling of capital, capacity, and expanded networks, and the alignment of entrepreneurship and research. It was noted that this natural ability to collectivise efforts creates potential for a PBFF-focused cluster.

2.3.3.3 Māori business relationships with consumers

When discussing consumer engagement, participants described the importance of authentic articulation of Māori concepts and values:

“I always draw on our cultural traditions and our values base to manifest something that in our puku (stomach) feels inherently Māori. And that's how we culturalise our commerce, rather than commercialise our culture”. – Participant 6

However, participants expressed uncertainty regarding the target consumer of Māori-produced PBFFs, with some suggesting young people and Māori may be more likely than others to embrace cultural values-based foods. Others said only premium markets are viable due to high production costs, although how consumers in export markets would react to a Māori PBFF proposition is unclear. Singapore was described as a viable export market, due to reportedly efficient regulatory processes, cultural and physical proximity to other Asian countries, and supportive agencies. Australia was also highlighted as a potential export area, due to relative proximity and a perception by participants that Indigenous Aotearoa NZ products may be perceived positively if they had a cultural differentiation.

2.3.3.4 Māori business relationships with Government

Several participants described the importance of a true Te Tiriti o Waitangi partnership between Māori and Government and that its absence leads to unhelpful policy and impedes innovation. It was expressed that Government must demonstrate a genuine commitment to values-based production to stimulate Māori PBF.

2.3.4 PBFF Resources

Māori businesses draw on a range of PBFF resources and reported numerous opportunities and challenges in accessing 1) capability, 2) finances, and 3) infrastructure.

2.3.4.1 Capability

Participants reported leveraging a unified value base that contains diverse capabilities for the development of PBFFs. Māori businesses aim to support whānau, workers, growers, and landholders to participate meaningfully in the PBFF sector. Developing capability pipelines for Māori businesses is critical but several participants felt there is a shortage of Māori capability across the PBFF value chain. Others suggested that more success stories and strong Māori leadership are needed to increase Māori industry confidence in the sector.

2.3.4.2 Finances

Participants highlighted various financial opportunities and challenges. Treaty settlements were seen as potential avenues for unlocking opportunities in PBFF for Māori, whilst some post-settlement and non-Treaty entities are already exploring PBFF entrepreneurship. However, the high cost of entry into the PBFF supply chain hinders innovation and lack of financial capital makes it difficult for Māori to commercially protect their propositions. While Māori businesses are not always conservative in investment, participants reported hesitation to divest from conventional agribusiness where alternatives are perceived as risky.

2.3.4.3 Infrastructure

Circular, reciprocal economies were described as supporting value-adding processes for PBFFs, but lack of reliable infrastructure hinders scale. Participants viewed agricultural innovation as easier at smaller scales, with tikanga-led growers generally working at a small scale. Challenges in using small land blocks were overcome by growing high-value crops. Limited control of the value chain was not a barrier for some participants because they leverage existing infrastructure from other sectors.

2.4 Discussion

PBFFs have received interest for their ability to contribute to improving environmental, human, and animal wellbeing. Previous research has demonstrated how Māori businesses in general generate multiple forms of value by embedding cultural values in their enterprise activity, however the relationship between Māori enterprise and PBFFs specifically has been little explored. This study investigated the motivations for Māori businesses to engage in PBFF production and their perspectives on key challenges and opportunities that they encounter across the PBFF value chain in Aotearoa New Zealand, expressed through the three overarching themes of value creation, relationships, and resources. The findings overall

highlight how Māori enterprise leadership is critical to navigating the PBFF sector. For Māori enterprise, the expression of self-determination is inextricably linked with their ability to meaningfully engage with PBFFs, to create and protect a PBFF value proposition and authentically communicate it to consumers, and to fully realise the potential of the PBFF sector to enhance community and environmental wellbeing. The considered and ethical development of PBFF incorporating native plants was identified as a unique high-value opportunity for Māori, which can support diversified land use and protection of biodiversity alongside economic, cultural, and social objectives. Gaps in policy and infrastructure that impede growth of the PBFF sector were identified, along with potential solutions that highlight the strengths of values-led practices, such as a move towards a relational economy that leverages collective experiences, knowledge, capacity, networks and markets of Māori businesses to accelerate progress in PBFFs.

2.4.1 Centrality of self-determination to Māori PBFF engagement

PBFFs constitute an emerging sector that is of particular interest to Māori enterprise due to its perceived alignment with Māori values, philosophy, and expression of self-determination. In this study, PBFFs are seen to represent an attractive opportunity for cultural enterprise on a variety of levels. They intersect Māori business aspirations to promote ecological and social wellbeing through their economic activities. PBFF can enable protection of biocultural heritage in native plants, which is driven by obligations to protect relational webs between plants, people, ancestors, and nature (Jefferson, 2022). At a political level, Māori in this study are motivated by PBFF through a desire to transform agrifood systems, which is interwoven with agendas for sovereignty, place-based enterprise, and protection of ecosystems in an age of ecological catastrophe. Tino rangatiratanga and self-determination was described as underpinning participant aspirations for food and economic sovereignty, where interest in PBFF is strongly motivated by environmental and human wellbeing, which in turn is linked to self-determination, survival, and revitalisation, as has been stated elsewhere (Watene & Merino, 2018).

Self-determination and mana motuhake provide a lens for Māori food enterprise that recognises that aspects of Māori life, including food production, are political (Campbell, 2020; Hokowhitu et al., 2022). While transformation of diets and agriculture is now critical (Willett et al., 2019), it would not necessarily address the deep relational shifts needed to improve collective Māori wellbeing. The genesis of the current New Zealand national food system has involved widespread transformation of landscapes away from communal Māori ownership into a commodity logic, with little attention given to wellbeing (Campbell, 2020). The exploration by Māori of new sectors such as PBFFs to solve a complex array of problems, despite such a challenging context, is an eminent example of mana motuhake. PBFF and other emergent

food sectors represent opportunities for a food regime where Māori participate not just as symbolic tokens or unconsenting contributors to pasteurised heritage stories, but as co-creators of future-focused food systems (Sinclair-Thompson, 2022). The findings of this study emphasise the essentiality of collaborative enterprise and co-leadership in Māori businesses achieving both their PBFF-related aspirations and intentions for food systems change.

2.4.2 Overcoming PBFF sector challenges

Despite recognition that current agrifood systems are not fit-for-world, emergent sectors and food regimes have yet to replace the incumbent model (Klerkx et al., 2022). This PBFF-focused study corroborated many of the same financial, capability, and infrastructure-related challenges reported in the overlapping alternative protein sector (Thompson & Palfreyman, 2021), through a Māori lens. The ways participants described their decision making and priorities for PBFFs also are in-line with other Māori values-based enterprises, where Māori create value for themselves and broader kin networks through mana-enhancing practices, particularly in whānau and community contexts (Hutchings, 2015; Mika et al., 2022; Taiapa et al., 2021). However, exactly what tikanga-led practice means for agribusiness at scale is not well established (Grelet et al., 2021), and participants highlighted difficulties in scaling these practices due to lack of capability, uncertainty in how to incorporate Western processing methods while maintaining cultural integrity, the necessity of long-term effort, and the unavailability of robust evidence of PBFF benefits, which is of critical importance to fetch the premium return reported by participants as needed to justify investment.

Māori capability building has been reported as critical for operationalising kaupapa Māori (Awatere et al., 2017), agribusiness governance (Rout et al., 2020) and managerial skills (Vunibola et al., 2021), all of which are relevant to PBFF innovation. To progress a feasible and streamlined PBFF pathway, participants unanimously identified the formation of PBFF clusters and/or collaboration, underpinned by genuine relationships and Māori economic principles as a powerful enabling factor that could be used to mitigate many of the challenges associated with a new sector. Māori enterprise collaboration is well documented (Mika et al., 2021; Rout et al., 2020; Ruwhiu et al., 2021). Linking iwi through a shared value chain, coalescing communally owned small land blocks, and accessing existing infrastructure through business relationships are among the potent collaborative approaches reported here that Māori enterprise could consider for future PBFF development.

2.4.3 Value creation and protection in the PBFF context

Māori PBFF are distinct for their ability to be created through culturalised business and Indigenous processes. Participants in this research emphasised the ability of Māori world views and approaches to add value in unique ways across the PBFF creation process. On the

other side of the value creation coin, the protection of cultural heritage and knowledge is essential to the articulation and assertion of mana motuhake. For Māori PBFFs, therefore, an important consideration is the protection of culture across the value chain, particularly when using native plants, which represent natural relationships that link spiritual, physical, and intellectual nourishment together, so are an important mediator of mātauranga Māori (Dell et al., 2022). Native plants are at the forefront of discussions of cultural knowledge protection because they are often not adequately protected from material or symbolic misuse (Jefferson, 2022). Documented challenges for Indigenous PBFF enterprise include a lack of clear processes for protecting traditional knowledge of native plants (Robinson et al., 2018), which can create tensions between guardianship and commercial interests (Walsh & Douglas, 2011). Participants in this research navigated some of these tensions by prioritising the preservation and revitalisation of taonga as an enterprise imperative, alongside the development of fit for purpose models and frameworks developed through a Kaupapa Māori lens to facilitate taonga protection. With these priorities set, Māori enterprise with an interest in PBFF then consider whether kaitiaki interests for native plants and their associated knowledge can also substantiate a value proposition and, further, how these special relationships can be conveyed to consumers in a way that is protected, genuine, and engaging.

Producing native plants, and accessing those on public lands, was of interest to participants. A need to restore ecosystems has been acknowledged as an important mechanism for ensuring Māori access to native species, as well as opportunities for their use in commercial applications by Māori (Waitangi Tribunal, 2011). In government documents related to food system changes, native plants are mentioned variably. In MPI's 10-year Fit for a Better World plan (2021a), native plants are not mentioned in terms of food production or consumption, nor is environmental restoration for wild plant procurement. "Our plants" –whether this means native ones or any plants – are mentioned in a brief paragraph about regenerative farming and improving environmental wellbeing via food and fibre production. There is precedent to build on the 'Te Taiao' framework in the plan by articulating what can be meant by Māori future food production, the role of such plans in enabling native plants for not only food production but also via environmental restoration, which should necessarily connect to agrifood plans, and also with a view to protect the value of native plants and associated Māori knowledge for the benefit of Māori.

The lack of robust and appropriate national and international mechanisms for the protection of cultural property has long been a significant concern for many Indigenous peoples, including Māori in Aotearoa (Mead et al., 1994). Participants here noted tensions between Māori worldviews and conventional intellectual property regimes, which confer individual ownership over creations of the human mind (Prager, 1944) and exclusive rights to use, possess, and

dispose of property (Garrrity, 1996). The scope of Māori knowledge governance extends beyond the concept of individual ownership, instead carrying communally held responsibilities to social, cultural, and symbolic practices and the knowledge associated with them (Sterling, Riddle, Brooks, et al., 2021). Incongruent approaches to knowledge ownership and responsibility often make it difficult to adequately protect mātauranga Māori from misappropriation. Participants were not always sure how best to protect Māori value propositions in new settings like PBFFs; as described by Sterling, Riddle, Brooks, et al. (2021), this can be even more difficult in a global digital world because offshore entities are not obligated to Te Tiriti o Waitangi or domestic protection mechanisms. While cultural IP in innovation can enhance the Māori economy, a need remains to strengthen existing, and create new, mechanisms for protection of traditional knowledge (Sterling, Riddle, Brooks, et al., 2021). Access and Benefit Sharing frameworks to govern the use of genetic resources and protect Indigenous knowledges, innovations and practices, and labelling schemes for Māori and other Indigenous food products, have been explored as mechanisms for asserting cultural knowledge rights but these are yet to be instituted broadly (Ijnu et al., 2023; Swiderska et al., 2009). Consideration of such schemes for PBFF was out of scope for the current study but should be a focus for future research.

Another reported area for value creation and protection was in place branding and provenance. Māori branding has been described as a vehicle for cultural expression (Harmsworth & Tahi, 2008) with food as a particularly potent agent for culture because of how it encapsulates people and place in te Ao Māori (Rout & Reid, 2019b). Provenance and place branding have been described as important for Māori agrifood (Rout & Reid, 2019b), with participants here confirming this for future foods. A uniquely Māori provenance was described as a key advantage for Māori PBFF, and protecting this type of place branding would benefit both Māori and Aotearoa NZ. A related challenge expressed by participants was how to ensure the authentic communication of Māori values and approaches, particularly in overseas markets. Yet, negotiating culturalised enterprise with commercial success was difficult for participants for several reasons; while pan-Māori values and culture may resonate in some places and has been described as a key element of Māori food value propositions (McIntyre et al., 2022), there are no clearcut pathways for ensuring complete authenticity to Māori identities. Place branding has been reported as one form of communication that can balance Māori cultural authenticity with consumer intelligibility (Ministry for Primary Industries, 2024). Place branding of notions of community had been well-received offshore for some participants, but they said there remains uncertainty about how an explicitly Indigenous Māori PBFF value proposition would fare in a global setting, highlighting a need for in-depth consumer research in this area. Some participants stated that Māori themselves may be a solid local market for

Māori-made PBFF because they would better understand Māori offerings, although inflation and food insecurity may inhibit PBFF consumption if products are not affordable. An additional challenge in Māori branding is where Māori cultural property has been used to construct commercial brands in ways that are not under Māori control or for Māori benefit, with participants reporting a need to address the lack of clarity on what constitutes Māori and NZ provenance. Understanding Māori provenance has been described as important for Māori foods (Reid & Rout, 2016; Rout & Reid, 2020; Sharma et al., 2021) and would reveal pathways for improved value protection for Māori PBFF.

2.4.4 Implications of PBFFs for Māori and Aotearoa NZ economies

Participants shared their aspirations for the future, which included fostering a high-value PBFF sector and a shift away from bulk commodity trading. This approach has been described as the ‘volume to value(s)’ transition, where trade is oriented towards production of ‘high-value’ goods (McIntyre et al.; Ministry for Primary Industries, 2021a) that fetch a premium return on the basis of a shared local or national story (Bradburn, 2021) and credence attributes such as sustainability, animal welfare, social responsibility, and cultural authenticity (Dalziel, Saunders, & Saunders, 2018). A volume to values shift already exists as a goal for Māori agribusiness (Te Hono, 2023) and several frameworks describe how diverse Māori economies advance such aspirations (Amoamo et al., 2018; Wolfram et al., 2020). Māori enterprises have successfully applied cultural values to established industries like dairy and wine, and participants in this research indicated that PBFFs are an opportunity for Māori to apply these same strategies in a new sector.

Divergent views on the role of export in generating premium returns for high-value products are evident among Māori. Despite this, there have been limited explorations of how Māori entities currently engage with and benefit from export (Jurado & Mika, 2018). In this study, participants reported tension between enabling local food sovereignty for whānau and ensuring economic prosperity via exported food, but that this tension was justified if the latter enables the former. Ensuring that PBFF exports generate economic benefits that extend to the social realm was a focus for all participants who export or who aspire to do so. Other Māori businesses likewise have navigated similar tensions created by export by operationalising their values in export activity (Jurado & Mika, 2022). Further, one participant remarked that a benefit of Māori export is that it enables engagement with other Indigenous communities, which has been highlighted as a means for Māori to influence global trade policies towards being more responsive to Indigenous peoples’ rights, needs and aspirations (Jurado & Mika, 2022).

Participants in this research stated a need for examples of Māori success in PBF. Contested optimism in PBFF investment and concerted efforts to dampen their potential in market (O'Donnell & Murray, 2023) may hinder Māori participation in PBFF without relevant policy change. Participants were forthright about a need for a clear commitment from government to wellbeing and values-based behaviour to enable transformational shifts and realise the full potential of the PBFF sector. Although some government-led initiatives demonstrate consideration of Māori co-leadership (Manatū Ahua Matua & Ngā Pouwhiro Taimatua, 2021; Ministry for Primary Industries, 2020), they may be vulnerable to a change of government and benefits will take years to actualise (Anderson & Mossialos, 2019). Realising Māori-led transformation strategies for agrifood systems, including PBFFs, requires broader socio-political shifts accompanied by strong leadership across government and industry (Klerkx et al., 2022).

The agricultural innovation system in Aotearoa NZ has some challenges for future foods. Systemic changes food production and consumption are required, but relying on organic growth of alternatives like future foods has been described as too slow and lacking sufficient power to induce systemic change on their own (Kivimaa & Kern, 2016). Policy has a significant role in enabling certain patterns of activities for agrifood systems, and in particular, policies that destabilise incumbent regimes can create opportunities for upscaling niche innovations (Kivimaa & Kern, 2016), which has been recognised for the NZ agrifood system (Turner et al., 2016). Core regime elements of the current agrifood system in NZ include dairy and meat farming, as well as some major horticulture monocrops such as kiwifruit. However, destabilising policies are naturally politically difficult to create and sustain and are constrained by previous policy choices that are institutionalised (Howlett & Rayner, 2007). There could be a role for Māori in creating and sustaining disruptive policy; this would also require concerted effort and power sharing by the Crown.

2.4.5 Limitations

Although participants had rich and diverse insights on Māori business aspirations, motivations and experiences in the development of PBFFs, this study drew from a limited pool of Māori organisations who were already partnered with a programme focused on PBFs. It therefore may not represent the full spectrum of Māori enterprise perspectives on Māori involvement in the PBFF sector.

2.4.6 Considerations for future research

A key challenge described by the participants in this study that lends itself to future research was understanding and testing communication of Māori values via PBFFs in local and global contexts. This study also articulated a need for case studies of successful Māori plant-based

and values-driven enterprise, which would enhance confidence and Māori participation in the sector. Further work to support the development of appropriate mechanisms for the protection of Māori cultural property and genetic resources in the PBFF context is imperative.

2.5 Conclusion

This research represents the first exploration of Māori enterprise approaches in the unique context of the nascent PBFF sector, with important implications for Māori enterprise and Aotearoa New Zealand policy settings, future foods, food systems, and export. It describes how Māori enterprise approaches and values contribute to, and align with, PBFF development. Although several enabling factors have yet to manifest, mechanisms already exist that Māori enterprise can leverage to capture PBFF opportunities. Collaborative efforts, distinctly culturalised enterprise, and authentically communicating the benefits of a Māori approach to PBFF in high quality products can provide distinct advantages to Māori if undertaken with due care. The findings of this study indicate that a successful Māori PBFF sector may look to create social, spiritual, environmental, economic, and cultural value through tikanga-led processes, and communicate this value to consumers in a way that addresses desires for authentic, values-driven food. Such a proposition, properly protected, would benefit not only individual Māori enterprise, but also signal examples of how Māori economies at large may replicate these processes for the development of a successful future foods sector.

Chapter 3

Place-ing commodities: a content analysis of Māori food
and beverage product packaging

3.1 Introduction

Packaged foods are ubiquitous. The aims of contemporary food packaging are numerous and have evolved in response to shifting influences of legislation, marketing, and consumption trends (Cheftel, 2005). As a communicative device, food packaging can capture and express value via branding. Building on the findings of Chapter 1, which identified branding as both an opportunity and a challenge for Māori future foods, this study examines the types of content used on packaging by Māori food and beverage (F&B) enterprises. Currently, it is unclear what forms of content Māori food enterprises use on their packaged products to express value. Understanding this would highlight potential avenues for value expression in future foods and contribute to Māori food and marketing scholarship by identifying the prevalence and functions of various brand attributes.

Establishing whether place elements are used on food packaging would also contribute to understanding the wider landscape of Māori food production and consumption. As described in Chapter 1, place elements encompass a variety of content, including provenance attributes, origin labelling, and terroir and geographical indications. Provenance includes cultural and social attributes, and so content that expresses Māori language and culture are considered as place elements and provenance in this chapter.

This research adopted a content analysis approach to examine the types and frequency of content presented on Māori food and beverage product packaging, as well as the scope of product types on offer. It fills gaps in knowledge about Māori food branding and place branding, and describes implications for Māori and Indigenous future foods, providing an avenue to understand the elements that contribute to how consumers may perceive Māori future foods.

3.1.1 Food packaging and branding introduced

Food packaging is not a new technology, the use of harakeke (a native plant used for fibre and medicine) to package food in rourou (food basket) for hāngī (in-ground earth oven) (Richardson, 2018), the storage of tītī (a native bird) inside pōhā (kelp carry bag) in the case of some Ngāi Tahu whānau (a Māori tribal group) (Rout & Reid, 2019a) and storage of freshwater in hue (gourd) (Burtenshaw, 2003) are all examples of traditional Māori food packaging. Contemporary versions of food packaging, i.e. those that sit on supermarket shelves, seemingly deviate from notions of 'cultural' food. Yet, from realms of chemical engineering and mechanised food processing, un-cultural objects do not emerge; highly processed packaged foods are also ontological objects that reflect the cultural conditions of its producers and consumers (Hawkins, 2012). Therefore, the consumption of any food and

its packaging involves not only nutrient intake and sensory experiences, but also the ingestion of values and representations (Fischler, 1988).

The advent of mass-scale commercially branded packaging is tied to several notable shifts in the production, distribution, consumption, and disposal of food (Twede, 2016). New and improved technologies, factorisation and mechanisation of food production, and globalisation unfolded along different trajectories across the world, contributing to these changes (Ellickson, 2016; Twede, 2016). Grocery and supermarket formats introduced unprecedented product scope (Ellickson, 2016), which encouraged value creation via differentiation strategies like contemporary branding of food packaging (Hawkins, 2012). The disruption of Indigenous life also helped to pave the way for contemporary food systems in colonised countries (Struthers Montford, 2020). A major aspect of commercial packaged food products is the use of branding. Branding is a site of value because it enables food packaging to perform in particular ways as a cultural and communication device by conveying meaning (Brody et al., 2008; McCracken, 2013), which is said to be increasingly valued by its consumers over the material content within (Lash et al., 1993). It is not known what kind of content Māori F&B enterprise utilise on their packaging, though some types of elements may be particularly relevant.

3.1.2 Forecasting types of content and products

Māori branding may operate in interesting ways that have not been described in food marketing or future foods scholarship. Although not a new concept, place branding has evolved and is of increasing scope and relevance for food packaging (Newman et al., 2014). It also has relevance for Māori F&B enterprise, as established in previous chapters. Place branding can take numerous forms. For Māori, some place elements may be particularly relevant for packaged foods. Language, cultural expressions, and origin statements can convey how the food has been produced, the place and associated identities and people from which it emerges, and the characteristics of the brand. These types of content can engender authenticity, which is useful for both producer and consumer. Further, place-specific narratives can underpin the symbolic production of future foods and compel their consumption. There are various reasons to expect the presence of these place elements on Māori packaging.

3.1.2.1 Place content: language and culture

Place and place branding, as outlined in section 1.4.3, are expansive in scope. Place branding can take different forms, and provenance is a useful concept because it encapsulates a variety of attributes associated with a place, as well as a process of communicating those attributes. Māori language and culture can be understood as place and provenance attributes because they are understood as emerging from experiences of a place (Murton, 2012) and so may be used by Māori enterprise.

Language is known to signal cultural authenticity of products and services (Heller et al., 2014; Manning & Uplisashvili, 2007), and so may serve as a tool for identification, legitimisation, and communication of the identity of a business as being Māori. Māori brand identity can be a site of value for the enterprise and for consumers (Harmsworth et al., 2009) as it can convey genuineness and command a premium (Roskrug et al., 2017). The process of creating value from one's own experiences and culture as an Indigenous person or group can be empowering (Keskitalo et al., 2021). The use of Indigenous language commercially can engender prestige for community members, and also modify the linguistic ecosystem to which consumers are exposed (Ferguson & Sidorova, 2018). The use of language and culture may constitute a value-expressing process, where, for Māori, value does not emerge only as a property of market exchange but is intrinsic and interrelated among all things via their shared primordial origins (Roberts et al., 2004). In summary, alongside the revalorisation and increasing health of te reo (Reese et al., 2018), it is reasonable to expect that language and culture, in various forms, may be place elements in use by Māori enterprise on food packaging. Beyond monetary benefits, provenance can also draw from and build up place at a geographic level, which may comprise social, political, or cultural functions. For example, Indigenous claims to geographic territory are deeply tied to their rights and identities, as these are articulated through connections to place (Cobo, 1986), and so Māori place attributes may take forms that are specific to Indigenous provenance.

3.1.2.2 Place content: origin labelling

Origin statements are also a form of provenance and may also be present on products as it is considered a key mechanism for expressing value to consumers (Charters et al., 2017; 2023; 2023). Origin labelling has been characterised as a significant development in food branding, emerging from discourses on consumer rights, food safety, and industry interests (Loureiro, 2003), although it has also faced opposition from some areas of the food industry (Smythe, 2010). While some critics argue that origin labelling has lost relevance due to the multi-locational nature of global production (Samiee, 2011) others assert that origin labelling retains significance as long as consumers value or perceive origin attributes, whether those attributes are real or not (Andéhn & L'esperoir Decosta, 2018; Magnusson et al., 2011). Origin labelling that uses Māori place names on wine packaging has been shown to command a higher price (Forbes & Dean, 2013), even if the producer's relationship to the named place is not further demonstrated.

Research into origin labelling and branding in Aotearoa NZ has focused on the New Zealand brand, reflecting its historical and contemporary economic and social significance (Barnes & Higgins, 2022; Coyle & Fairweather, 2005; Dalziel, Saunders, Tait, et al., 2018; Lees & Saunders, 2015). The enduring prevalence of New Zealand place branding offers Māori both

opportunities to leverage these narratives and avenues to challenge them. According to a survey on nationwide food exports, a large percentage of products were not labelled with their Aotearoa NZ origin (Lees & Saunders, 2015), and so some Māori F&B products may not have origin statements, despite potential value. Whether Māori currently utilise food packaging to mobilise place branding is not fully known, despite the increasing importance of provenance in Māori food enterprises (Reid & Rout, 2016; Rout & Reid, 2019b). Origin labelling and branding literature has been criticised for its narrow focus on purchase value and lack of theoretical depth and situational awareness, neglecting broader conceptualisations of place and its context (Andéhn & L'espoir Decosta, 2018; Firat et al., 1987; Samiee, 2011), such as those relevant to Indigenous peoples. Examining origin labelling with a broader notion of value and its application in non-dominant economies are key research gaps in place branding (Andéhn & L'espoir Decosta, 2018). Investigating whether Māori F&B enterprise use origin labelling, in a wider frame of place branding, could contribute to both these research gaps, as well as to the not-yet-existing Māori and Indigenous marketing sphere (Love & Hall, 2022). Moreover, this would contribute to understanding future foods and how they may be supported by place branding. In summary, it is reasonable to expect that origin labelling will be present on the studied F&B products, making it a pertinent area of research with significant potential to explore its impact on Māori F&B enterprises and broader place branding practices.

3.1.2.3 Product types

The Māori food economy is diverse and makes up a significant portion of the national Māori economy. Thirty-two percent of all Māori businesses currently operate in the food and fibre sector, which has grown significantly since 2018 (Ministry for Primary Industries, 2023a). Recent assessments reveal that packaged and premium foods are a minor aspect of the Māori food economy when compared with primary agricultural production (Nana et al., 2021). Value-adding processes to foods are associated with numerous challenges for Aotearoa NZ-based firms, such as a small domestic market and distance from export markets, as well as access to capital (Saunders et al., 2011). Māori food exports are relatively small, making up 1.4% of total NZ food exports in 2021 (Ministry for Primary Industries, 2023a).

There are unknowns with regards to a detailed composition of Māori packaged and premium foods sector. In a recent assessment of the Māori economy, other food manufacturing (which includes packaged food) has provided the highest return for Māori food enterprises (Nana et al., 2021), and so there may be a decent variety of products available. Māori entrepreneurship in small to medium sized business are pivotal for Māori economic development (Mika, 2013).

Horticulture has long been practised by Māori and has experienced growth in recent years (BERL, 2020), so some packaged plant-based products could be expected. It is reasonable

to expect native plant use and representation, given the varied roles they play in te Ao Māori, traditionally and contemporaneously (Dana & Hipango Jr, 2011). Apiculture is another longstanding food sector in Aotearoa New Zealand, emerging with the importation of European bee species who pollinated pasture plants (Gillingham, 2008). Māori were early adopters of European beekeeping, and today, honey production is a significant aspect of Māori agrifood (Dimitrov, 2024; New Zealand Story, 2020). Honeys produced via native trees, e.g., Mānuka Honey, also have distinct provenances that are associated with Māori knowledge, Aotearoa NZ landscapes, and the food industry, and have contributed to Māori socioeconomic development (Dimitrov, 2024). Mānuka honey is also highly contested, with commercialisation of Mānuka trees and international battles over IP rights to use the term 'Mānuka honey' by domestic and international honey producers overshadowing Māori interests and connections to Mānuka (Bil et al., 2016; Dimitrov, 2024; Morgan et al., 2019). Therefore, it is reasonable to expect that there will be Māori honey products available and that they may express content related to native plants, and/or national or local honey provenances.

3.1.3 Research objectives

This research set out to determine what content Māori food and beverage businesses utilise on their product packaging. To achieve this, a content analysis approach was adopted. The objectives were to:

- 1) identify Māori-made food and beverage products commercially available in Aotearoa New Zealand
- 2) develop a coding paradigm to categorise and quantify content on product packaging
- 3) quantify and compare the relative presence of content across and within product types, and examine the most prevalent content
- 4) determine whether and to what extent provenance, te reo, and cultural expressions are deployed on packaging
- 5) contextualise the content analysis in a broader setting of Māori enterprise and the NZ context to identify opportunities for content communication for Māori future foods.

3.2 Materials and methods

3.2.1 Content analysis method

A qualitative content analysis method following Mayring's (2014) inductive approach was employed, with some steps slightly adapted for clarity (Figure 3.1). Step 1 defined the theoretical background of the research and set research objectives. Step 2 set product selection criteria, where an appropriate definition for a Māori brand was selected and used to identify and screen Māori brands and products in Step 3. Step 4 retrieved images of the product packaging that were included in analysis. Step 5 outlined how content categories would be developed, which would be used to quantify the presence of different types of content on packaging. Analysis of product packaging and parallel creation of content categories began in Step 6. This step involved cyclical refinement of content categories as new types of content necessitated new categories, and older categories were made redundant. Intercoder reliability was also established in Step 6, initially by three researchers assessing the same five products and comparing analysis. Intercoder sense-checking was applied as new categories emerged or uncertainties arose. The final aspect of Step 6 was the creation of main categories to group lower order categories for ease of discussion, e.g., 'Māori provenance' and 'non-Māori NZ provenance' were grouped in the main category 'Provenance'. In Step 7, the frequency of content across categories and products was summarised, and further analysis was carried out.

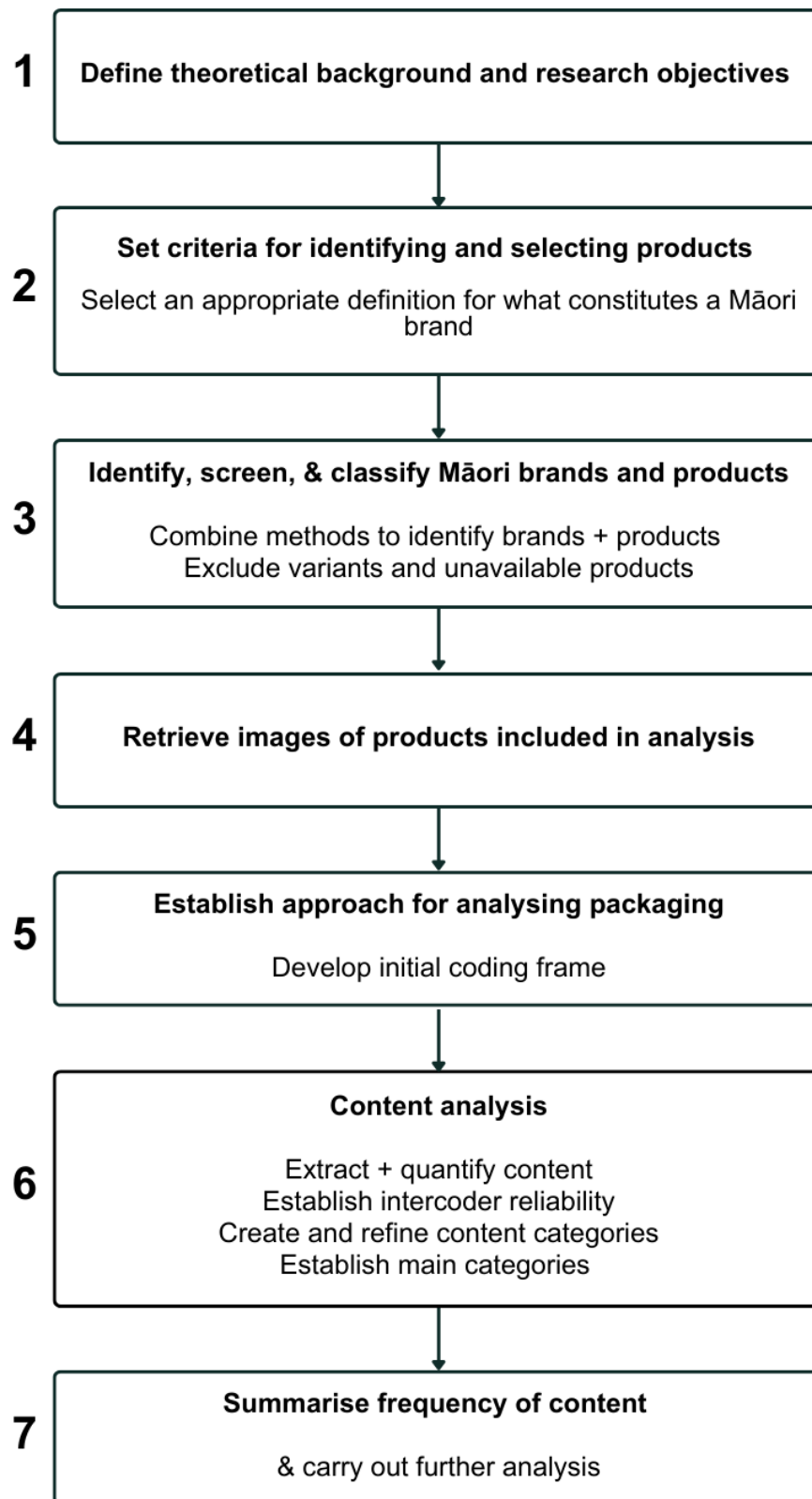


Figure 3.1: Overall approach to content analysis of the product set, modified from Mayring (2014, p. 80).

3.2.1.1 Identification, screening, and inclusion of Māori brands and products

Step 2 of the overall content analysis method involved setting criteria for identifying and selecting products. This first required defining what constituted a Māori brand. Māori business has been defined in various ways. Te Puni Kōkiri, the NZ government's principal policy advisor on Māori wellbeing and development, has defined a Māori business as one that is at least 50% owned by Māori (Te Puni Kōkiri, 2022). A Māori business has also been defined where "a Māori person (or people), operating within a Māori world view, generates value by identifying and exploiting new products, processes or markets for economic, social and cultural purposes of benefit to themselves, their whānau, hapū, iwi and wider community" (Awatere et al., 2017). Self-identification is an up-to-date measure used by the NZ government to identify Māori businesses (Stats NZ, 2018). The first definition described here was not practical for this study due to the inability to systematically determine ownership structures of a brand. Further, it has been noted that binary definitions between Māori and non-Māori in a business context must be used cautiously, as Māori enterprise is carried out within and across cultural and market dimensions (Mika et al., 2022). Therefore, including brands that self-identified as Māori was considered a valid approach for the purposes of this study. Some food and beverage brands owned or controlled by Māori may not explicitly identify as Māori and were therefore inadvertently excluded from this study. However, focusing on brands that explicitly identify as Māori aligns with commonly accepted definitions appropriately narrows the scope of the research.

Step 3 of the content analysis then involved identifying Māori brands and screening and classifying their products. A combination of methods was used to identify Māori brands and products. It was assumed that many Māori F&B offerings would not be widely available in commercial databases or large supermarkets, with a significant portion retailing independently, because in 2022, 61% of 4,200 self-identified Māori businesses were small to medium-sized enterprises (fewer than 100 employees) (Stats NZ, 2023), informal search approaches were therefore employed and included researchers' prior knowledge of Māori brands, in-store searches, online searches using operative syntax in both in English and te reo (Table 3.1), and websites profiling Māori businesses, such as Kāuta and TUKU Māori Winemaker's Collective.

Table 3.1: Operative phrases used in online search for brands and products

Search syntax	Search phrases and terms used with syntax
AND, OR	Māori, food, kai, buy, rongoā, business, pākihi, kaupapa
" "	"Māori food"
	"kai Māori"
	"Māori food business"

Māori brands were verified through their website information; if a brand's website indicated Māori affiliation, such as references to whakapapa or Iwi or hapū connections, the brand and its products were included for the next phase of screening. In this stage, product variants were excluded, as well as products or images of products that could not be obtained. A 'variant' was a product from the same brand that differed in flavour or another minor characteristic, with packaging largely identical to another product from the same brand, illustrated in Figure 3.2. The variant chosen for analysis was the one first sighted.



Figure 3.2: Example of products deemed variants.

Classification of product types followed categories set out by the 2011-2013 Australia New Zealand Food Standards Health Classification System (FSANZ, 2023). Products were classified at the major (e.g., dairy milk product) and sub-major (e.g., yoghurt) group level. In this study, 'Other' products amalgamated the Confectionary, Bread & Bakery, Dairy, Edible Oils, Foods Intended for Particular Dietary Use, Mayonnaise & Salad Dressings, Pre-prepared Meals, and Sauces product types for clarity of presentation. Products were also categorised based on whether they declared themselves as vegan, vegetarian, or plant-based to understand how common these declarations were and to inform the discussion on Māori future foods in the thesis. Both food and beverage products, including alcoholic beverages, were included in the analysis, while dietary supplements were excluded as they were deemed out of scope of "food and beverage" products.

Step 4 of the content analysis was to collate images of the included products, which were sourced from online retailers or taken after purchase.

3.2.1.2 Development and use of a coding frame for content analysis

Step 5 of the content analysis method established an approach for systematically analysing products. A coding frame was developed to categorise content present on packaging (Table 3.2). The coding frame was initiated deductively, where some categories were created before analysing packaging, based on findings from previous studies of F&B packaging (Bowen & Miller, 2022; Chen et al., 2022). Other pre-conceived categories like "nutrition claim" and "intellectual property" (IP) were created based on researcher prior knowledge (Schreier, 2012). Inductively created categories were made the first time a form of content appeared, with later content being subsumed into these categories. The coding frame was then iterated as new categories were identified during packaging analysis. Once no new categories appeared, the categorisation logic was reviewed (Mayring, 2014). Consensus among three researchers was reached for categorisation, as advised by Drisko and Maschi (2016) and Mayring (2014), validating the approach. In total, 10 main content categories were created and used to organise packaging information, which were finalised after all products were analysed

Table 3.2: Final categorisation frame for content categorisation

Category	Content unit code	Definition of code	Example
1 Provenance	1.1 Provenance Māori	Reference to or depiction of a place through connections to Māori	‘Made in Aotearoa’ NZ map with Māori art motifs
	1.2 Provenance Non-Māori New Zealand	Reference to or depiction of a place without reference to Māori	‘Made in New Zealand’
	1.3 Provenance Non-NZ	Reference to or depiction of a place that is not New Zealand	‘Cultivated in Samoa’ Image of a Samoan flag
	1.4 Ingredient provenance	Description or depiction of how a specific ingredient relates to a place	‘Marlborough grapes’
2 Language and culture	2.1 Language te reo Māori	Use of te reo Māori words or terms	‘Kia ora!’
	2.2 Language other non-English	Use of non-Māori non-English words or terms	Scientific Latin name for a species
	2.3 Language slang	Use of well-known slang terms or phrases	‘Chur’
	2.4 Māori TCE	Reference to or representation of Māori TCEs, including concepts, practices, or values	‘Queens of Manaakitanga’ Image of woven basket
	2.5 Non-Māori Polynesian TCE	Reference to or representation of non-Māori Polynesian TCEs, including concepts, practices, or values	Image of Samoan weaponry
3 Production	3.1 Friends, family, community	Description or depiction of how friends, family, or community are involved in the production process	‘Made by the aunties’
	3.2 Māori owned	Description or depiction of Māori ownership and/or production of the brand	‘We are a Māori business’ Photo of the brand founder
	3.3 Environmental	Statement or depiction of how the environment is considered in the production process	‘This jar is carbon neutral’

Table 3.2 continued...

Category	Content unit code	Definition of code	Example
			Image of a healthy forest
	3.4 Nature/style	Description or depiction of the nature or style of production	‘Organic’ ‘Handmade’
	3.5 Science/clinical	Statement or depiction of how the product has been developed or accredited in a scientific manner	‘Lab tested’ Graphic laboratory certification
	3.6 Animal Welfare	Description or depiction of how the product is made with regard to animal welfare	‘We care for our bees’ Image of a happy bee
	3.7 Food Safety	Description or depiction of how the product is made in relation to food safety standards	‘HACCP certified’
	3.8 International	Description or depiction of international production	‘International teas sourced from sustainable farms’
	3.9 Ethical	Statement or depiction of how the product is ethical	‘Ethically made’
	3.10 Traditional	Description or depiction of how the product or ingredients are traditional or have been produced in a traditional manner or relate to traditional use	‘Prepared for you in the spirit of our traditions’
	3.11 Intergenerational	Statement about how the product is made with past or future generations in mind	‘Made with future generations in mind’
4 Ingredient	4.1 Native species	Mention or depiction of native species	‘30% Kawakawa extract’ Image of kawakawa leaf
	4.2 Non-native species	Mention or depiction of non-native species	‘Pine bark extract’ Image of pine tree
	4.3 Māori Traditional use	Description or depiction of how a product ingredient relates to traditional Māori use	‘The Mānuka tree has a long history of use as rongoā’

Table 3.2 continued...

Category	Content unit code	Definition of code	Example
	4.4 Nature/style	Description or depiction of ingredient nature or style	‘100% natural’ Organic hemp certification
	4.5 Other specified ingredient	Description or depiction of other specified ingredients, including additives or nutrients	‘With probiotics’ UMF sticker
	4.6 Declaration of ingredient	Declaration of the presence or absence of specific ingredients (outside of the ingredient list)	‘Caffeine free’
5 Wellbeing	5.1 Environmental	Description or depiction of environmental health benefits created or its importance in general	‘Manaaki whenua, manaaki tangata, haere whakamua, if we take care of earth and people, we take care of the future’
	5.2 Social/cultural	Description or depiction of how the product enhances social wellbeing in the consumer, or how the brand enhances social connections for its stakeholders	‘You become part of Tukutuku [brand] when you gather with your family’
	5.3 Physiological	Description or depiction of physiological health benefits obtained by using the product	‘Supports immunity’
	5.4 Psychological	Description or depiction of psychological benefits obtained by using the product	‘Enhances mental wellbeing’
	5.5 Spiritual	Description or depiction of spiritual benefits obtained by using the product	‘Allows your creativity to inspire and empower you’
	5.6 General	Description or depiction of non-specific wellbeing benefits obtained by using the product	‘Better for you’
6 Nature	6.1 Connection to nature	Describes how the product connects the consumer to nature, or elicits a connection	‘Get in touch with nature’
	6.2 Element of nature	Description of an element of nature	‘Universe gave us hailstorms, we made cider’
7 Certification and award	7.1 Third party certification	Description or depiction of a certification given to the product or brand	‘B-CORP certified’ Rainforest alliance logo certification

Table 3.2 continued...

Category	Content unit code	Definition of code	Example
	7.2 Third party award	Description or depiction of award given to the product or brand	'Award winning marmalade' NZ Artisan Awards logo
	7.3 Certification imitation	A graphic that imitates the appearance of a third-party certification, without being a legitimate certification	Ethically sourced in a circle shape
	8.1 Nutrition Claim	Nutrient reference values (standard definition taken from food standards or wherever)	'30% protein'
	8.2 Front of pack profiling	The standardised icons on the front of pack briefly showing nutrition information	'Energy: 390kj', '5% of NRVs'
	8.3 Nutrient function claim	A description or declaration of the role of a nutrient in health or function	'Vitamin C is good for immunity'
8 Nutrition & sensory	8.4 Nutrition Description	A statement referring to the nutrition of the food	'Functional food', 'superfood'
	8.5 Sensory Description	Description of taste, smell, texture, colour, mouthfeel, sensation, or their combination	'Refreshing taste'
9 Intellectual property	9.1 Registered IP	Use of registered trademarks	®
	9.2 Unregistered IP	Use of unregistered trademarks	TM ©
10 Other	10.1 Charity	Description or depiction of charitable cause or association affiliated to the brand or product	'We donate 5% of profits to Forest Friends'
	10.2 Convenience	Description or depiction of how the product is easy or quick to use	'Ready to heat and eat'
	10.3 Athletic performance	Description or depiction of how the product or ingredients support athletic performance	'Good for muscle repair'

In Step 6 of the approach, content analysis began proper. Content was extracted from packaging and quantified against the coding frame. The units of analysis were either textual (words, phrases, sentences) or graphical (images, symbols, certifications). The presence of these content units was quantified for each product, with an example analysis depicted in Figure 3.3. 'Presence' indicated that a content unit appeared at least once on the packaging. Some units were classified under multiple categories; for example, "Made in Aotearoa" was categorised as both 'te reo' and 'Māori provenance'. Some overlap between content relating to te reo, Māori provenance, culture, and native species was expected, because te reo can express multiple forms of content simultaneously.

The categorisation of content units followed a largely thematic approach based on meaning, as per Rustemeyer (1992, as cited in Schreier, 2014). For instance, a map of New Zealand next to a provenance message was interpreted as a graphic provenance message and categorised as Māori or non-Māori depending on the text. What constituted a 'cultural expression' was defined in terms of it being a Māori traditional cultural expression (TCE), such as a reference to a specific concept, e.g. 'Papatūānuku'. While any te reo word could be considered cultural content, the TCE frame helped to narrow what was understood as cultural content for the purposes of this study.

While thematic segmentation focused on meaning, formal segmentation was applied to factual content like nutrition claims and intellectual property (IP). Only printed trademark symbols were recorded as IP, excluding product design distinctions as per New Zealand government definitions of IP (Intellectual Property Office of New Zealand, 2024). Content including mandatory nutrition information and reference to digital platforms (websites, social media) were excluded.



Figure 3.3: Example of content unit segmentation of a product included in analysis.

3.2.1.3 Summary of content frequency and further analysis

In Step 8, the frequency of content was summarised against the coding frame in an Excel spreadsheet. Content unit frequency was quantified and converted to percentages to show frequency across products, with results presented in Table 3.2. Frequency was also determined for different product types. The product set was summarised by number of products, types, subtypes, and variants. Two additional analyses focused on the most common content types - provenance, te reo, and Māori TCE - examining their co-occurrence with other content and exploring their composition in more detail.

3.3 Results

3.3.1 Product set summary

A total of 362 eligible products from 44 Māori brands and from 37 entities were identified and screened. Brands already known to researchers enabled identification of 109 products, a further 95 were identified from websites that profile or list Māori businesses, and 158 through online searches and viewing products in store. Of the initial 362 products, 274 were excluded due to being a variant, and 29 products and 2 brands were excluded because they were no longer available for purchase. This left 59 of the 362 screened products and 42 of the 44 brands included for analysis. The final product set consisted of 12 fruit and vegetable products, 11 non-alcoholic beverages, 12 alcoholic beverages (7 wines, 3 beers, 1 cider, and 1 spirit), 9 honeys, 3 fish products, 3 confectionary products, 2 edible oil, 2 pre-prepared meals, and 1

each of a bread, dairy product, a food intended for particular dietary use, a salad dressing, and a sauce. Of the 42 brands included in analysis, 36 had a brand name that included te reo.

Table 3.3: Brands, product types, and subtypes included in analysis

Product Code	Product type	Brand	Product subtype	# of variants
1	Alcohol	Hop Federation	Beer	11
2	Alcohol	Kono	Wine	4
3	Alcohol	Kono	Cider	0
4	Alcohol	Lone Bee	Beer	0
5	Alcohol	Manu Wines	Wine	6
6	Alcohol	Mata Brewery	Beer	13
7	Alcohol	Montford Estate	Wine	8
8	Alcohol	Pā Road	Wine	6
9	Alcohol	Tahu	Spirit	0
10	Alcohol	te Pā	Wine	13
11	Alcohol	Tiki Koro	Wine	16
12	Alcohol	Tohu	Wine	13
13	Bread & bakery	Titahi	Breads	0
14	Confectionary	Kōkō	Chocolate & cocoa products	3
15	Confectionary	Samāori	Chocolate & cocoa products	0
16	Confectionary	Samāori	Chocolate & cocoa products	0
17	Dairy	BioFarm	Yoghurt	5
18	Edible oils & emulsions	Kawakawa Spa	Edible oils	2
19	Edible oils & emulsions	Waikōkopu	Edible oils	0
20	Fish & fish products	Aoraki	Semi-preserved fish & fish fillets	8
21	Fish & fish products	Aoraki	Dip	0
22	Fish & fish products	Chatham Island Food co	Processed fish & fish fillets	6
23	Foods intended for particular dietary use	Top Hemp	N/A	0
24	Fruits & vegetables	Stef the Māori	Herbs & spices	3
25	Fruits & vegetables	Charles Royal Māori Food (Kinaki Herbs)	Herbs & spices	2
26	Fruits & vegetables	Annies	Dried fruit	9
27	Fruits & vegetables	Ārepa	Dried fruit	0
28	Fruits & vegetables	Kaitaia Fire	Herbs & spices	4
29	Fruits & vegetables	Kanapū	Nuts & seeds	0
30	Fruits & vegetables	Kawakawa Spa	Herbs & spices	1
31	Fruits & vegetables	Manaaki	Jams & spreads	8
32	Fruits & vegetables	Tītahi	Nuts & seeds	4
33	Fruits & vegetables	Tītahi	Jams & spreads	0
34	Fruits & vegetables	Top Hemp	Nuts & seeds	0
35	Fruits & vegetables	Top Hemp	Jams & spreads	4
36	Mayonnaise & salad dressings	Kai Ora	Mayonnaise & salad dressings	3
37	Non-alcoholic beverage	Ārepa	Fruit & vegetable juice drink	0
38	Non-alcoholic beverage	Aroha Ra	Tea	5
39	Non-alcoholic beverage	Atutahi	Soft drinks	6
40	Non-alcoholic beverage	Kaputi Studio	Tea	8
41	Non-alcoholic beverage	Oku	Tea	9

...Table 3.3 continued

Product Code	Product type	Brand	Product subtype	# of variants
42	Non-alcoholic beverage	Samāori	Tea	0
43	Non-alcoholic beverage	Samāori	Coffee	0
44	Non-alcoholic beverage	Soul Sister	Herbal infusions	3
45	Non-alcoholic beverage	Ti Ani	Herbal infusions	22
46	Non-alcoholic beverage	Wai Mānuka	Soft drinks	0
47	Non-alcoholic beverage	Waikirikau Fermented Tii	Herbal infusions	6
48	Pre-prepared meals	Moana	N/A	6
49	Pre-prepared meals	Moana	N/A	6
50	Sauces	Kaitaia Fire	Sauces	2
51	Sugar, honey & related	Aotea	Honey	3
52	Sugar, honey & related	Awhi	Honey	0
53	Sugar, honey & related	Kai Ora	Honey	5
54	Sugar, honey & related	Kai Ora	Honey	0
55	Sugar, honey & related	Mana Kai	Honey	6
56	Sugar, honey & related	Manawa	Honey	10
57	Sugar, honey & related	Onuku Mānuka Honey	Honey	12
58	Sugar, honey & related	Tai Tokerau Honey	Honey	16
59	Sugar, honey & related	Tarahina	Honey	5

3.3.2 Presence of content across the product set

The presence of content on products was expressed as a frequency count and percentage across 10 content categories (Table 3.4). The format of content – text and/or graphic - was also quantified. The most frequent content units, which were present on more than half of products, related to te reo, followed by non-Māori NZ provenance, Māori provenance, Māori TCE, native species, and sensory descriptions. As expected, there was some overlap between textual content relating to te reo, Māori provenance, Māori TCE, and native species. Te reo was the most frequent form of content, and also encompassed many textual content units relating to Māori provenance, TCE, and native species. Content frequency across product types was determined to see if product type was influential (Table 3.5).

Table 3.4: Presence of content on n=59 products, expressed as a percentage and number of products

Content category	Content unit code	Total presence on products (text and/or graphic content)	Text content presence on products	Graphic content presence on products
1 Provenance	1.1 Provenance Māori	64% (n=38)	59% (n=35)	18% (n=11)
	1.2 Provenance Non-Māori New Zealand	76% (n=45)	76% (n=45)	8% (n=5)
	1.3 Provenance non-NZ	7% (n=4)	7% (n=4)	2% (n=1)
	1.4 Ingredient provenance	46% (n=27)	46% (n=27)	0
2 Language and culture	2.1 Language te reo Māori	86% (n=51)	86% (n=51)	N/A
	2.2 Language other non-English	7% (n=4)	7% (n=4)	N/A
	2.3 Language slang	8% (n=5)	8% (n=5)	N/A
	2.4 Māori TCE	54% (n=32)	31% (n=18)	47% (n=28)
	2.5 Non-Māori Polynesian TCE	5% (n=3)	0	5% (n=3)
3 Production	3.1 Friends, family, community	22% (n=13)	22% (n=13)	0
	3.2 Māori owned	15% (n=9)	15% (n=9)	0
	3.3 Environmental	20% (12)	17% (n=10)	10% (n=6)
	3.4 Nature/style	31% (18)	31% (n=18)	5% (n=3)
	3.5 Science/clinical	14% (8)	12% (n=7)	2% (n=1)
	3.6 Animal Welfare	5% (n=3)	5% (n=3)	0
	3.7 Food Safety	3% (n=2)	3% (n=2)	0
	3.8 International	7% (n=4)	7% (n=4)	0
	3.9 Ethical	5% (n=3)	3% (n=2)	2% (n=1)
	3.10 Traditional	5% (n=3)	5% (n=3)	0
	3.11 Intergenerational	7% (n=4)	7% (n=4)	0
4 Ingredient	4.1 Native species	54% (n=32)	53% (n=31)	27% (n=16)
	4.2 Non-native species	36% (n=21)	32% (n=19)	15% (n=9)
	4.3 Māori traditional use	14% (n=8)	14% (n=8)	0
	4.4 Nature/style	37% (n=22)	37% (n=22)	3% (n=2)
	4.5 Other specified ingredient	22% (n=13)	22% (n=13)	3% (n=2)
	4.6 Declaration of ingredient	27% (n=16)	27% (n=16)	5% (n=3)
5 Wellbeing	5.1 Environmental	17% (n=10)	17% (n=10)	0
	5.2 Social/cultural	8% (n=5)	8% (n=5)	0
	5.3 Physiological	20% (n=12)	20% (n=12)	0
	5.4 Psychological	12% (n=7)	12% (n=7)	0

...Table 3.4 continued

Content category	Content unit code	Total presence on products (text and/or graphic content)	Text content presence on products	Graphic content presence on products
6 Nature	5.5 Spiritual	8% (n=5)	8% (n=5)	0
	5.6 General	15% (n=9)	15% (n=9)	0
	6.1 Connection to nature	19% (n=11)	19% (n=11)	N/A
	6.2 Element of nature	39% (n=23)	20% (n=12)	25% (n=15)
7 Certification and award	7.1 Third party certification	36% (n=21)	15% (n=9)	36% (n=21)
	7.2 Third party award	15% (n=9)	N/A	15% (n=9)
	7.3 Certification imitation	22% (n=13)	N/A	22% (n=13)
8 Nutrition & sensory	8.1 Nutrition Claim	8% (n=5)	8% (n=5)	N/A
	8.2 Front of pack profiling	3% (n=2)	3% (n=2)	N/A
	8.3 Nutrient function claim	7% (n=4)	7% (n=4)	N/A
	8.4 Nutrition Description	5% (n=3)	5% (n=3)	N/A
	8.5 Sensory Description	51% (n=30)	51% (n=30)	N/A
9 Intellectual property	9.1 Registered IP	10% (n=6)	10% (n=6)	N/A
	9.2 Unregistered IP	7% (n=4)	7% (n=4)	N/A
10 Other	10.1 Charity	2% (n=1)	2% (n=1)	0
	10.2 Convenience	19% (n=11)	14% (n=8)	5% (n=3)
	10.3 Athletic performance	2% (n=1)	2% (n=1)	0

Table 3.5: Presence and frequency of content across product types

Content category	Product type and number plus percentage of products with content category and corresponding text and/or graphic content							
	Alcohol (n=12)	Fruits Vegetables (n=12)	& Non-alcoholic Beverage (n=11)	Sugar, Honey, & related (n=9)	Other (n=15)	Plant- based/ vegan (n=16)	Non -based/ vegan (n=43)	Plant-
1.1 Provenance Māori	75% (9)	67% (8)	72% (8)	89% (8)	33% (5)	63% (10)	60% (26)	
1.2 Provenance Non-Māori New Zealand	92% (11)	75% (9)	64% (7)	89% (8)	67% (10)	88% (14)	74% (32)	
1.3 Provenance: Non-NZ	0	8% (1)	9% (1)	0	13% (2)	19% (3)	2% (1)	
1.4 Ingredient provenance	33% (4)	58% (7)	18% (2)	89% (8)	40% (6)	40% (6)	48% (21)	
2.1 Language te reo Māori	75% (9)	92% (11)	91% (10)	100% (9)	80% (12)	81% (13)	64% (38)	
2.2 Language other non-English	0	0	18% (2)	0	13% (2)	6% (1)	7% (3)	
2.3 Language slang	8% (1)	17% (2)	18% (2)	0	0	8% (2)	7 % (3)	
2.4 Māori TCE	67% (8)	33% (4)	64% (7)	89% (8)	33% (5)	31% (5)	62% (27)	
2.5 Non-Māori Polynesian TCE	0	0	18% (2)	0	7% (1)	6% (1)	5% (2)	
3.1 Production Friends, family, community	42% (5)	17% (2)	27% (3)	11% (1)	13% (2)	31% (5)	19% (8)	
3.2 Production Māori owned	17% (2)	8% (1)	27% (3)	22% (2)	7% (1)	8% (2)	16% (7)	
3.3 Production Environmental	33% (4)	17% (2)	27% (3)	11% (1)	13% (2)	6% (1)	26% (11)	
3.4 Production Nature/style	25% (3)	33% (4)	27% (3)	33% (3)	33% (5)	25% (4)	33% (14)	
3.5 Production Science/clinical	0	17% (2)	9% (1)	44% (4)	7% (1)	8% (2)	14% (6)	
3.6 Production Animal Welfare	0	0	0	22% (2)	7% (1)	0	7% (3)	
3.7 Production Food Safety	0	8% (1)	0	11% (1)	0	0	5% (2)	
3.8 Production International	0	0	18% (2)	0	13% (2)	13% (2)	5% (2)	
3.9 Production Ethical	0	0	18% (2)	0	7% (1)	13% (2)	2% (1)	
3.10 Production Traditional	8% (1)	8% (1)	9% (1)	0	0	6% (1)	5% (2)	
3.11 Production Intergenerational	25% (3)	8% (1)	0	0	0	0	9% (4)	

...Table 3.5 continued

Content category	Product type and number plus percentage of products with content category and corresponding text and/or graphic content							
	Alcohol (n=12)	Fruits Vegetables (n=12)	& Non-alcoholic Beverage (n=11)	Sugar, Honey, & related (n=9)	Other (n=15)	Plant- based/ vegan (n=16)	Non -based/ vegan (n=43)	Plant-
4.1 Ingredient Native species	8% (1)	50% (6)	72% (8)	100% (9)	53% (8)	25% (4)	65% (28)	
4.2 Ingredient Non-native species	42% (5)	25% (3)	37% (4)	0	47% (7)	25% (4)	40% (17)	
4.3 Ingredient Māori Traditional use	0	17% (2)	46% (5)	11% (1)	0	13% (2)	14% (6)	
4.4 Ingredient Nature/style	0	25% (3)	55% (6)	44% (4)	60% (9)	38% (6)	37% (16)	
4.5 Ingredient Other specified	0	42% (5)	27% (3)	44% (4)	13% (2)	25% (4)	23% (10)	
4.6 Ingredient Declaration	25% (3)	42% (5)	27% (3)	0	33% (5)	56% (9)	16% (7)	
5.1 Wellbeing Environmental	33% (4)	8% (1)	18% (2)	22% (2)	7% (1)	6% (1)	21% (9)	
5.2 Wellbeing Social/cultural	33% (4)	0	0	0	7% (1)	13% (2)	7% (3)	
5.3 Wellbeing Physiological	0	42% (5)	46% (5)	11% (1)	7% (1)	25% (4)	19% (8)	
5.4 Wellbeing Psychological	8% (1)	17% (2)	18% (2)	11% (1)	7% (1)	25% (4)	7% (3)	
5.5 Wellbeing Spiritual	17% (2)	8% (1)	18% (2)	0	0	13% (2)	7% (3)	
5.6 Wellbeing General	0	8% (1)	27% (3)	22% (2)	20% (3)	13% (2)	16% (7)	
6.1 Connection to nature	58% (7)	8% (1)	18% (2)	11% (1)	0	6% (1)	23% (10)	
6.2 Element of nature	67% (8)	17% (2)	27% (3)	55% (5)	33% (5)	25% (4)	44% (19)	
7.1 Third party certification	58% (7)	17% (2)	9% (1)	66% (6)	30% (5)	25% (4)	40% (17)	
7.2 Third party award	17% (2)	8% (1)	9% (1)	22% (2)	20% (3)	13% (2)	16% (7)	
7.3 Certification imitation	0	33% (4)	18% (2)	33% (3)	27% (4)	38% (6)	16% (7)	
8.1 Nutrition Claim	0	25% (3)	18% (2)	0	0	3 (19%)	5% (2)	
8.2 Front of pack profiling	0	0	0	0	13% (2)	0	5% (2)	
8.3 Nutrient function claim	0	8% (1)	9% (1)	0	13% (2)	6% (1)	7% (3)	
8.4 Nutrition Description	0	17% (2)	0	0	7% (1)	6% (1)	5% (2)	
8.5 Sensory Description	67% (8)	58% (7)	46% (5)	33% (3)	47% (7)	50% (8)	51% (22)	
9.1 Registered IP	0	17% (2)	9% (1)	11% (1)	0	19% (3)	7% (3)	

...Table 3.5 continued

Content category	Product type and number plus percentage of products with content category and corresponding text and/or graphic content							
	Alcohol (n=12)	Fruits Vegetables (n=12)	& Non-alcoholic Beverage (n=11)	Sugar, Honey, & related (n=9)	Other (n=15)	Plant- based/ vegan (n=16)	Non based/ vegan (n=43)	Plant-
9.2 Unregistered IP	0	8% (1)	18% (2)	0	0	6% (1)	7% (3)	
10.1 Other Charity	8% (1)	0	0	0	0	0	2% (1)	
10.2 Other Convenience	0	25% (3)	18% (2)	11% (1)	33% (5)	25% (4)	16% (7)	
10.3 Other Athletic performance	0	8% (1)	0	0	0	0	2% (1)	

3.3.2.1 Provenance content

Both Māori and non-Māori NZ provenance content were prevalent across the product set. Overall, non-Māori NZ provenance was more frequent than Māori provenance (present on 76% of products vs 64% of products), except for graphic content units where Māori provenance graphic content was more prevalent (18% vs 8%). Ingredient-related provenance was also frequent, appearing on 46% of products. Frequency of provenance content varied across product types. Māori provenance was most prevalent on honey products (present on 89% of honey products), while non-Māori NZ provenance was most common on alcohol products (92%). Māori provenance was only more common than non-Māori NZ provenance on non-alcoholic beverage products (72%). Māori provenance was least common on 'Other' product types (33%). Fruit & Vegetable products presented Māori and non-Māori provenances at a similar frequency (67% vs 75%). Of the product types, these categories were the second most likely to display ingredient provenance content (58%) after honey (89%).

3.3.2.2 Language and culture content

Te reo was the most common form of content across the product set, appearing on 86% of products. Māori TCEs were prevalent, appearing on more than half of products, more commonly in graphic than text format (47% vs 31%). Honey products displayed Māori TCEs most often (89%), followed by alcoholic (75%) and non-alcoholic (64%) beverages. Only 33% of fruit and vegetable and Other products presented a Māori TCE.

3.3.2.3 Production-related content

Across the product set, the most frequently presented production-related content was nature/style (31%), followed by friends, family, and community (22%), and environmental (20%), Māori owned (15%), and science/clinical (14%). Of the product types, alcohol was the most likely to express friends, family, and community and environmental content. Honey products most commonly displayed science/clinical content.

3.3.2.4 Ingredient content

Content pertaining to native species was frequent, present on 54% of products, more often as text than graphic representations (53% vs 27%). Nature/style and non-native species content was also frequent but less so (37% and 36%, respectively). Māori traditional use of ingredients was not frequent (14%). All honey products and a majority (72%) of non-alcoholic beverages displayed native species content.

3.3.2.5 Wellbeing

Wellbeing content was largely infrequent across the product set. Physiological and environmental wellbeing were the most common, expressed on 20% and 17% of products, respectively.

3.3.2.6 Nature

Elements of nature were present on 39% of products, with connection to nature emphasised on 19% of products, both being most frequent on alcohol products.

3.3.2.7 Certification and award

Third party certifications were present on 36% and 15% of products in graphic and textual format respectively. The most common third-party certifications were related to environmental wellbeing; namely, FernMark (n=10), NZ Sustainable Winegrowers (n=4) and Rainforest Alliance (n=2) (not tabulated). Informal imitation certifications were present on 22% of products. Honey and alcohol products most frequently displayed third-party certifications.

3.3.2.8 Nutrition & sensory content

Few products used nutrition claims (8%), front of pack nutrition profiling (3%), nutrient function claims (7%), or nutrition descriptions (5%). Over half (51%) of the total product set described sensory attributes or experiences.

3.3.2.9 Intellectual property

Registered IP was present on 10% (n=6) of products. Unregistered IP was present on 10% (n=4) of products. No products had both forms of IP simultaneously.

3.3.2.10 Other content

Charitable affiliation and athletic performance content were infrequent, present on 1 product each.

3.3.3 Co-presence of prevalent content

Māori provenance content was present on 38 of 59 products in the set (Table 3.6). Of these, 32/38 simultaneously presented non-Māori provenance content. The relative frequency of co-presence for Māori provenance and Māori TCE was higher than for non-Māori NZ provenance (68% vs 56%). Only 6/59 total products presented Māori provenance only, and 14/59 Non-Māori NZ provenance only. Ingredient provenance content was more likely to co-occur with non-Māori provenance content (22/27) vs Māori provenance content (15/27). Māori TCE content was present on 31/59 products, and 30/31 co-occurred with te reo.

Table 3.6: Occurrence frequency of the most prevalent content with other types of content

Content category	1.1 Provenance Māori (n= 38)	1.2 Provenance Māori New Zealand (n= 45)	Non-ingredient (n=27)	1.4 Provenance ingredient (n=27)	2.1 Language te reo Māori (n=51)	2.4 Māori TCE (n=32)
1.1 Provenance Māori		71% (32)		56% (15)	69% (35)	78% (25)
1.2 Provenance Non-Māori NZ	84% (32)			81% (22)	80% (41)	78% (25)
1.3 Provenance Non-NZ	5% (2)	4% (2)		4% (1)	6% (3)	6% (2)
1.4 Provenance Ingredient	39% (15)	49% (22)			69% (35)	41% (13)
2.1 Language & culture te reo	92% (35)	91% (41)		100% 27		94% (30)
2.2 Language & culture – other non-English	8% (3)	9% (4)		4% (1)	6% (3)	3% (1)
2.3 Language & culture – slang	11% (4)	9% (4)		11% (3)	10% (5)	6% (2)
2.4 Language & culture – Māori TCE	66% 25	55% (25)		48% (13)	59% (30)	
2.5 Language & culture – non-Māori Polynesian TCE	5% (2)	2% (1)		0	4% (2)	9% (3)
3.1 Production Friends, family, community	24% 9	22% (10)		15% (4)	20% (10)	28% (9)
3.2 Production Māori owned	24% 9	16% (7)		26% (7)	18% (9)	28% (9)
3.3 Production Environmental	26% (10)	20% (9)		7% (2)	22% (11)	28% (9)
3.4 Production Nature/style	37% (14)	29% (13)		26% (7)	33% (17)	38% (12)

...Table 3.6 continued

Content category	1.1 Provenance Māori (n= 38)	1.2 Provenance Māori New Zealand (n= 45)	Non-ingredient (n=27)	1.4 Provenance (n=27)	2.1 Language te reo Māori (n=51)	2.4 Māori TCE (n=32)
3.5 Production Science/clinical	18% (7)	13% (6)		19% (5)	14% (7)	9% (3)
3.6 Production Animal welfare	5% (2)	4% (2)		7% (2)	6% (3)	6% (2)
3.7 Production Food Safety	5% (2)	4% (2)		4% (1)	4% (2)	6% (2)
3.8 Production International	5% (2)	2% (1)		0	6% (3)	9% (3)
3.9 Production Ethical	5% (2)	2% (1)		0	4% (2)	3% (1)
3.10 Production Traditional	8% (3)	7% (3)		4% (1)	6% (3)	9% (3)
3.11 Production Intergenerational	11% (4)	9% (4)		4% (1)	8% (4)	13% (4)
4.1 Ingredient Native species	50% (19)	51% (23)		63% (17)	59% (30)	56% (18)
4.2 Ingredient non-native species	34% (13)	33% (15)		30% (8)	35% (18)	31% (10)
4.3 Ingredient Māori traditional use	16% (6)	9% (4)		15% (4)	14% (7)	19% (6)
4.4 Ingredient Nature/style	26% (10)	36% (16)		22% (6)	35% (18)	28% (9)
4.5 Ingredient Other specified	22% (8)	18% (8)		42% (10)	22% (11)	19% (6)
4.6 Ingredient Declaration	24% (9)	33% (15)		33% (9)	24% (12)	19% (6)
5.1 Wellbeing Environmental	24% (9)	18% (8)		4% (1)	20% (10)	25% (8)
5.2 Wellbeing Social/cultural	13% (5)	20% (9)		0	10% (5)	13% (4)
5.3 Wellbeing Physiological	24% (9)	11% (5)		22% (6)	24% (12)	6% (2)

...Table 3.6 continued

Content category	1.1 Provenance Māori (n= 38)	1.2 Provenance Māori New Zealand (n= 45)	Non-ingredient (n=27)	1.4 Provenance (n=27)	2.1 Language te reo Māori (n=51)	2.4 Māori TCE (n=32)
5.4 Wellbeing Psychological	11% (4)	13% (6)		7% (2)	10% (5)	6% (2)
5.5 Wellbeing Spiritual	11% (4)	9% (4)		7% (2)	10% (5)	9% (3)
5.6 Wellbeing General	16% (6)	11% (5)		11% (3)	16% (8)	16% (5)
6.1 Connection to nature	24% (9)	22% (10)		15% (4)	18% (9)	28% (9)
6.2 Element of nature	49% (15)	44% (20)		56% (15)	37% (19)	41% (13)
7.1 Brand profile	29% (11)	20% (9)		19% (5)	16% (8)	19% (6)
7.2 Brand slogan	18% (7)	24% (11)		22% (6)	20% (10)	13% (4)
7.1 Third party certification	34% (13)	40% (18)		33% (9)	35% (18)	41% (13)
7.2 Third party award	21% (8)	18% (8)		15% (4)	16% (8)	19% (6)
7.3 Certification imitation	18% (7)	22% (10)		19% (5)	22% (11)	13% (4)
8.1 Nutrition Claim	8% (3)	9% (4)		4% (1)	8% (4)	9% (3)
8.2 Front of pack profiling	0	4% (2)		7% (2)	4% (2)	0
8.3 Nutrient function claim	5% (2)	9% (4)		7% (2)	8% (4)	3% (1)
8.4 Nutrition Description	5% (2)	7% (3)		4% (1)	6% (3)	3% (1)
8.5 Sensory Description	47% (18)	60% (27)		30% (8)	53% (27)	56% (18)
9.1 Registered IP	8% (3)	9% (4)		7% (2)	8% (4)	6% (2)
9.2 Unregistered IP	5% (2)	7% (3)		4% (1)	6% (3)	0
10.1 Other Charity	3% (1)	2% (1)		4% (1)	2% (1)	3% (1)

...Table 3.6 continued

Content category	1.1 Provenance Māori (n= 38)	1.2 Provenance Māori New Zealand (n= 45)	Non-	1.4 Provenance ingredient (n=27)	2.1 Language te reo Māori (n=51)	2.4 Māori TCE (n=32)
10.2 Other Convenience	5% (2)	16% (7)		22% (6)	18% (9)	6% (2)
10.3 Other Athletic performance	3% (1)	2% (1)		0	2% (1)	3% (1)

3.3.4 Composition of provenance content

Additional analysis of the presentation of Māori provenance content units found them to be comprised of textual reference to national and regional/local place names, reference to Māoritanga, and graphic representations (Table 3.7). Textual Māori provenance content was present on 35 products, and 18/35 (51%) referred to 'Aotearoa', either standalone or in combination with reference to 'New Zealand'. Regional and local place names, and references to Māoritanga, were relatively infrequent. Aotearoa was connected to notions of nativity and indigeneity, to being Māori, and attached to statements about New Zealand.

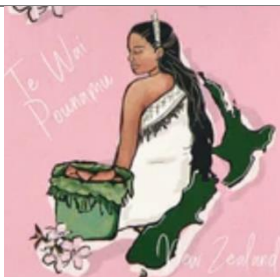
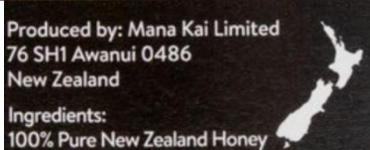
Analysis of the presentation of non-Māori NZ provenance determined that it was made up of national and regional place names and descriptions. Compared with Māori NZ provenance, non-Māori NZ provenance was more frequent across national place names (n=36, 61%) and ingredient provenance (n=14, 25%) categories, but was less common for regional provenance (n=11, 20%).

Graphic Māori provenance was more frequent than graphic non-Māori provenance and was conveyed more diversely. Non-Māori NZ provenance was largely communicated with topographical maps, while Māori provenance used of a variety of TCEs and other cultural expressions such as the Tino Rangatiratanga flag.

Table 3.7: Frequency and examples of provenance content

Content category 1 - Provenance			
1.1 Māori provenance	Percent (%) and number of all products with this content (n = 59)	Percent (%) and number of products that had a Māori provenance message with this content (n = 35)	Examples of content units* (with product code in brackets)
Text reference to 'Aotearoa'	31% (n=18)	51% (n=18)	'Made in/Product of/Country of origin Aotearoa New Zealand' (9, 27, 37, 57, 29, 39,21)
			'Aotearoa' (4, 6, 8, 14, 19, 27, 28, 29, 42, 44, 52)
			'Māori Food, harvested from a forest in Aotearoa New Zealand' (25)
			'Native to Aotearoa' (24)
			'A taste of Aotearoa' (47)
			'We are Māori, indigenous people of Aotearoa New Zealand' (2)
Text of regional & local Māori place names and places	22% (n=13)	37% (n=13)	'For over 800 years, my family has journeyed along Pā road in the heart of Marlborough' (4)
			Kuku, Horowhenua (19)
			'Handmade at Omaka marae' (31)
			'Pulled from our hives on Aotea' (51)
Text reference to doing or being Māori	12% (n=7)	20% (n=7)	Display of pepeha (47)
			Reference to product or producer being connected to marae, hapū, iwi (11,31,47,51)

...Table 3.7 continued

Graphic Māori provenance	19% (n=11)	26% (n=9)	 Content description: illustration of a Māori woman wearing traditional attire, seated next to a woven food basket and superimposed on a topographic representation of Aotearoa NZ (14)
1.2 Non-Māori New Zealand provenance	Percent (%) and number of all products with this content (n = 59)	Percent (%) and number of products that had non-Māori NZ provenance content with this content unit (n = 46)	Examples of content units (with product code)
Text reference to 'New Zealand'	61% (n=36)	78% (n=36)	'Made in/Product of New Zealand' (9,13,26,34,31,32,33,35,49,50) 'Wine of New Zealand/New Zealand Wine (2,4,7,8,10,11) 'From wide open spaces in New Zealand' (1)
Text reference to regions of New Zealand	11 (19%)	11 (26%)	Grown in New Zealand's richest agricultural region (34) Hop country, Nelson, New Zealand (1) Marlborough Chardonnay (7,10)
Graphic non-Māori NZ provenance	5 (8%)	5 (12%)	 Content description: Topographic map of Aotearoa NZ next to text referencing New Zealand (55)
1.3 Non-NZ provenance	Percent (%) and number of all products with this content (n=59)	Percent (%) and number of products that had non-NZ provenance content with this content unit	Examples of content units (with product code)

...Table 3.7 continued

(n=5)			
Text provenance non-NZ	8% (5)	100% (5)	Cultivated in Samoa (42)
Graphic provenance non-NZ	2% (1)	100% (1)	 Content description: Illustration of crossed flags of Samoa national flag and the Tino Rangatiratanga flag, which is often used as an unofficial national flag for Māori (42)
1.4 Ingredient provenance			
Text Māori ingredient provenance	6 (10%)	17% (6)	'Aotearoa hemp hearts' (34)
			'He taonga no Aotearoa' (46)
			'Honeys of Te Urewera' (56)
			'Māori pepper' (25)
			'Produced from the nectar of Mānuka and rewarewa among other trees native to Aotearoa New Zealand' (57)
			'Unique Aotearoa ingredients' (14)
Text ingredient non-Māori NZ provenance	14 (24%)	14 (33%)	100% NZ Honey... each jar is traceable to a specific location (55)
			NZ's own native plants (47)
			NZ pine bark (27, 37)

* Product codes can be found in table 3.3

3.3.5 Composition of language and traditional cultural expression content

Of the 51 products that presented te reo, 34 used Māori place names, 21 referred to cultural concepts through words or phrases, and 29 named native plants using their Māori names (Table 3.8). TCEs included references to identity, commonly used phrases, actions and states of being, descriptions of atua, concepts of place and environment, objects and things, and whakataukī (proverb). Graphical depictions of Māori TCE were present on 28 (47%) of all products and included various motifs. Other examples of content units that appeared in multiple products were the overlaying of a New Zealand topographical map and other representations of place with TCE motifs.

Table 3.8: Frequency and examples of language and culture content

Content category 2 - Language & culture			
2.1 Language te reo Māori	Percent (%) and number of all products with this content (n=59)	Percent (%) and number of products that had te reo Māori content with this content unit (total = 51)	Examples of content units (with product code)
Māori place names	58% (34)	67% (34)	'Te Ika a Maui' (14) 'Tai Tokerau' (58) 'Kaitaia (30)
Text of Māori cultural references	36% (21)	41% (21)	'As beekeepers we respect Papatūānuku' (55) 'Karakia' listed in the product ingredient list (47) 'Manaaki whenua manaaki tangata haere whakamua, if we take care of earth, we take care of people and the future' (8) 'Ngā taonga a Papatūānuku' (47) 'Queens of Manaakitanga' (31) 'We harvest our rongoā rākau upholding Māori tikanga' (38)
Text of native species names in te reo Māori	50% (29)	57% (29)	'Pōhutukawa smoked salmon' (20)
2.4 Māori TCE	Percent (%) and number of all products with this content (n=59)	Examples of content units (with product code)	
Text Māori TCE	18 (31%)	'A love for land and respect for sea, our wine has been prepared for you in the spirit of our traditions' (2) 'Ngā taonga a Papatūānuku from our mama earth' (47) 'Tūhoe the Ancient guardian of our forest' (56)	

...Table 3.8 continued

Graphic Māori TCE 47% (28)



Content description: illustration of a green face stylised as in Māori whakairo (carving) (50)

3.4 Discussion

This study aimed to identify the types of content featured on Māori F&B packaging. The analysed products deployed a diversity of elements, and revealed that te reo, provenance, TCEs, and native species were frequently expressed. These types of content constitute elements of place branding, confirming that Māori food enterprise utilises place elements. Māori place branding may serve multiple functions and has implications for the development of Māori future foods.

3.4.1 Use of place elements

Place branding leverages unique elements to express a unique enterprise identity. Place elements were varied, appearing in the forms of language, cultural expressions, provenances sovereignty, and native plants.

3.4.1.1 Language and culture as place

This research confirmed that Māori food branding commonly employs language and TCEs, as demonstrated in broader studies of Māori branding (Harmsworth, 2009). Their use in a food product context may be motivated by various factors; as highlighted in section 3.1.2, language and culture can convey authenticity and identity, which can be empowering for the enterprise, Indigenous communities, and perceived as valuable by consumers. Language also delimits place via geographic and political domain and involves processes of history, power, and exchange (Järlehed et al., 2023). Regional place names are also a fairly straightforward provenance method when compared with communicating the connections between food and producer or techniques (Rout & Reid, 2019b). Indeed, many instances of te reo involved the use of Māori place names. This is a particularly potent element of place branding because place names provide a foundation upon which histories, memories, and relationships are remembered (Belshaw, 2005). Contested relationships to land are the foundations of Indigenous life, struggles, and aspirations (Goeman, 2008). The remembering of Māori place names is part of a decolonising whole, where trampled histories are recalled and tangata whenua (people of the land, Māori Indigeneity) is reasserted (Belshaw, 2005). Reference to places through Indigenous language and history enforces place boundaries (Matwick & Matwick, 2019) and can be a vessel for articulating ideology and political goals (Yeh, 2013). For Māori, this might serve as a method for nation (re)building, or at the least, assertion of belonging to a place. The scope of origin labelling continues to expand (Newman et al., 2014), and asserting Indigenous claims to place via Indigenous language on food products further widens the prospectives of origin labelling. Additionally, the use of origin labelling in this way points to the emancipatory functions of origin labelling which can utilise appropriate notions of place with the possibility to confront the basis of settler places, a finding that contributes to

important gaps in origin branding literature as identified by Andéhn and L'espoir Decosta (2018).

3.4.1.2 Simultaneous use of Māori and non-Māori provenances

Over half the products analysed displayed both Māori and non-Māori provenance simultaneously on their packaging. By using both provenances in tandem, the meaning of Māori provenance may be improved in the consumer's mind, which has been stated previously (Lees & Saunders, 2015). The use of Indigenous language in a commercial setting often does occur simultaneously with the dominant non-Indigenous language, which improves the mobility of the Indigenous language while providing authenticity to the product (Pietikäinen & Kelly-Holmes, 2011). While 'Aotearoa' has been present in the national lexicon for some time, its use may not yet be sufficiently ubiquitous for food producers to feel confident in using it in isolation to define the origin of their product. This is also likely true for export countries and may reduce confidence in using Māori place names. In the same vein, using both provenances may be more palatable to a consumer, although more research is needed to determine how consumers perceive Māori or non-Māori provenance when used for food.

The relatively more prevalent use of non-Māori NZ provenance than Māori provenance may be explained by New Zealand being an established national brand with a history of use and success in the global market (Morgan et al., 2002), by the strong definition and reputation of Aotearoa NZ farming culture (Rout & Reid, 2019b) as well as English being the dominant language. 'Brand Zealand' has received significant investment over a period of roughly 150 years and has cycled through various iterations (Barnes & Higgins, 2022; Morgan et al., 2002). Comparatively, brand Māori and brand Aotearoa have not received similar investment in support of a standalone Māori provenance. In addition, the institution of Māori as a national and global brand is probably more fraught than branding a settler state of New Zealand, due to the heterogeneity of Māori, the tensions in appropriating Indigenous TCEs for commercial use in food (Bil et al., 2016), and ongoing marginalisation and colonisation of Māori by New Zealand society (Durie et al., 2018). Māori branding tends to emerge more often from application of Indigenous values and approaches to enterprise (Harmsworth & Tahi, 2008), and less as concerted efforts to substantiate particular industries or settler nationhood. Māori branding also faces challenges in the control of TCEs and cultural IP, as well as tensions in commodifying culture (Harmsworth & Tahi, 2008). While the government acknowledges a need to address IP issues surrounding Māori knowledge and rights to taonga, including plants and other foods (Ministry for Primary Industries, 2023b), there is yet no unified approach across government to these problems (Mead et al., 2022). Altogether, Māori provenance requires careful development and targeted investment.

The traceability of provenance statements is important for legitimation to consumers (Rout & Reid, 2019b). Of relevance, the FernMark certification was in use by about a fifth of products. FernMark is managed by the New Zealand Story Group, which is a government initiative and the current iteration of the NZ nation brand (Dalziel, Saunders, & Saunders, 2018). FernMark is a national trademark that acts as verification for brands to claim their products are 'born of New Zealand', and that 'protects New Zealand at a global scale' (New Zealand Story, 2024b). Similar geographic indication systems for use by Māori food brands have been explored but have not yet eventuated in a substantive scheme (Tuffery-Huria & Gibson, 2020), though the idea of a 'Māori mark' was suggested in 1936 by Sir Apirana Ngata and there is currently an indication for Māori art products, provided for by the Toi Iho Charitable Trust (Toi Iho Charitable Trust, 2024). However, New Zealand Story has supported a "world-first verification process" in the HUI Māori Collective, which is a suite of Māori brands sold via Chinese e-commerce and then shipped directly to China via the national post services of both countries, thereby enabling more trustworthy purchasing of Māori and Aotearoa NZ food and beverage products (Holden, 2018). The initiative began in 2018, and is still happening, but no data or further information about its performance are yet available. Such a system may also function well domestically, or in other markets, and remains to be explored.

3.4.1.3 Expression of sovereignty as provenance

There were few direct assertions of Māori as having sovereignty or being Indigenous peoples of Aotearoa. Māori enterprise and Māori people do not have a homogenous goal for self-determination, though such aspirations are not uncommon, as reported in Chapter 2. Content about self-determination, sovereignty, and being Indigenous could have been more common given the importance of place to Māori and potentials for Māori branding (Reid & Rout, 2016; Rout & Whitehead, 2024). The demands made by Māori for recognition of their rights as Indigenous people have often been interpreted by the settler Pākehā culture as disruptive of their belonging to the nation (Morris, 2010). In the past, the distinct lack of a widespread Māori cuisine or restaurant culture has been explained by the 'social unpalatability' of Māori as a people, which extends to Māori food (Morris, 2010). However, the gastronomic landscape may have shifted in recent years alongside increasing mainstreaming of Māori language, culture, and cuisine, evidenced by the nationally and globally acclaimed high-end Māori restaurant, Hiakai, by Monique Fiso (Diver, 2022) (since closed, despite popularity).

There is an increasing drive in Aotearoa NZ to develop a more place-specific national food identity (Diver, 2022; Ministry for Primary Industries, 2023a), but this needs to be achieved in a manner that protects Māori interests and rights if it is to be both effective and just. Altogether, there is appetite for Māori food propositions, and as Māori politics and economies unfold and evolve in an increasingly volatile political climate (Pitama et al., 2022) perhaps Māori food

producers will become less conservative with their propositions and a content analysis of Māori offerings may look very different in 10 - 20 years' time.

To the author's knowledge, food packaging has not been studied as a site of cultural reification or place branding for Māori. There are however many documented efforts by Māori and other Indigenous peoples to achieve food sovereignty, which seeks to shift power relations (Hutchings et al., 2012), decolonise and decommodify food (Grey & Patel, 2015), resist neoliberalism (Alkon & Mares, 2012), and embed values such as equity, self-determination, and stewardship in food systems (Vivero Pol, 2015). To what extent packaged food entrepreneurship contributes to food sovereignty is generally not a focal point of discussion in food sovereignty movements (Iles & De Wit, 2018). However, sovereignty can occur at different scales at different points in a food system, and so Māori entrepreneurship in packaged foods may represent one nodule in contemporary food sovereignty.

3.4.1.4 Prevalent depiction and use of native plants

Native plants were also frequently depicted and used in the product set. Native plants are understood here as place elements because they derive from ecosystems at a particular place and are named and described by Māori through place-specific narratives associated with certain responsibilities and practices (Erueti et al., 2023). There has been a marked growth in consumer interest in consumption of native plants, on a background of increasing demand for novel functional ingredients (Gruenwald, 2009) and consumer interest in local food and food sovereignty (Miranda et al., 2024; Shelef et al., 2017). The native plants of Aotearoa are also perceived as being connected to health, naturalness, and sustainability by domestic consumers (Torrico et al., 2023). Therefore, their use by Māori enterprise may constitute value-capture at the consumer end.

Native plant depiction and use could also serve symbolic functions. Depicting and using native plants may serve as a method of relating to them, or making a claim to their use, in a context where Māori kaitiaki interests and rights to native plants are often alienated by intellectual property regimes (Geismar, 2013). In the politically charged terrains of colonised countries like Aotearoa, depictions of native plants can act as a forum for expressing national boundaries and ethnic identities (Craw, 2008). Indigenous people often find themselves in a strange suspension between cultural identity and economic property (Geismar, 2013), and the frequent depiction and use of native plants might reflect the assertion of a broadly held cultural license by Māori to use them. This would align with what participants said in the previous chapter, where they described kinship responsibilities to native plants, which could be enacted in their representation and use in the products studied here.

3.4.2 Low prevalence of intellectual property protections

Of note was uncommon use of registered and unregistered trademarks on packaging, despite the prevalent use of TCEs. IP protection, while occasionally dismissed as only a commodification tool, does offer Indigenous people some capacity to protect culture from unwanted use, as well as assert rights to it (Taubman, 2012). At the same time, the IP regime and the New Zealand government's overall approach to enabling protection of Māori culture and knowledge has been thoroughly described as inadequate in and beyond the Wai 262 claim (Ahu et al., 2017; Houghton, 2021; Wai262, 2024; Waitangi Tribunal, 2011). The IP concept of individual ownership is arguably inconsistent with the longstanding Māori approach of communally held traditional knowledge that endures intergenerationally, and is maintained without the need for commercial use (Sterling, Riddle, Tūrongo Brooks, et al., 2021; Tuffery-Huria & Gibson, 2020). In a practical sense, the cost of some forms of IP protection may also be prohibitive for many small and medium sized Māori businesses (Rosanowski, 2015).

Geographic Indications (GIs) are a form of collective IP and a type of place branding that signify a specific origin and qualities or reputation specific to that origin, and recognise the tradition, biodiversity, and knowledge linked to a place (Cardoso et al., 2022; Tuffery-Huria & Gibson, 2020). Globally, GIs have received attention for the protection and innovation of Indigenous foods and associated knowledge (Lee, 2018; Ma et al., 2022). GIs have drawn interest from Māori for their ability to enhance Māori control over Māori cultural property, and protect traditional names, signs, and symbols (Tuffery-Huria & Gibson, 2020). However, the studied product set did not display any GIs, which is unsurprising, as a comprehensive work programme for the protection of Māori IP has yet to be implemented (Tuffery-Huria & Gibson, 2020).

The common use of place elements including TCEs suggests that more Māori F&B businesses could implement IP protections to protect from future misuse. This is increasingly important in an environment where Māori place elements are perceived as being high-value; place branding that levers 'Māori stories' and 'Māori Indigenous products' have been identified by the NZ government as one of the most important long term opportunities for the national food sector (Ministry for Primary Industries, 2023a). The Ministry for Primary Industries current strategy fronts mātauranga Māori as a key driver for increasing productivity of the food sector (Ministry for Primary Industries, 2021b). The Māori economic development panel has also stated that there is benefit in the government emphasising Māori in nation branding for long term Māori economic development (Māori Economic Development Panel, 2012). However, there is still no unified government approach to the protection of mātauranga (Mead et al., 2022). Despite this, the uptake of international architecture for the protection of Indigenous rights and food sovereignty is projected to become increasingly important to consumers in a

food consumption context (Ministry for Primary Industries, 2023a). New Zealand Story, the current iteration of Brand Zealand, also recently reported that positive international perceptions of the nation brand are contingent on the New Zealand state having a good relationship with Māori (New Zealand Story, 2024a). While the IP environment could and should shift in a direction that is more protective of Māori interests, a comprehensive scheme has yet to emerge (Mead et al., 2022). Māori enterprise should look to protect place attributes where appropriate, or they may see uptake by other commercial actors seeking to exploit the value of these elements.

While the impacts of origin branding on consumers or its users remain largely unclear due to its complexity and varied approaches to its study (Newman et al., 2014), place branding is recognised as useful for protection of cultural property because places and Indigenous relationships to them are unique, and difficult to replicate, unlike most other types of marketing (Charters et al., 2017). Examining how potential consumers of Māori future foods perceive place attributes could highlight relevant avenues for place branding and enhance understanding of value protection in Indigenous marketing.

3.4.3 Māori food products in market

Given the prominence of agriculture and food in the national Māori economy (BERL, 2020), a larger number of products could have been expected. Some product categories had higher representation than others, e.g., alcohol and honey, which are both well-established sectors of national significance and are associated with a globally distinct NZ provenance (i.e., 'Mānuka Honey' and 'Marlborough Wine'). Similarly, the NZ non-alcoholic beverage sector also is long-standing, reaching back to the mid-1800s, and is currently experiencing an "innovation era" (Coriolis, 2020). In contrast, the product types classified as 'Other' were not abundant and mostly represented those involving value-add processes and without a dedicated sector, association, or national strategy. In addition to the various challenges of creating successful value-added foods, another reason for a lower-than-expected number of products could be that Māori food economies are expressed in diverse ways, including through whānau, hapū, iwi, and community axes, where customary and relational food exchange occurs outside the commodity market (Taiapa et al., 2021). Irrespective of the number of products available, those studied underscore a variety of Māori F&B offerings, and there are signs of growth. Horticulture has long been practised by Māori and this sector of the Māori economy is experiencing growth (BERL, 2020). In a recent assessment of the Māori economy, other food manufacturing (which includes packaged food) has provided the highest return for Māori in the food sector (Nana et al., 2021). Both these trends may signal conditions more amenable for production of future foods.

3.5 Conclusion

This chapter examined Māori food and beverage products with the aim of determining what forms of content they employ on their packaging. It demonstrated that place elements were particularly prevalent, underscoring their likely relevance for Māori future foods. These insights contribute to understanding Māori branding in a food context, and highlighted opportunities and challenges for the protection of value via place branding. The next chapter will expand on these findings by exploring how some of the Māori place content identified in this study is perceived by consumers in Aotearoa NZ and in a relevant export market, to further understand how place branding may apply to future foods.

Chapter 4

Jars and Ladders: Unwrapping cross-cultural consumer
perceptions of Māori place branding

4.1 Introduction

Chapter 3 identified that place elements are in prevalent use on Māori food and beverage packaging. To expand on this finding, the research in this chapter investigated cross-contextual consumer perceptions of Māori place and environmental branding. It aimed to determine the dominant perceptual orientations of critical consumers in Aotearoa NZ and Singapore towards these brand elements and describe how food context may affect perceptions. Singapore was a relevant context to study alongside Aotearoa NZ for several reasons: it has some historical parallels in British colonisation; is also a nation in the Pacific and receives Aotearoa NZ food exports; Singapore consumers may be receptive to Māori offerings; and this research is part of the broader Te Rangahau Taha Wheako mō ngā Kai o Āpōpō: Consumer Dimensions of Future Foods project held jointly between Massey University in Aotearoa NZ and Singapore Institute of Food and Biotechnology Innovation (SIFBI) at A*STAR in Singapore. Means-end chain theory is introduced and its relevance for studying cross-contextual consumption in the context of Māori place branding is described.

4.1.1 Consumption, culture, and perception

The place, or context, people inhabit influences their consumption and perceptions. Context refers to temporal and place conditions (Onwezen, 2018), including culture, and is well-understood as shaping consumption (Askegaard & Linnet, 2011; Lusk & Briggeman, 2009; Shavitt & Barnes, 2020; Tversky & Kahneman, 2000) and consumer perceptive processes involved in consumption (Nisbett & Miyamoto, 2005). Analysing context is a fairly recent development in consumption research (Kastanakis & Voyer, 2014; Nisbett & Miyamoto, 2005; Shavitt et al., 2018). Units of context for analysis can be expressed as country, culture, values, or language (Kastanakis & Voyer, 2014; Shavitt & Barnes, 2020). Cultural context has been used as an analytic frame in consumption research, often narrowing its focus to a specific aspect of the milieu being studied (Douglas & Craig, 1997). A cultural context can be demarcated by food, which is a worthwhile focus because food is a major site of culture and consumption.

When comparing contexts, the methodology must be appropriate for both, and the research should be aware of known issues in cross-contextual and cross-cultural literature. Equivalising the meaning of participant responses can be problematic for studies comparing cultures (Van de Vijver & Tanzer, 2004). It is also important to be aware of dichotomous generalisations and how they may misunderstand culture (Lomas et al., 2023; Vignoles et al., 2016), e.g., a value schism between an individualistic West and communalistic East has been a common cross-cultural research focus (Shavitt & Barnes, 2020; Shavitt et al., 2018) that hasn't gone unchallenged (Kim et al., 2002). Although no consensus exists on best practices for cross-

cultural and cross-contextual research (Shavitt et al., 2018), cognitive interviewing can be useful as it attends to sociocultural factors and yields narrative data (Willis & Miller, 2011). This method involves asking respondents to elaborate on their answers, using probing techniques and natural conversation (Beatty & Willis, 2007). Means-end chain approaches, a type of cognitive interviewing, offer advantages for studying cultural perceptions.

4.1.2 Means end chain research

4.1.2.1 Overview of means end chain theory and research

Means end chain (MEC) theory and approaches explain why people make consumption choices by examining how they link actions or attributes (means) to outcomes (ends) (Gutman & Reynolds, 1988; Reynolds & Gutman, 2001). MEC is based on the idea that people make value judgements and store this information in their cognitive network, which can be activated and retrieved (Claeys & Abeeel, 2001; Collins & Loftus, 1975; Reynolds & Olson, 2001). MEC is a type of network model (Grunert, 1995) and can investigate individual cognition or systems of meaning shared by a group of people (Baker, 2002; Kilwinger & van Dam, 2021). Laddering is the practice of MEC; it gathers the associations people make between attributes and outcomes and organises these links into a hierarchical value map (HVM) that reveals dominant perceptions of the group towards the attributes of interest. Laddering can be thought of a discursive activity, where the interviewer co-creates responses with their participant (Brandt Sørensen & Askegaard, 2007). Laddering research can be conducted from a social constructivist perspective (Baker, 2002) to produce knowledge about consumers that is context-specific (Hong et al., 2003), which is beneficial for a transdisciplinary research approach that aims to produce knowledge about Māori and Māori places, from a Māori perspective (Moewaka Barnes et al., 2021).

MEC emerged from cognitive psychology (Bannister & Mair, 1968; Hinkle, 1965; Kelly, 1955) and is associated with the areas of consumer cognition, behaviour, action, motivation, and value (Bannister & Mair, 1968; Dibley & Baker, 2001; Gutman, 1982, 1997; Gutman & Reynolds, 1988; Hinkle, 1965; Reynolds & Gutman, 2001; Rokeach, 1973). MEC has been used extensively in marketing (Phillips & Reynolds, 2009) and in a range of food research including food preference (Arsil et al., 2014; Mandolesi et al., 2020; Sorenson & Henchion, 2011), values (De Ferran, 2007; Humble et al., 2021), and consumption of traditional foods (Cerjak et al., 2014; Chao, 2010; Lee & Cho, 2017; Ny, 2021; Tey et al., 2018). MEC can be useful for bridging context and consumption in transdisciplinary research (Haghighi & Jusan, 2012), particularly for uncharted areas (Van Rekom & Wierenga, 2007), such as Māori and Indigenous marketing. Moreover, individuals construct places in their minds as bundles of attributes through cognitive processes (Massey, 2005; Pierce et al., 2011), and so examining

their perceptions of place via cognitive processes as in MEC can be considered an appropriate approach.

4.1.2.2 Relevance of a means end chain approach to Māori branding

Research on consumer perceptions of Indigenous products is limited (Ayuba & Bello, 2022; Fibri & Frøst, 2019). In addition, few MEC studies focus on place (Mostovicz & Kakabadse, 2009). This is not surprising: culture and context are relatively recent additions to consumption and marketing research agendas (Askegaard & Linnet, 2011); and Indigenous and other critical consumption research are often at the margins (Firat & Dholakia, 2017; Love & Hall, 2022; Love & Hall, 2024; Raciti, 2022). Consumer food perception studies have also outright neglected Indigenous rights, to the detriment of the study and the place it is carried out (Charlebois et al., 2024). However, there is growing interest in advancing Indigenous marketing (Love & Hall, 2022; Love & Hall, 2024; Raciti, 2022). As discussed in previous chapters, place branding is of relevance to Māori food enterprise. Indigenous and Māori marketing represents an opportunity for critical scholarship (Love & Hall, 2024) and imagining alternative ways of life (Dell et al., 2022; Firat & Dholakia, 2017). Moreover, there is a need for more consumption-oriented literature on credence and place attributes (Eden et al., 2008). In sum, there are clear gaps where a cross-contextual MEC research approach for Māori place branding can provide original contribution to both MEC and Māori enterprise literature.

4.1.2.3 Choosing a consumer and context for a means end chain study of Māori branding

4.1.2.3.1 Selection of consumer

Careful characterisation of participant groups improves the quality of MEC data (Reynolds & Olson, 2001). Consumer characteristics also influence how valuable they perceived place branding (Charters et al., 2017). Classifying consumers according to a variable that affects their consumption is market segmentation, which is a foundational concept in marketing and consumer research (Smith, 1956). Conventional consumer segmentation uses predetermined static categories such as gender, age, and education, and assumes there is an accessible and predictable homogeneity among consumers (Amine & Alexander Smith, 2009), and that those variables predict preference, an idea stemming from classical economics (Lusk & Briggeman, 2009). However, using only static categories is an unreliable strategy for describing a group (Goyat, 2011) and is ineffective in explaining food consumption (Verain et al., 2012). Conversely, precisely how context and culture affect consumption is contested (Lindridge & Dibb, 2003), so it is important to include both person-level and contextual variables when defining and comparing groups (Onwezen, 2018).

At the person-level, values are a well-established approach to characterising groups (Amine & Alexander Smith, 2009; Goyat, 2011; Lindridge & Dibb, 2003; Onwezen, 2018; Verain et al., 2012). Values are a form of social cognition that instruct someone on how to perceive and act in an environment (Kim et al., 2002; Nisbett & Miyamoto, 2005) and can be understood as outcomes of culture (Hofstede, 1984; Rokeach, 1973). Values are useful for cross-contextual research because at some point, human values are shared across cultures and the difference between countries is not necessarily that large, which makes comparing groups in this way more robust (van Herk & Poortinga, 2017). Consumer values are frequently applied in sustainable food research to explain perception of credence attributes (Annunziata & Scarpato, 2014; Bryant & Barnett, 2018), including provenance (Kovacs & Keresztes, 2022) and to expose structural processes (Askegaard & Linnet, 2011). 'Critical consumers' are a group that can be segmented according to their values regarding ethical consumption. They consider the ethical or political implications of production or perceived effects of consumption of goods in the use, purchase, or boycott of goods and services (Gjerris et al., 2016; Yates, 2011). Critical consumers may therefore be interested in Māori place branding and can constitute a defined group for a MEC approach.

4.1.2.3.2 Selection of context

The selection of contexts for comparison should also be relevant to Māori enterprise. Aotearoa NZ requires little justification, as a homeland of Māori and the place from where most Māori enterprise operates. The overarching context of Aotearoa NZ has been outlined in Chapter 1. Enquiring outwards, international contexts are also relevant for Māori enterprise: although Māori export is understudied (Mika & Ross, 2019), yet international contexts have relevance for Māori development (McKerchar et al., 2015; Rout & Reid, 2019b), food sovereignty (Rout & Reid, 2020), and Māori enterprise and alternative economics (Mika & Ross, 2019). Additionally, global markets are the key organising structure of our time and require examination (Andéhn & L'espoir Decosta, 2018; Polanyi, 2002).

Singapore is a tropical island country at the Western side of Te Moana Nui A Kiwa, the Pacific. Singapore shares some parallels with Aotearoa NZ that altogether contribute to its relevance for Māori enterprise. Like Aotearoa NZ, Singapore has experienced British colonisation, and food has played a major role in de- and re-constructing the nation (Chou, 2014). Singapore is a multi-racial and multi-religious country, where food culture is broadly influenced by the movement of people, goods, and ideas (Tarulevicz, 2020). Domestic concerns about food insecurity (Singapore Food Agency, 2023), a desire for reconnection to food production, and exposure to international consumer cultures contribute to increasing consumer interest in local and healthy foods (Hyejin, 2018). Singapore has visible goals for food security, and both traditional and future foods are in the consciousness of Singaporeans (Stevens & Ruperti,

2024). Moreover, participants in the interview study in Chapter 2 described the viability of Singapore for Māori export due to its cultural and physical proximity to other Asian countries, amenable regulatory environment, and other structures like the Food Agency that enables food imports.

Exploring and comparing consumer perceptions of Māori place branding, in the local Aotearoa NZ market and an overseas market in Singapore, would offer insights about Māori and Indigenous place branding, generate useful information for Māori enterprise, and be a fruitful endeavour to unlock the potentiality of Māori marketing thought. Enabling enterprise practices that maintain and protect Indigenous knowledge is critical for Indigenous practices and supporting social and economic development (Reid & Rout, 2016). There is a need to demonstrate the impacts of Māori place and environmental branding to enable these kinds of developments (Sharma et al., 2021). The export of Indigenous foods from one corner of the Pacific to a postcolonial Asian city-country in another corner does raise interesting dynamics. This chapter and following study do not aim to account for complexities of transpacific trade between these contexts; however, the implications of Māori food production and export will nonetheless be discussed in the light of the food contexts of Aotearoa NZ and Singapore.

4.1.2.4 Choosing attributes for means-end chain research

As demonstrated in previous chapters, place branding is already commonly used by Māori food enterprises and is relevant for future foods. In particular, origin statements were prevalent. Environmental attributes were less prevalent but still function as place attributes and are also relevant for future foods. Māori culture and language emerge in co-creation with environmental experience, i.e., from a place (Murton, 2012), so may constitute elements of a place-brand with ease. There is a paucity of literature on consumer perception of Māori and Indigenous place attributes. Initial research shows that themes of competence, sincerity, and sophistication have been important in international consumer perception of Māori origin branding, and elevate other attributes (Ministry for Primary Industries, 2024). Kiwifruit and yoghurt made by Māori enterprise has been perceived by Chinese consumers as having various attributes, including naturalness, quality, traditionality, artisanality, collective governance, and environmental, cultural, and social responsibility (Tait et al., 2018). Perceived value of Aotearoa NZ-related attributes depends on a multitude of factors, which vary by context, product, and person (Saunders et al., 2016), further highlighting a need for cross-contextual research that includes both a domestic and international focus. This research would also constitute what Rout and Reid (2019b) refer to as “culturally-focused value chain analysis”, which is important for understanding place branding, and explores consumer values in the context of their food culture to understand how the attributes of a producer’s food can be oriented to a consumer.

4.1.3 Research objectives

This research aimed to determine the dominant perceptual orientations of critical consumers towards Māori place branding, with a focus on provenance and environmental attributes, on F&B packaging. It was conducted in two cultural contexts of relevance to Māori enterprise to generate useful insights about Māori branding for Māori enterprise and discuss associated implications. A means-end laddering interview approach using mixed elicitation techniques was carried out with critical consumers in each cultural context. Critical consumers were chosen for their relevance to Māori branding and to delineate the groups along a combination of contextual and cultural lines.

The specific objectives were to:

- 1) determine dominant perceptual orientations of critical consumers of environmental and provenance brand messaging employed by Māori enterprises on their food and beverage packaging
- 2) compare perceptions in Aotearoa NZ and Singapore contexts
- 3) establish implications of findings for Māori enterprises operating or aspiring to operate in these markets.

Variability in ladder expression, as previously observed in a cross-contextual MEC dataset between Australia and Malaysia (Leppard et al., 2004), was anticipated. It was also hypothesised that the Aotearoa NZ group were more likely to possess knowledge about Māori culture and Māori food and enterprise products due to exposure to the place conditions, which is known to influence consumer valuation of place branding (Charters et al., 2017), and consequently may produce different ladders to Singapore respondents who are likely to have less exposure to Māori place elements. Further, it was expected that Māori critical consumers might respond to stimuli with greater insider insight compared with non-Māori participants.

4.2 Materials & Methods

This study explored the dominant perceptual orientations of critical consumers in Aotearoa NZ and Singapore towards Māori food product attributes. It was conducted by a cross-cultural team with profound understandings of the contexts being studied, which is a major mitigating factor for many issues that may arise in cross-contextual research. A discursive and constructivist approach was taken, where the laddering process was understood as a social activity to produce narrative data.

4.2.1 Ethics

The Aotearoa NZ element of the study was submitted to the Massey University Human Ethics process and deemed to be low risk (ethics registration 4000027903). For Singapore, the study was approved by A*STAR Institutional Review Board, IRB. (A*STAR IRB Reference number 2023-122, approval date 5 Oct 2023). Participants were each offered \$25 reimbursement (NZD or SGD, as appropriate) and a koha (gift) of a Māori-made jam product (worth NZD 7.50) in appreciation of their contribution.

4.2.2 Participants

The context and consumers were selected on the basis of their relevance to Māori enterprise and because they provided an opportunity to compare local and international contexts, leveraging the research collaboration between Aotearoa NZ and Singapore researchers in Te Rangahau Taha Wheako mō ngā Kai o Āpōpō: Consumer Dimensions of Future Foods program. Ensuring similarity in the groups being compared can avoid the issue of over-attributing consumption to context (Hui & Triandis, 1985). A specific consumer group is also important to increase the generalisability of MEC findings (Reynolds & Gutman, 2001). Psychographic variables like values and attitudes are more indicative of perception of provenance (Bryła, 2021) and better than static variables, e.g., age in explaining consumption (Dagevos, 2005; Verain et al., 2012) and are valid for comparing cross-cultural groups (van Herk & Poortinga, 2017). Therefore, 'critical consumers' were specified by their reported ethical consumption behaviour to add dimensionality to characterisation of the group across both contexts.

4.2.2.1 Screening and recruitment of critical consumers

Critical consumers were screened and recruited using an online survey and modified (Table 1.4) ethically minded consumer behaviour (EMCB) tool validated for measuring ethical consumption behaviour in European and Asian contexts (Sudbury-Riley & Kohlbacher, 2016). Using tools that are valid across contexts is important for cross-contextual research (Lindridge & Dibb, 2003).

To be included in the study, participants were required to be aged 21 or over, be born in Aotearoa NZ (Aotearoa NZ arm of the study), or a Singaporean permanent resident (PR) born in Singapore or Malaysia (Singapore arm of the study), and have achieved a high score upon application of the modified EMCB assessment tool. Age criteria were chosen to align with Singapore ethics requirements, which require parental consent for those under 21. Recruiting participants based on country of birth ensured that participants in each arm were familiar with the cultural context of the country being studied. In Singapore, participants born in Malaysia

were also considered to be eligible, due to Singapore's proximity to Malaysia, shared history and culture, and because many Singaporean PRs are born in Malaysia.

Gender and ethnicity information was collected to characterise the sample (not tabulated). The survey was distributed using CompuSense (Version 23.0.25636, CompuSense Inc.) in both Aotearoa NZ and Singapore. In Aotearoa NZ, the survey was distributed via the Massey Food Experience and Sensory Testing (Feast) database, through campus groups, and to a community group that had a pre-existing relationship with Feast. In Singapore, the survey was distributed to the public through A*STAR channels (emailing past participants who agreed to be contacted, and staff) and social media advertisements.

The EMCBS tool has been validated (Sudbury-Riley & Kohlbacher, 2016) and used in Southeast Asian (Le & Kieu, 2019) and European-majority (Ruggeri et al., 2021; Stern et al., 2018) cultural contexts for measuring ethical consumption behaviours and hence is considered appropriate for use in both Aotearoa NZ and Singapore to identify and screen critical consumers. The EMCBS scale was modified for a food product context (Table 4.2.1). Item 6 was deleted because paper products were not relevant to this research, and because Singapore researchers advised that recyclable food packaging was less common in Southeast Asia and therefore responses to this item might skew participant responses unfairly when compared with Aotearoa NZ respondents. Item 8 was modified to be about animal welfare because it is a relevant social dimension for ethical food consumption (Alonso et al., 2020; Vinnari & Vinnari, 2014) and 'sweatshop conditions' and 'child labour' are relatively less relevant for food production than other items, e.g., clothing. Working conditions were still captured in item 7.

Table 4.1: Modified EMCB scale used for screening and recruiting critical consumers

Item	Modified EMCB scale for food product context	Original EMCB scale
1	When there is a choice, I always choose foods that contribute to the least amount of environmental damage	When there is a choice, I always choose the product that contributes to the least amount of environmental damage
2	I have switched food products for environmental reasons	I have switched products for environmental reasons
3	If I understand the potential damage to the environment that some foods can cause, I do not purchase those products	If I understand the potential damage to the environment that some products can cause, I do not purchase those products
4	I do not buy food products that harm the environment	I do not buy household products that harm the environment
5	Whenever possible, I buy foods packaged in reusable or recyclable materials	Whenever possible, I buy products packaged in reusable or recyclable containers
6	N/A	I make every effort to buy paper products (toilet paper, tissues, etc.) made from recycled paper
7	I will not buy a food product if I know that the company that sells it is socially irresponsible	I will not buy a product if I know that the company that sells it is socially irresponsible
8	I do not buy foods from companies that I know enable poor animal welfare	I do not buy products from companies that I know use sweatshop labour, child labour, or other poor working conditions
9	I have paid more for environmentally friendly foods when there is a cheaper alternative	I have paid more for environmentally friendly products when there is a cheaper alternative
10	I have paid more for socially responsible foods when there is a cheaper alternative	I have paid more for socially responsible products when there is a cheaper alternative

At the end of recruitment, the median score for each survey item on the modified EMCB scale was obtained, and participants scoring at or above the median for each of the 9 items were invited to participate. This method was chosen because scoring highly across a whole scale is better able to predict a high scorer than if the total sum of item responses is used (Nosi et al., 2023). Prominent scholars of the laddering method have indicated that including 20 participants per group is sufficient to generalise dominant perceptual orientations across that group, provided participants are carefully selected and have similar characteristics (Reynolds & Gutman, 2001). Recent studies using soft laddering have recruited 30 participants per group to compare attitudes and perceptions of food products (Haas et al., 2019; Oh et al., 2019; Roininen et al., 2006). Data sets should also be of comparable or the same size to ensure robust application of cutoffs and comparison of HVMs (Leppard et al., 2004). Thirty participants in each country group were therefore considered sufficient for the purposes of this study.

4.2.3 Stimuli

Provenance and environmental messages were extracted from commercially available Māori food and beverage product packaging and presented to respondents on a generic label on empty jars (Figures 4.1 and 4.2). Six messages of each type were selected for inclusion in provenance and environmental attribute lists as stimuli. The selected messages were chosen to exemplify the varied level of detail and varied reference to Māori and Māori culture exhibited by commercially available products, as shown in Chapter 3. The number of attributes presented in each set ($n=6$) was sufficient to provide a range of choice, while not imposing too great a cognitive burden on respondents. Each attribute list included two messages that were generic and not specific to Māori branding, e.g. 'Made in New Zealand', 'Sustainably Made'. The lists also included two messages that were relatively less generic and more relevant to Māori culture, without explicit reference to Māori culture, e.g. 'Made by an Indigenous family business', 'Made with care for our land, people, and traditions'. Finally, the lists included two messages that contained Māori language or cultural expressions, e.g. 'Made in Aotearoa New Zealand', 'We care deeply for Papatūānuku, Mother Earth'. The use of different tiers of information and detail was important to reflect the real-world mix of Māori branding, and to enable participants to respond depending on their attitude or knowledge of Māori people or culture. When an attribute contained Māori language, it had an English translation alongside it to ensure participants had a reference point to assess the message. This would also likely be how Māori language would be presented in real-world products in export markets like Singapore. Some of the extracted messages were modified slightly for length and ease of presentation or to add the English translation.



Figure 4.1: Provenance attribute list displayed on generic jar labels.



Figure 4.2: Environment attribute list displayed on generic jar labels.

Two commercially available products were selected as another stimuli. Using complete products balanced the limitations of isolated messages as in the attribute list stimuli. The selected products were made by businesses that identified as being Māori owned, which were ‘Piripiri Plum Chutney’ by brand Taste Manaaki (Figure 4.3) and ‘Cacao Husk Tea’ by brand Samāori (Figure 4.4). They were chosen because they displayed varied cultural motifs and place banding, including provenance statements ‘Handmade at Omaka Marae’, ‘Social Enterprise’, ‘Ethically Sourced’, ‘Single origin Samoa’, and ‘Proudly Māori and Pacific Owned’.



Figure 4.3: Product packaging of the commercially available chutney product used as stimuli in activity 3.



Figure 4.4: Product packaging of the commercially available tea product used as stimuli in activity 3.

4.2.4 Laddering approach

A structured interview using two ladder elicitation techniques was developed to determine dominant perceptual orientations towards Māori place branding elements. Analysis followed a multi-stage process, resulting in HVMs that illustrated the dominant perceptual orientations of each participant group towards the presented stimuli. The development of the entire approach is described further below.

4.2.4.1 Interview design

A preliminary interview guide was created (Table 4.2). It included an introduction, presentation of the stimuli across three activities, and a conclusion. A 'soft laddering' approach was used that involved conversational probing and participants responding in their own words (Reynolds & Olson, 2001). Soft laddering was well-suited to the abstract nature of the attributes being studied, facilitating generation of broad data in an area with little prior literature (Borgardt, 2018; Modesto Veludo-de-Oliveira et al., 2006). The interview combined two elicitation

techniques which mitigated limitations of using only a single method (Modesto Veludo-de-Oliveira et al., 2006). The order of elicitation techniques, with attribute list first and direct elicitation second, was decided based on the idea that the attribute list technique was more straightforward, allowing the participant to familiarise themselves with the laddering process.

Table 4.2: Pilot guide for laddering interviews

Introduction & warmup 5 min	Introduction to each other and the research project Researcher and participant introduce each other. Researcher explains the purpose of the interview and how it contributes to a broader PhD and overarching project. Warmup activity Demonstrate laddering procedure with a warmup question: ask participant about their favourite food and probe their response.
Activity 1 Provenance attribute list 15 min	Present provenance attribute list stimuli Generate ladders, positive and negative. Transcribe response on paper, as a means end chain. Audit responses with the participant.
Activity 2 Environment attribute list 15 min	Present environment attribute list stimuli Generate ladders, positive and negative. Transcribe response on paper, as a means end chain. Audit responses with the participant.
Activity 3 Direct elicitation with commercially available products 15 min	Present commercially available product stimuli Elicit a standout attribute, positive or negative. Emphasise focus away from product type liking. Transcribe response on paper. Audit responses with the participant.
Conclusion 5 min	Wrap up the session Thank participant for their time and provide reimbursement.

The interview was piloted, in each country, with three researchers in the respective (Feast/SIFBI) institutes. The Aotearoa NZ pilot interviews took place first and determined timing and confirmed that two elicitation techniques could be used in one session without fatigue. The Singapore pilot interviews highlighted a need to check if participants had ever heard of Māori people, and to briefly explain that Māori are Indigenous to Aotearoa NZ without

imposing too much new or influential information on participants. The interview structure did not change after either pilot.

The introductory section of the interview sought to build rapport with the participant and introduce the research context. Rapport building included casual discussion asking where the participant was from, if they worked or studied nearby, or whether they were familiar with the research institute (Feast/SIFBI) where the interview was taking place. The interviewer introduced themselves, their position as a Māori PhD student, and the purpose of the research in a wider project. An introductory phase was necessary to establish a comfortable environment for abstract and sensitive discussion, and mutual understanding between interviewer and participant is beneficial for laddering as a discursive exercise (Brandt Sørensen & Askegaard, 2007). Of note, disparate levels of ladder expression have been reported in a study comparing Australian and Malaysian participants (Leppard et al., 2004), which are similar contexts to Aotearoa NZ and Singapore. Respondents in Asian and Southeast Asian contexts have been described as responding politely but less truthfully than Western contexts (Banks, 1997; Baumgartner & Steenkamp, 2001; Jones, 1993; Witkowski et al., 2003), which may explain such disparities, although this effect can be mitigated with study design that accounts for it (Jones, 1993), and so the researchers made efforts to establish a relaxed environment; in Singapore, SIFBI researchers led the study introduction, followed protocols familiar to their research context, and were present throughout interviews.

Activity 1, the “provenance list” stimuli, and Activity 2, the “environment list” stimuli, used an attribute list technique (Bech-Larsen & Nielsen, 1999). Participants were presented with an attribute list and were asked to report the most and least appealing message and probed as to the reasons behind their choices. Participants were asked to imagine a typical food shopping scenario, viewing the stimuli as genuine Māori-made products containing any desirable food, not limited to preconceptions of a “Māori food”. The attribute list technique was chosen because it is fast and imposes a relatively low cognitive burden on participants compared with other elicitation methods (Bech-Larsen & Nielsen, 1999), allowing time to use the second elicitation technique and thereby increasing the rigour of the data by providing more and variable ladders (Modesto Veludo-de-Oliveira et al., 2006). Eliciting both the most and least appealing message was considered important to enable retrieval of both poles of information and a more complete picture of perceptual orientations (Costa et al., 2004; Modesto Veludo-de-Oliveira et al., 2006). The attribute list technique is also able to elicit abstract information better than other techniques for low-involvement products such as foods (Bech-Larsen & Nielsen, 1999), which was important due to the abstract nature of the attributes of interest. A limitation of the technique is that researcher-generated attributes may have less validity and may exert too much influence on results, but its use is acceptable if

justified by a specific hypothesis (Miles & Rowe, 2004); and here was also strengthened by the mixing of two elicitation techniques. (Costa et al., 2004; Modesto Veludo-de-Oliveira et al., 2006)

Activity 3 presented the commercially available products. A direct elicitation technique was used, where participants were instructed to examine the packaging and report any standout (positive or negative) elements. The interviewer asked participants to emphasise their focus on attributes presented on the packaging, rather than their liking of the product type or whether they would buy it. Direct elicitation on commercially available products was appropriate because it enabled participants to elicit relevant attributes, which improved ecological validity of the study (Miles & Rowe, 2004) and generate a wide range of ladder constructs (Bech-Larsen & Nielsen, 1999).

4.2.5 Data collection, processing, and analysis

4.2.5.1 Data collection and processing

In each country (Aotearoa NZ, Singapore), 30 interviews were conducted, taking approximately 45–60 minutes, beginning in September 2023 and concluding in December 2023. Data processing began within interviews, where ladders were transcribed and audited during the interview using a pencil-paper method as recommended by Modesto Veludo-de-Oliveira et al. (2006). After each interview, ladders were moderated with a second researcher from the respective country. The level of abstraction of constructs (i.e., as attribute, consequence, or value) was also moderated and confirmed here. Ladder data were then digitised in an excel workbook in preparation for analysis.

Data analysis consisted of three steps (Figure 4.5): 1) content analysis; 2) aggregation; and 3) hierarchical value map creation (Kilwinger & van Dam, 2021). Ladders were comprised of attributes (A), consequences (C), and values (V), henceforth referred to as ACV constructs. The relationships between ACV constructs within a ladder are referred to as links. The goal of laddering analysis is to quantify how many participants link different ACV constructs. This quantification is achieved by generating implication matrices (IM), then representing them as HVMS.

Data processing



- Transcribe and audit with participants during interviews
- Moderate transcribed ladders
- Digitise ladder data for analysis

Data Analysis



1

Content analysis

- 1a Code ladder data
- 1b Condense ladder data



2

Aggregation

- 2a Input & calculate ladder data
- 2b Generate implication matrices



3

Hierarchical value map creation

- 3a Test cutoff levels
- 3b Select final cutoff levels
- 3c Optimise maps

Figure 4.5: Overview of the approach to data processing and analysis.

The overall analysis approach followed the ‘state of the art’ (Foolen-Torgerson et al., 2023) protocol developed by Foolen-Torgerson and Kilwinger (2021). The protocol provides explicit instructions and methodological transparency for laddering analysis, as well as digital input and calculation tools that greatly simplify analysis (Torgerson & Kilwinger, 2021). The protocol and tools provide exceptional conceptual and methodological clarity, where other established MEC tools such as LadderUX (Vanden Abeele et al., 2012) or LADDERMAP (Lastovicka, 1995) do not offer comparable support.

4.2.5.2 Data analysis step 1: Content analysis

Content analysis (step 1) flattened the ladder data by grouping ACV constructs by shared meaning to simplify data and identify dominant perceptions while preserving a degree of individual participants' expressions. Content analysis involved steps 1a) coding and 1b) condensation of ladder data. Kilwinger and van Dam (2021) made an important distinction between coding and condensing, which are sometimes referred to as one step in MEC literature, and so these processes were carried out as connected but distinct activities.

Coding (step 1a) began after completing data collection and processing for both countries. Constructs with similar meanings were assigned common denominators; for example, 'know who made the product' and 'can tell where it was made' were grouped under the denominator 'clear origin'. While these expressions may reflect differing worldviews or interpretations, the differences were not distinct enough to require separate denominators. The process of coding necessitates some degree of meaning loss between individual participants, but it is necessary to determine group perceptions (Kilwinger & van Dam, 2021).

Condensation (step 1b) followed coding, where subordinate 'child' codes with a similar meaning were further denominated by a superordinate 'parent' code. For example, the code 'clear origin' was a child code of the broader parent code 'informative'. The process of assigning child codes to parent codes is critical to ensure uncommon constructs elicited during interviews that have a shared meaning with other constructs are retained in the final data representation (Foolen-Torgerson & Kilwinger, 2022; Kilwinger & van Dam, 2021). While Grunert (1995) recommended condensing superordinate constructs with different valence (e.g., 'good taste' and 'bad taste' into 'taste'), Kilwinger and van Dam (2021) recommend retaining valence in the superordinate construct because it prevents further unnecessary information loss. Therefore, here valence was retained in the superordinate constructs.

Content analysis was iterative, involving multiple stages of coding and condensation to ensure constructs were appropriately grouped while retaining meaning. The Aotearoa NZ and Singapore datasets were analysed in parallel to enable meaningful comparison of HVMs. This did present a potential validity issue where different cultures may assign different meanings to the same terms. However, the cross-cultural nature of the research and research team enabled data processing and analysis that were attuned to each cultural context. During interviews in Singapore the primary interviewer sense-checked any unclear constructs and ladders with Singapore researchers, in recognition that an in-depth knowledge of a specific cultural context is critical to allow valid interpretation of a dataset produced within that context (Baker, 2002). Intercultural meaning was also addressed by recruiting consumers in both countries who were fluent in English (noting that both Aotearoa NZ and Singapore have

English as an official language). At the completion of the content analysis stage, a final codebook of content analysed ladder constructs was created (Appendix B), and ladder data were ready to be input as sequential links in the aggregation stage.

4.2.5.3 Data analysis step 2: Aggregation

Aggregation refers to grouping individual perceptions into a group cognitive structure. It involved steps 2a) data input and calculation and 2b) IM generation, which were carried out for each activity and country group separately.

In aggregation step 2a, the MECANALYSIS input tool was used to input the content analysed ladders. Both direct and indirect links between ladder constructs were input because indirect links reveal relationships between constructs that may not be apparent when examining dominant links only (Gutman & Reynolds, 1988; Kilwinger & van Dam, 2021). A direct link refers to a construct immediately linking to another e.g. Made in Aotearoa New Zealand à Clear origin. An indirect link refers to links made in the same ladder, but which don't directly lead to each other, e.g., in Made in Aotearoa New Zealand à Clear origin à Trust, there is an indirect link between the first and third constructs. The input data was then transferred to the MECANALYSIS calculator tool, which calculated the number of direct, indirect, and total links, and number of ACV constructs elicited in each activity by each group. The number of ACVs includes the attributes presented (activities 1 and 2), and attributes elicited by participants (activity 3). The data was copy-pasted between the input and calculator tools simply to minimise computing time.

In aggregation step 2b, the calculator tool was used to generate IMs – grids with a single quadrant and two axes, showing how many participants link two constructs, both directly and indirectly. A brief excerpt from an IM generated from activity 1 for the Aotearoa NZ group is illustrated in Table 4.3, to demonstrate how it works. It shows that 'Made in Aotearoa New Zealand' was directly linked to 'Clear origin' by 5 participants and indirectly by 2 participants, and that the 'Indigenous' attribute was directly linked by 3 participants and indirectly by 0 participants. The links contained in IMs are expressed graphically in the HVMs.

Table 4.3: Excerpt from an implication matrix demonstrating the number of respondents who made direct and indirect links between constructs

	'Clear origin'
'Made in Aotearoa New Zealand'	5,2
'Indigenous'	3,0

When generating IMs, both a numerical cutoff and a cutoff algorithm were selected. The cutoff and the algorithm specify what type of information is expressed via IMs and HVMs.

Connections that appear at the chosen cutoff level represent dominant perceptual orientations of a group. For example, a numerical cutoff of 5 using a 'number of respondents' algorithm means that the implication matrix will only express links that are made by 5 or more participants. At this cutoff level, the link between 'Made in Aotearoa New Zealand' and 'Clear origin' would be expressed in the IM and the subsequent HVM, while 'Indigenous' to 'Clear origin' would not, because the number of people who made the link (3,0) is less than 5. The former link constitutes a dominant perception, while the latter does not. The 'number of respondents' algorithm was selected as the aggregation algorithm to reflect the overall research aim and methodology of comparing consumers as groups (Kilwinger & van Dam, 2021) and minimised disparity that can occur between participants if some express a particular link many times within an interview (as would be counted in a different cutoff algorithm). There are different approaches to specifying the numerical cutoff level and deciding what is a dominant perception. The simplest method is to balance HVM intelligibility with retention of information (Reynolds & Gutman, 2001), and so step 2b and step 3 (described below) were carried out in parallel.

4.2.5.4 Data analysis step 3: HVM generation

In step 3, NodeXL (Smith et al., 2010) was used to convert the IMs into HVMs at both the parent and child code level, for each activity, and for each dataset.

In step 3a, cutoff levels of 3–6 were tested, generating a total of 24 IMs and output HVMs. Cutoff level 3 was chosen as the lowest cutoff level to test IMs and output HVMs because cutoff levels lower than 3 generated unintelligible HVMs. Cutoff level 6 was the highest tested because higher levels led to empty HVMs. Attention was also paid to the number and relative percentage of links and ACV constructs expressed at each cutoff level, and that both groups were similar at the same cutoff level, ensuring comparability.

HVMs were made for both parent and child codes. The selection of the final cutoff levels to present the data occurred in step 3b. The final cutoff levels chosen were determined by balancing map intelligibility and similarity in percentage of link and ACV expression between country groups for each activity, to enable robust comparison, following the recommendations of Kilwinger and van Dam (2021) and (Reynolds & Gutman, 2001). Parent and child HVMs used a cutoff level of 5 and 3 respectively, because these cutoff levels generated intelligible and meaningful maps. Child maps used lower cutoff levels than parent maps because they added resolution to the links expressed in parent maps (Foolen-Torgerson et al., 2023).

The final cutoff levels were also informed by the goal of the study. It has been suggested that less widely held beliefs can be revealed in incidental linkages at lower cutoff levels and in more complicated HVMs, which is beneficial for exploring product innovation (Leppard et al.,

2004) or in emphasising product attributes from new angles (Reynolds & Gutman, 2001). Conversely, if the aim is to determine dominant perceptions, then examining the strongest, or more widely held and generalisable beliefs, is appropriate for a higher cut-off level (Leppard et al., 2004). Therefore, reflecting the aims of this study, the highest cut off level achievable while balancing information retention was selected here.

In step 3c, HVMs were optimised in NodeXL. The comprehensibility of HVMs were improved by removing ‘dangling’ links (as per (Kilwinger & van Dam, 2021), where ladders did not contain an attribute. Attribute to consequence links with no value can still provide interesting information, so these incomplete ladders were retained. Attribute to attribute links that went no further were also removed in child HVMs, to improve intelligibility of the maps. When interpreting the HVMs, dominant perceptions were also described in terms of the most dominant ladder, at both positive and negative valences, which strengthens comparison between groups (Leppard et al., 2004). Finally, HVM figures were refined at a purely visual level in an online illustration app, and child maps that were too large for a single page were split into multiple figures.

4.3 Results

4.3.1 Participant information

4.3.1.1 Participant demographic information

The Aotearoa NZ participant group contained 24 women, 5 men, and 1 non-binary person, while the Singapore participant group contained 18 women and 12 men. The mean age ($\pm$ SD) of the Aotearoa NZ group was 43y $\pm$ 11.9, compared to 40 $\pm$ 14.8 for the Singapore group.

4.3.1.2 Responses to critical consumer scale

In Aotearoa NZ and Singapore, 92 and 147 respondents, respectively, were screened using the modified EMCB scale. Across almost all EMCB survey items, the median score (3) was the same for both groups, indicating that both reported a similar degree of critical consumption. Aotearoa NZ had a higher median by one point for item 10, which related to recyclable food packaging, and Singapore had a higher median by one point for item 11, which related to boycott of socially irresponsible food production.

4.3.2 Link and construct elicitation and expression at different cutoff levels

In activities 1, 2, and 3, when analysed at the parent code level, the Aotearoa NZ group expressed a total of 79, 61, and 68 ACV constructs (ACVs), and 946, 630, and 779 total links, respectively (Table 4.4). The Singapore group expressed 69, 69, and 64 ACV constructs and

653, 719, and 582 links. The expression of links and ACVs at the different cutoff levels 3–6 is shown at the parent (Table 4.4) and child code level (Table 4.5). Cutoff levels 5 and 3 were chosen to present the final parent and child HVMS respectively, because they enabled a balance of information retention and map intelligibility. The percentage of links and ACV constructs represented in the implication matrices were generally similar across all cutoff levels for both groups. The length of ladders elicited in each activity was similar between groups. Altogether, this meant the laddering interview elicited similar amounts of data from both groups, enabling robust comparison.

Table 4.4: Summary of parent link and ACV construct expression across activities and groups at different cutoffs, presented as the number and percentage of the total link and ACV constructs

Activity 1: Provenance attribute list											
Aotearoa NZ	Total	Cutoff 3	Cutoff 4	Cutoff 5	Cutoff 6	Singapore	Total	Cutoff 3	Cutoff 4	Cutoff 5	Cutoff 6
Direct links	466	184 (39.5%)	129 (27.7%)	86 (18.5%)	64 (13.7%)	Direct links	266	117 (44%)	85 (32%)	81 (30.5%)	59 (22.2%)
Indirect links	480	224 (46.7%)	141 (29.4%)	100 (20.8%)	77 (16%)	Indirect links	387	131 (33.9%)	88 (22.7%)	72 (18.6%)	44 (11.4%)
Total links	946	408 (43.1%)	270 (28.5%)	186 (19.7%)	141 (14.9%)	Total links	653	248 (38%)	173 (26.5%)	153 (23.4%)	103 (15.8%)
Average ladder length	4.7					Average ladder length	4.7				
Attributes	22	17 (77.3%)	14 (63.6%)	9 (40.9%)	6 (27.3%)	Attributes	22	14 (63.6%)	10 (45.5%)	10 (45.5%)	7 (31.8%)
Consequences	26	10 (38.5%)	8 (30.8%)	6 (23.1%)	5 (19.2%)	Consequences	21	5 (23.8%)	2 (9.5%)	1 (4.8%)	1 (4.8%)
Values	31	13 (50.6%)	8 (25.8%)	8 (25.8%)	6 (19.4%)	Values	26	9 (34.6%)	6 (23.1%)	6 (23.1%)	3 (11.5%)
Total ACV	79	40 (50.6%)	30 (30.8%)	23 (29.1%)	17 (21.5%)	Total ACV	69	28 (40.6%)	18 (26.1%)	17 (24.6%)	11 (15.9%)
Activity 2: Environment attribute list											
Aotearoa NZ	Total	Cutoff 3	Cutoff 4	Cutoff 5	Cutoff 6	Singapore	Total	Cutoff 3	Cutoff 4	Cutoff 5	Cutoff 6
Direct links	268	113 (42.2%)	85 (31.7%)	77 (28.7%)	61 (22.8%)	Direct links	292	133 (45.5%)	85 (29.1%)	56 (19.2%)	44 (15.1%)
Indirect links	362	167 (46.1%)	138 (38.1%)	82 (22.7%)	63 (17.4%)	Indirect links	427	140 (32.8%)	80 (18.7%)	45 (10.5%)	37 (8.7%)
Total links	630	280 (44.4%)	223 (35.4%)	159 (25.2%)	124 (19.7%)	Total links	719	273 (38%)	165 (22.9%)	101 (14%)	81 (11.3%)
Average ladder length	4.4					Average ladder length	4.6				
Attributes	20	9 (45%)	7 (35%)	5 (25%)	5 (25%)	Attributes	19	13 (68.4%)	8 (42.1%)	4 (21.1%)	4 (21.1%)

Consequences	18	8 (44.4%)	6 (33.3%)	6 (33.3%)	5 (27.8%)	Consequences	21	10 (47.6%)	7 (33.3%)	5 (23.8%)	5 (23.8%)
Values	23	9 (39.1%)	8 (34.8%)	5 (21.7%)	3 (13%)	Values	29	14 (48.3%)	10 (34.5%)	6 (20.7%)	4 (13.8%)
Total ACV	61	26 (42.6%)	21 (34.4%)	16 (26.2%)	13 (21.3%)	Total ACV	69	37 (53.6%)	25 (36.2%)	15 (21.7%)	13 (18.8%)
Activity 3: Commercially available products											
Aotearoa NZ	Total	Cutoff 3	Cutoff 4	Cutoff 5	Cutoff 6	Singapore	Total	Cutoff 3	Cutoff 4	Cutoff 5	Cutoff 6
Direct links	358	155 (43.3%)	120 (33.5%)	93 (26%)	56 (15.6%)	Direct links	263	105 (39.9%)	68 (25.9%)	51 (19.4%)	37 (14.1%)
Indirect links	421	212 (50.4%)	154 (36.6%)	121 (28.7%)	78 (18.5%)	Indirect links	319	119 (37.3%)	66 (20.7%)	31 (9.7%)	30 (9.4%)
Total links	779	367 (47.1%)	274 (35.2%)	214 (27.5%)	134 (17.2%)	Total links	582	224 (38.5%)	134 (23%)	82 (14.1%)	67 (11.5%)
Average ladder length	4.2					Average ladder length	4.2				
Attributes	21	11 (52.4%)	9 (42.9%)	7 (33.3%)	3 (14.3%)	Attributes	19	12 (63.2%)	8 (42.1%)	6 (31.6%)	5 (26.3%)
Consequences	22	10 (45.5%)	10 (45.5%)	10 (45.5%)	7 (31.8%)	Consequences	18	9 (50%) (33.3%)	6 (22.2%)	4 (16.7%)	3 (16.7%)
Values	25	12 (48%)	8 (32%)	6 (24%)	4 (16%)	Values	27	11 (40.7%)	7 (25.9%)	2 (7.4%)	1 (3.7%)
Total ACV	68	33 (48.5%)	27 (39.7%)	23 (33.8%)	14 (20.6%)	Total ACV	64	32 (50%) (32.8%)	21 (32.8%)	12 (18.8%)	9 (14.1%)

Table 4.5: Summary of child link and ACV construct expression across activities and groups at different cutoffs, presented as the number and percentage of the total link and ACV constructs

Activity 1: Provenance attribute list											
Aotearoa NZ	Total	Cutoff 3	Cutoff 4	Cutoff 5	Cutoff 6	Singapore	Total	Cutoff 3	Cutoff 4	Cutoff 5	Cutoff 6
Direct links	452	87 (19.2%)	47 (10.4%)	33 (7.3%)	29 (6.4%)	Direct links	285	80 (28.1%)	46 (16.1%)	38 (13.3%)	32 (11.2%)
Indirect links	571	80 (14%)	48 (8.4%)	34 (6%)	28 (4.9%)	Indirect links	451	91 (20.2%)	44 (9.8%)	24 (5.3%)	10 (2.2%)
Total links	1023	167 (16.3%)	95 (9.3%)	67 (6.5%)	57 (5.6%)	Total links	736	171 (23.2%)	90 (12.2%)	62 (8.4%)	42 (5.7%)
Attributes	35	19 (54.3%)	9 (25.7%)	3 (8.6%)	3 (8.6%)	Attributes	31	19 (61.3%)	10 (32.3%)	7 (22.6%)	5 (16.1%)
Consequences	45	10 (22.2%)	5 (11.1%)	2 (4.4%)	2 (4.4%)	Consequences	28	4 (14.3%)	1 (3.6%)	1 (3.6%)	1 (3.6%)
Values	57	5 (8.8%)	2 (3.5%)	1 (1.8%)	1 (1.8%)	Values	43	11 (25.6%)	5 (11.6%)	3 (7%)	2 (4.7%)
Total ACV	137	34 (24.8%)	16 (11.7%)	6 (4.4%)	6 (4.4%)	Total ACV	102	34 (33.3%)	16 (15.7%)	11 (10.8%)	8 (7.8%)
Activity 2: Environment attribute list											
Aotearoa NZ	Total	Cutoff 3	Cutoff 4	Cutoff 5	Cutoff 6	Singapore	Total	Cutoff 3	Cutoff 4	Cutoff 5	Cutoff 6
Direct links	289	77 (26.6%)	53 (18.3%)	44 (15.2%)	36 (12.5%)	Direct links	311	77 (24.8%)	42 (13.5%)	27 (8.7%)	16 (5.1%)
Indirect links	409	86 (21%)	50 (12.2%)	35 (8.6%)	28 (6.8%)	Indirect links	497	87 (17.5%)	56 (11.3%)	35 (7%)	21 (4.2%)
Total links	698	163 (23.4%)	103 (14.8%)	79 (11.3%)	64 (9.2%)	Total links	808	164 (20.3%)	98 (11.2%)	62 (7.7%)	37 (4.6%)
Attributes	28	9 (32.1%)	7 (25%)	6 (21.4%)	5 (17.9%)	Attributes	28	12 (42.9%)	5 (17.9%)	4 (14.3%)	4 (14.3%)
Consequences	32	6 (18.8%)	5 (15.6%)	4 (12.5%)	4 (12.5%)	Consequences	39	7 (17.9%)	5 (12.8%)	4 (10.2%)	2 (5.1%)
Values	40	9 (22.5%)	4 (10%)	2 (5%)	1 (2.5%)	Values	48	9 (18.8%)	6 (12.5%)	3 (6.3%)	2 (4.2%)

Total ACV	100	24 (24%)	16 (16%)	12 (12%)	10 (10%)	Total ACV	115	28 (24.3%)	16 (13.9%)	11 (9.6%)	8 (7%)
Activity 3: Commercially available products											
Aotearoa NZ	Total	Cutoff 3	Cutoff 4	Cutoff 5	Cutoff 6	Singapore	Total	Cutoff 3	Cutoff 4	Cutoff 5	Cutoff 6
Direct links	380	83 (21.8%)	44 (11.6%)	32 (8.4%)	9 (2.4%)	Direct links	277	54 (19.5%)	29 (10.5%)	13 (4.7%)	12 (4.3%)
Indirect links	486	79 (16.3%)	49 (10.1%)	17 (3.5%)	10 (2.1%)	Indirect links	345	37 (10.7%)	23 (6.7%)	11 (3.2%)	7 (2%)
Total links	866	162 (18.7%)	93 (10.7%)	49 (5.7%)	19 (2.2%)	Total links	622	91 (14.6%)	52 (8.4%)	24 (3.9%)	19 (3.1%)
Attributes	50	11 (22%)	6 (12%)	6 (12%)	2 (4%)	Attributes	44	13 (29.5%)	7 (15.9%)	3 (6.8%)	2 (2.5%)
Consequences	34	14 (41.2%)	9 (26.5%)	6 (17.6%)	2 (5.9%)	Consequences	35	7 (20%)	4 (11.4%)	2 (5.7%)	2 (5.7%)
Values	42	11 (26.2%)	6 (14.3%)	3 (7.1%)	1 (2.4%)	Values	41	6 (14.6%)	3 (7.3%)	1 (2.4%)	1 (2.4%)
Total ACV	126	36 (28.6%)	21 (16.7%)	15 (11.9%)	5 (4%)	Total ACV	120	26 (21.7%)	14 (11.7%)	6 (5%)	5 (4.2%)

4.3.3 Hierarchical value maps

The HVMs (Figures 4.6 – 4.18) show links between constructs that make up ladders that correspond to the dominant perceptual orientations of the group towards the presented attributes (PA) and products. Constructs were presented attributes (PA), elicited attributes (EA), consequences (C), and values (V). Parent maps used cutoff level of 5, and child maps used cutoff levels of 3 and 5, to reveal broader information or more dominant information, respectively.

4.3.3.1 Dominant perceptual orientations towards provenance attribute list

Both Aotearoa NZ and Singapore parent maps expressed 4 of the 6 presented provenance attributes for activity 1. For Aotearoa NZ the most dominant positive ladders started at *Made in Aotearoa New Zealand* (PA), directly connecting to *Indigenous* and *Informative* attributes, and to *Feels Inclusive* (C) (Figure 4.6). *Indigenous* (EA) directly linked to *Social benefit* (C), and indirectly to *Health benefit* (C), terminating in *Healthy Society* (V). Examining the Aotearoa NZ child map at cutoff level 5 (Figure 4.7), the parent code *Indigenous* was most frequently made up of child code *Uses te reo Māori* (EA) which linked to *Cultural harmony* (C, child of *Social benefit*), terminating in *Social unity* (V, child of *Healthy society*). *Clear origin* (EA) linked to *Supporting Māori*, while *Unclear origin* (EA) led to *Māori harmed* (C) in the child map at a lower cutoff level of 3 (Figures 4.8 and 4.9). *Benefits to Māori* (C) linked to *Social unity*. *Clear origin* (EA, child of *Informative*) led to *Supporting others* (C), which also terminated in *Healthy society*. *Cultural disharmony* (C) and *Feels divisive* (C) also appeared in this child map and was elicited from *Made on our ancestral lands* (PA).

The most dominant positive ladder for Singapore at the parent level was *Made by Māori, the Indigenous people of New Zealand* (PA), which, like Aotearoa NZ, linked to *Indigenous* (EA), but then linked directly to *Natural* (EA), *Health Benefits* (C), and to *Good Health* (V) (Figure 4.10). *Health benefit* also laddered to *Productivity* (V) and *Better Life* (V). Singapore did not express any Society-related constructs in the parent map. The Singapore child map (Figures 4.11 and 4.12) showed that *Made by Māori, the Indigenous peoples of New Zealand* (PA) directly and frequently connected to *NZ brand* (EA), which then laddered to *Good food safety* (V). It also directly connected to *Clear origin* (EA, child of *Informative*) and to *Authenticity* (V, child of *Trust*). Conversely, *Made on our ancestral lands* (PA) linked to *Poor food safety* (V) and *Uncertainty* (V). *Uses native plants* (EA, child of *Indigenous*) mediated the link between *Indigenous* and *Health benefits* shown in the parent map. *Indigenous* also indirectly connected to *Natural* and then *Health benefit* in the child map. The attribute *Made in Aotearoa New Zealand* (PA) did not appear in any of the Singapore maps, meaning that it was not selected as either a positive or negative attribute by most participants.

Aotearoa NZ's most dominant negative parent ladder started at *Made in New Zealand* (PA), which directly linked to *Uninformative* (EA) and *Lack Trust* (V) (Figure 4.6). *Made by an Indigenous family business* (PA) laddered this pathway less frequently. *Uninformative* (EA) also directly linked to *Unfairness* (V) and indirectly to *Feel bad* (V). Similarly, Singapore's most dominant parent negative ladder linked *Made on our ancestral lands* (PA) to *Uninformative* and *Feel bad* (V) (Figure 4.10). Aotearoa NZ also negatively laddered *Made on our ancestral lands*, though they linked it to *Negative Social Impact* (C) and *Unhealthy Society* (V).

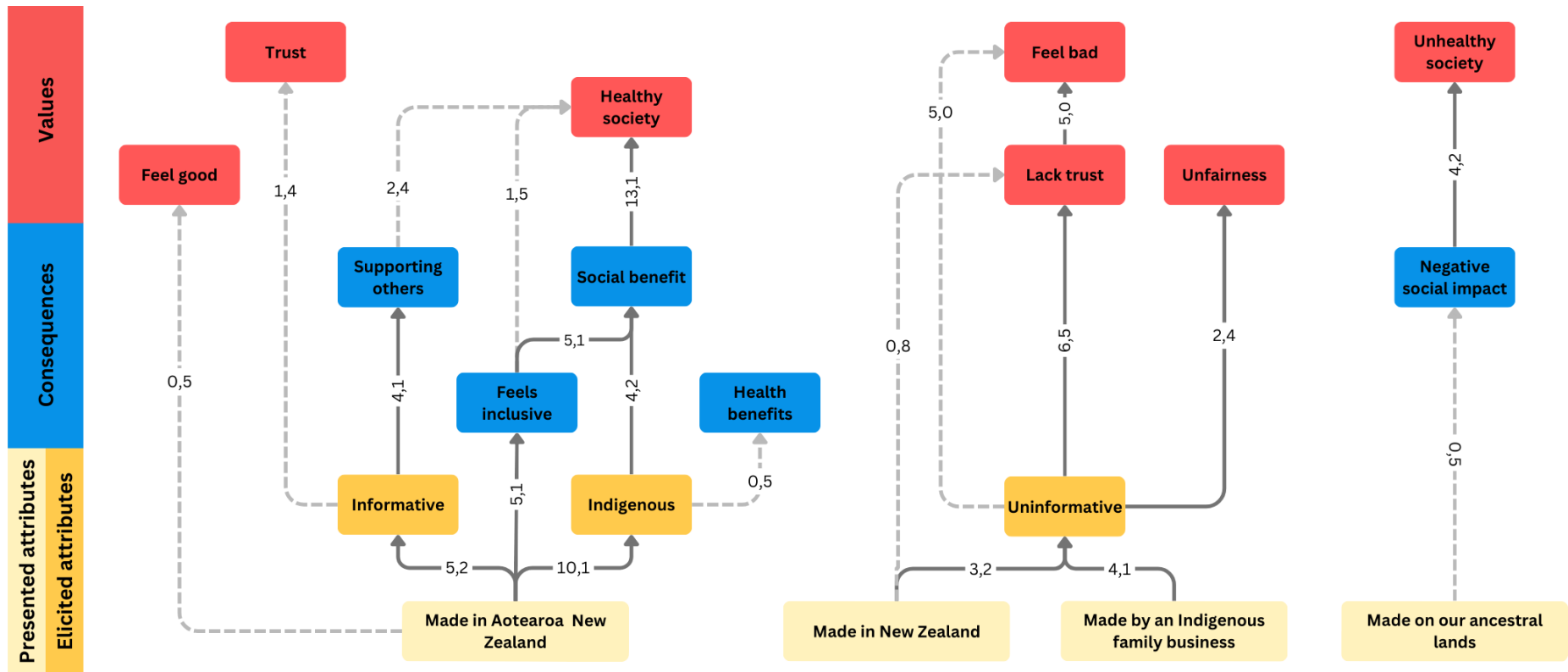


Figure 4.6: Hierarchical value map of parent constructs for Aotearoa NZ Activity 1, at a cutoff level of 5.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct are shown as a full line, while indirect links are dashed. The number of direct and indirect links are indicated along the link line.

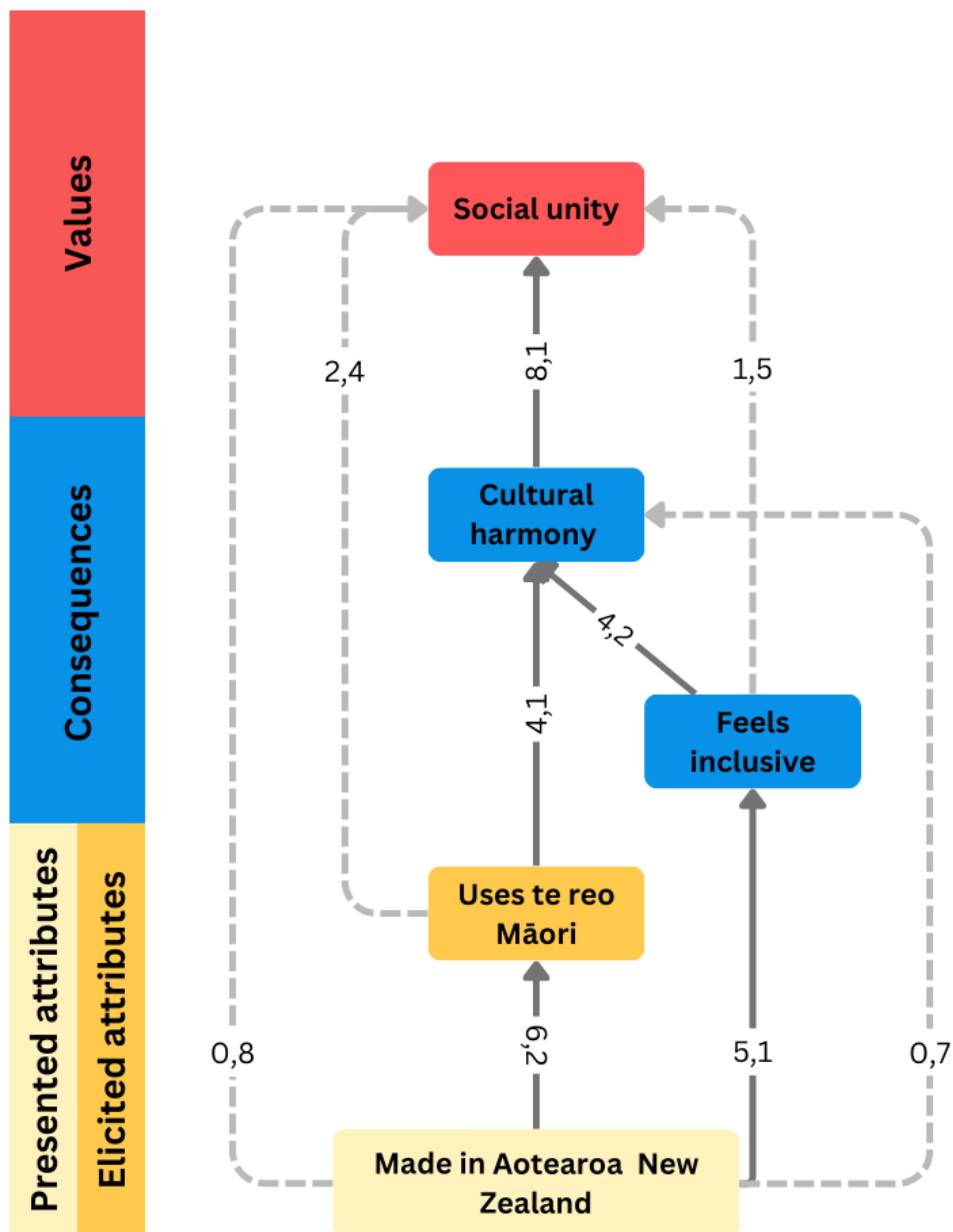


Figure 4.7: Hierarchical value map of child constructs for Aotearoa NZ Activity 1, at a cutoff level of 5.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct are shown as a full line, while indirect links are dashed. The number of direct and indirect links are indicated along the link line.

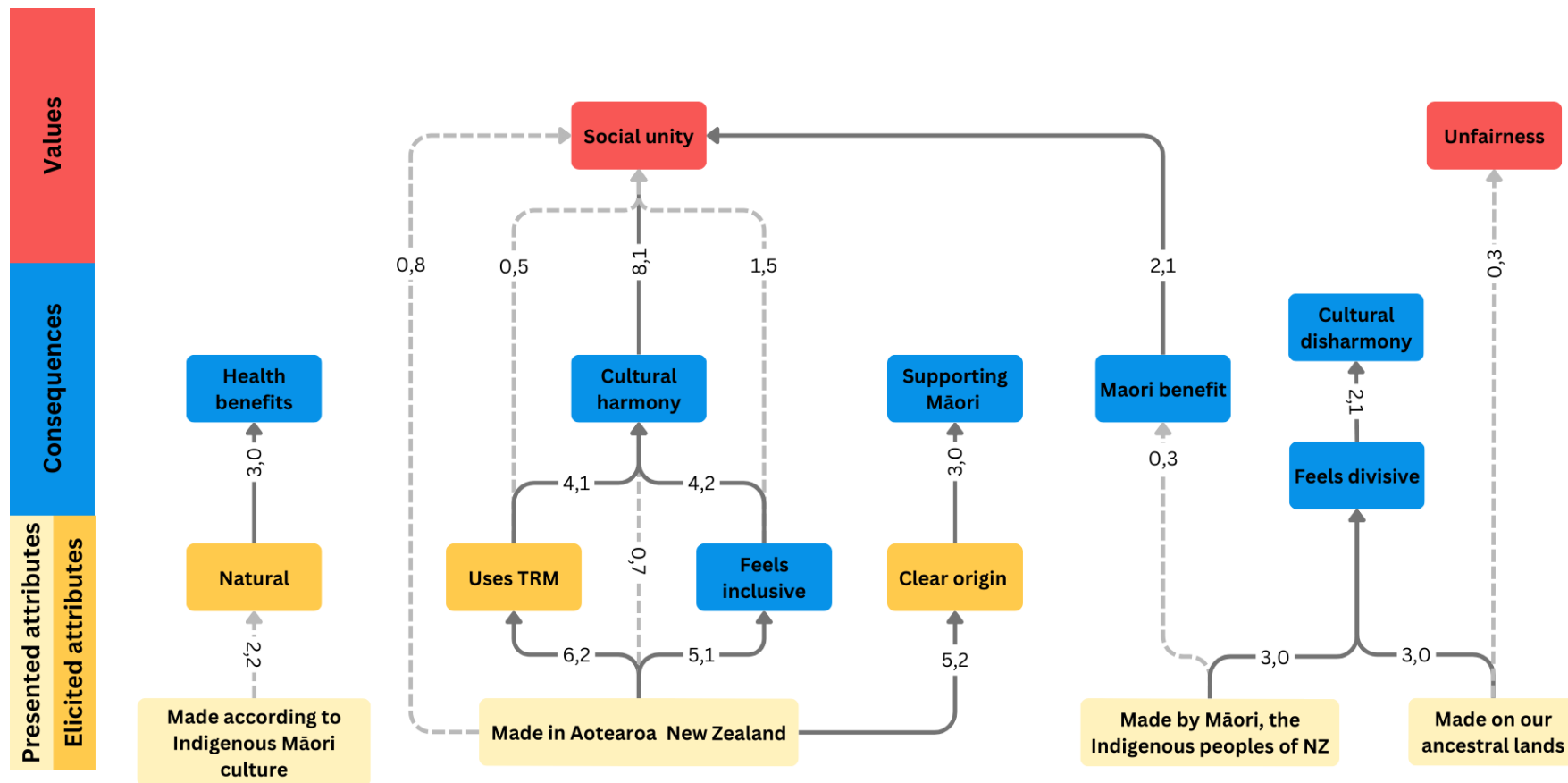


Figure 4.8: Hierarchical value map of child constructs for Aotearoa NZ Activity 1, at a cutoff level of 3.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct are shown as a full line, while indirect links are dashed. The number of direct and indirect links are indicated along the link line.

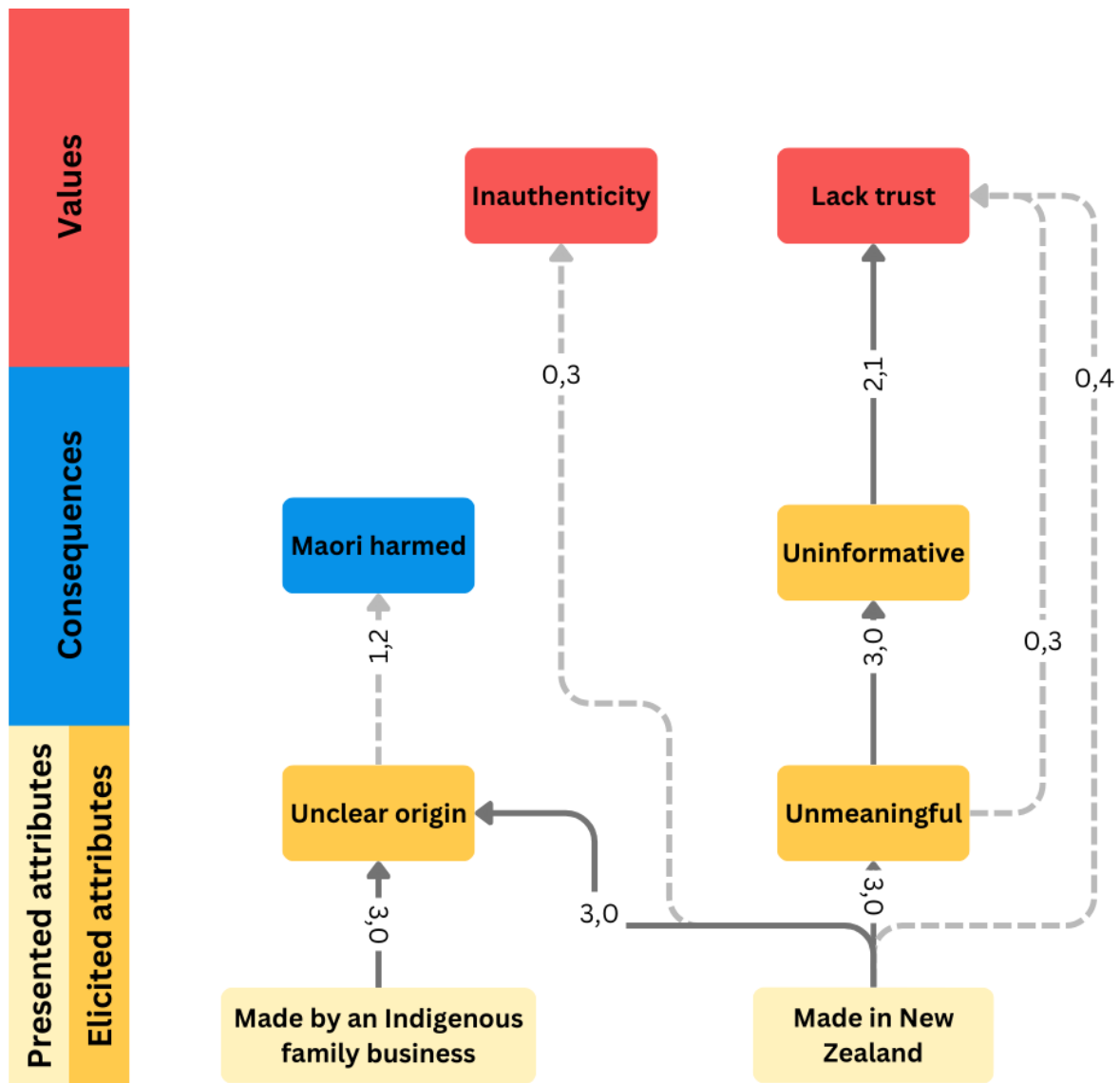


Figure 4.9: Hierarchical value map of child constructs for Aotearoa NZ Activity 1, at a cutoff level of 3, continued.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct are shown as a full line, while indirect links are dashed. The number of direct and indirect links are indicated along the link line

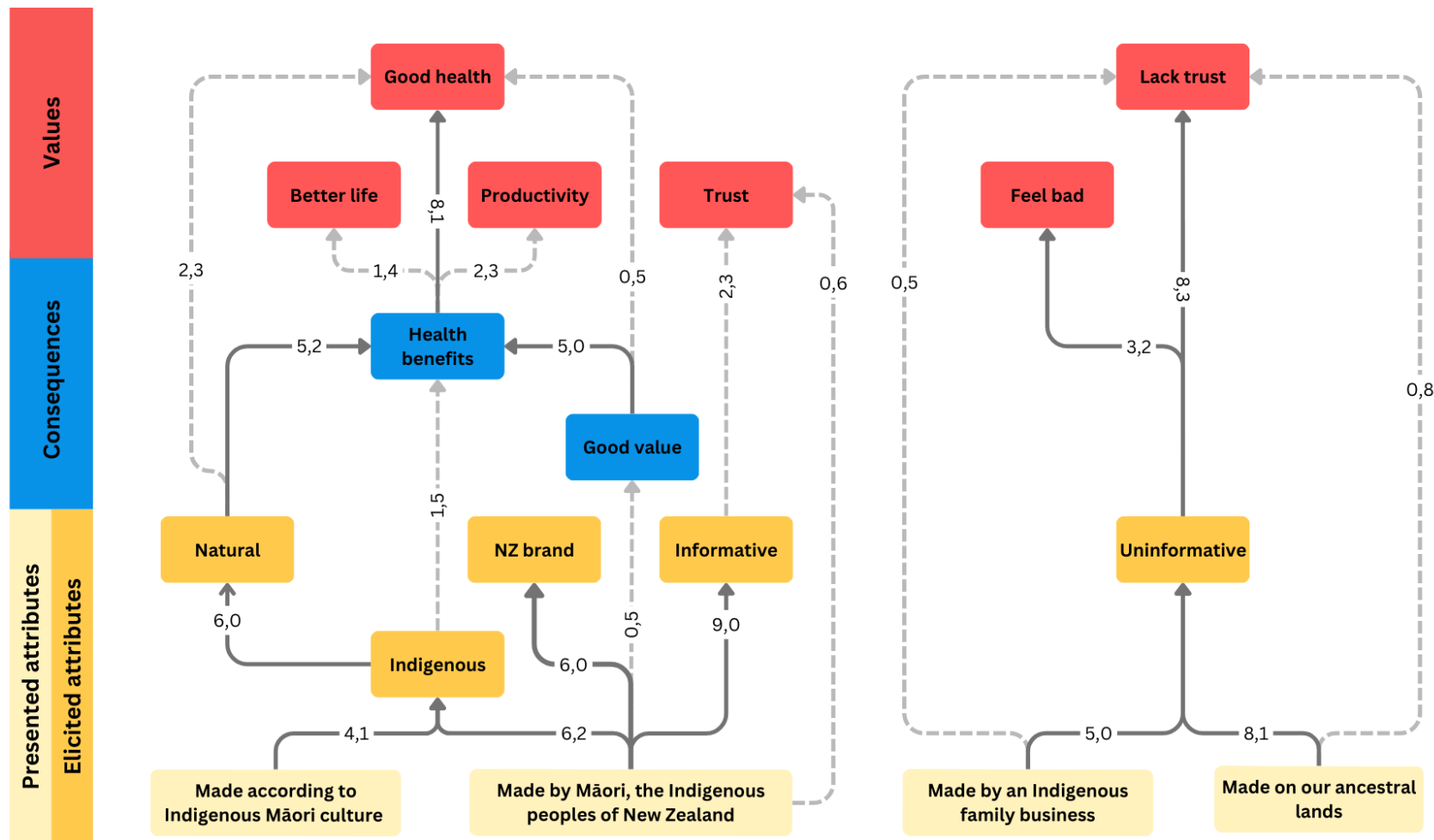


Figure 4.10: Hierarchical value map of parent constructs for Singapore Activity 1, at a cutoff level of 5.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

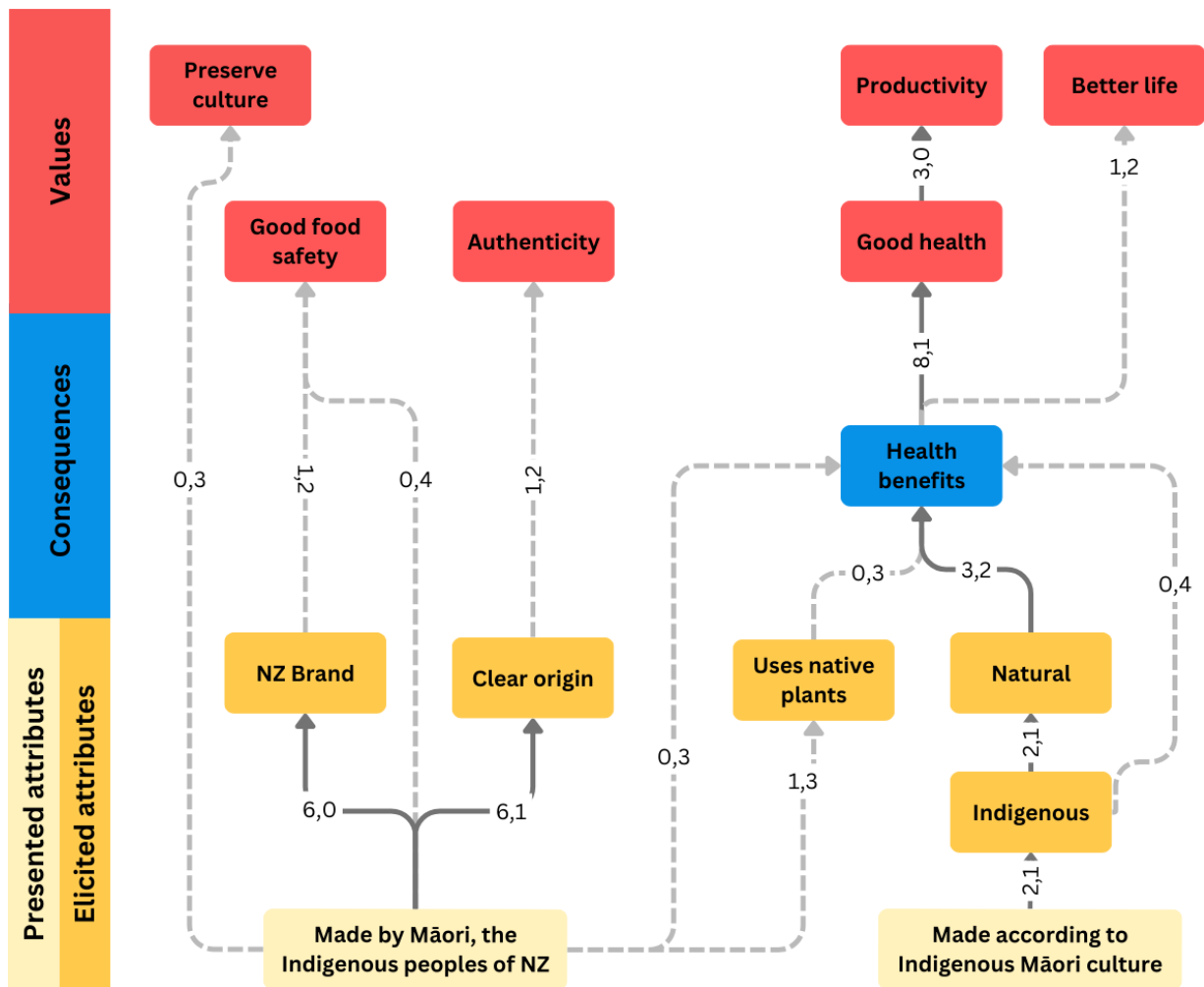


Figure 4.11: Hierarchical value map of child constructs for Singapore Activity 1, at a cutoff level of 3, continued.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

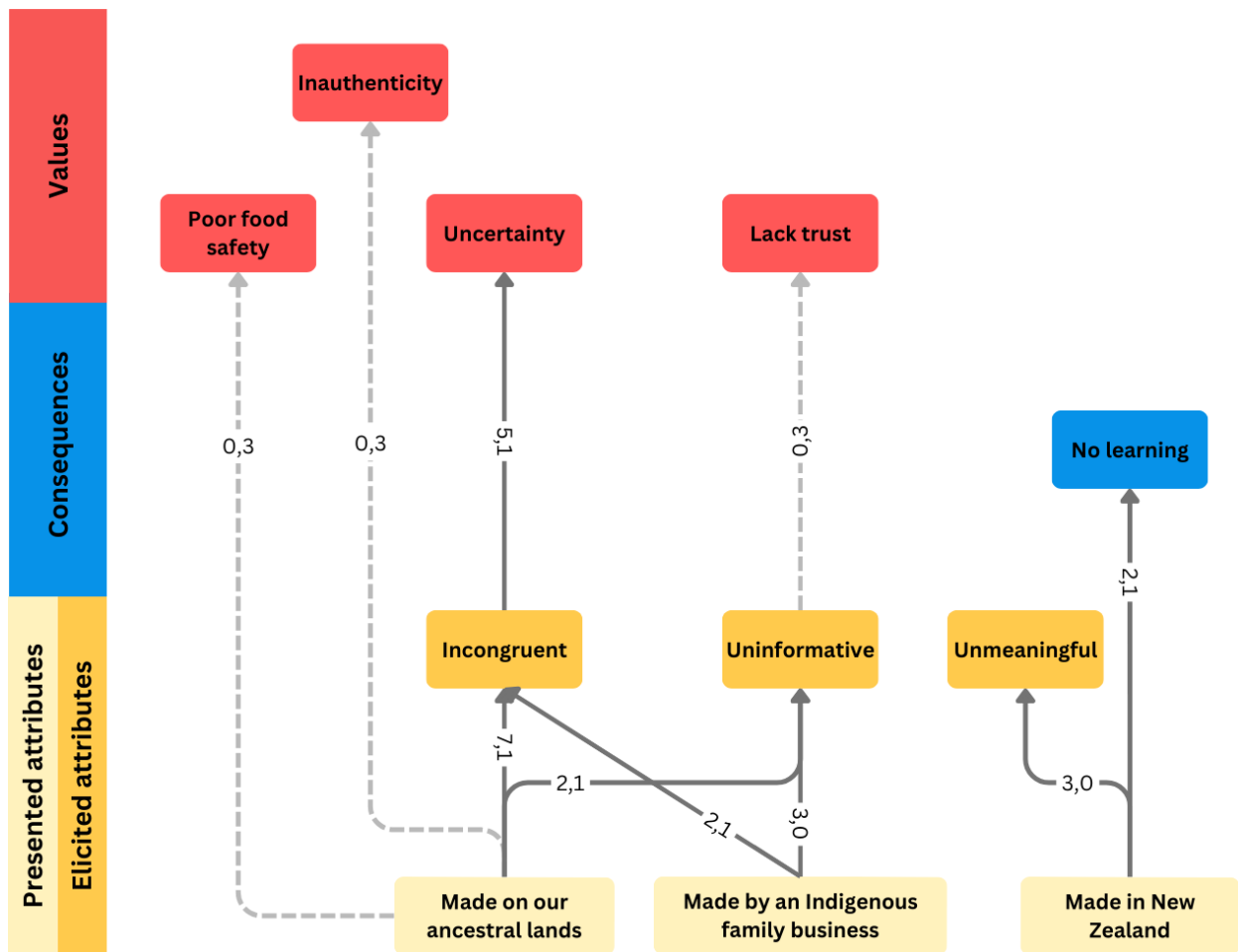


Figure 4.12: Hierarchical value map of child constructs for Singapore Activity 1, at a cutoff level of 3, continued.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

4.3.3.2 Dominant perceptual orientations towards environment attribute list, Activity 2

Both Aotearoa NZ and Singapore parent maps expressed three of the six presented attributes in this activity. For Aotearoa NZ the most dominant positive ladder came off *Made with care for our land, people, and traditions* (PA), which led to *Protect environment* (C) and *Looking after the future* (V) (Figure 4.13). *Sustaining our lands for generations to come* (PA) led to *Healthy society* (V), where the most frequent child code of *Healthy society* was *Social unity* (V), as shown on the child map (Figures 4.14 and 4.15).

The most dominant positive ladder in the Singapore parent map (Figure 4.16) was from *We care deeply for Papatūānuku, Mother Earth* (PA), to *Protect environment* (C), and *Looking after the future* (V). *Protect Environment* also laddered to *Healthy Society* (V) via *Social benefit* (C), and to *Looking after the future* (V). Unlike Aotearoa NZ, when Singapore expressed *Healthy society*, it was not further denominated by *Social unity* or any child code. The child maps of both Aotearoa NZ (Figures 4.14 and 4.15) and Singapore (Figures 4.17 and 4.18) showed that *Protect environment* (C) was central to most of the positive ladders. *Made with care for our land, people and traditions* (PA) also was expressed in the Singapore parent map (Figure 4.16) and laddered to *Protect culture* (C) and *Preserve culture* (V). The Singapore child map at cutoff 3 (Figure 4.17) showed that *Preserve culture* (V) was also linked to *Looking after the future* (V). Constructs relating to protection of culture were not present in the parent or child Aotearoa NZ maps.

The most dominant negative ladder in both Aotearoa NZ (Figure 4.13) and Singapore (Figure 4.16) parent maps was *Carbon neutral* (PA), to *Uninformative* (EA), to *Lack trust* (V). Consequences relating to inclusion and relatability were also expressed in this activity by Aotearoa NZ, but not by Singapore.

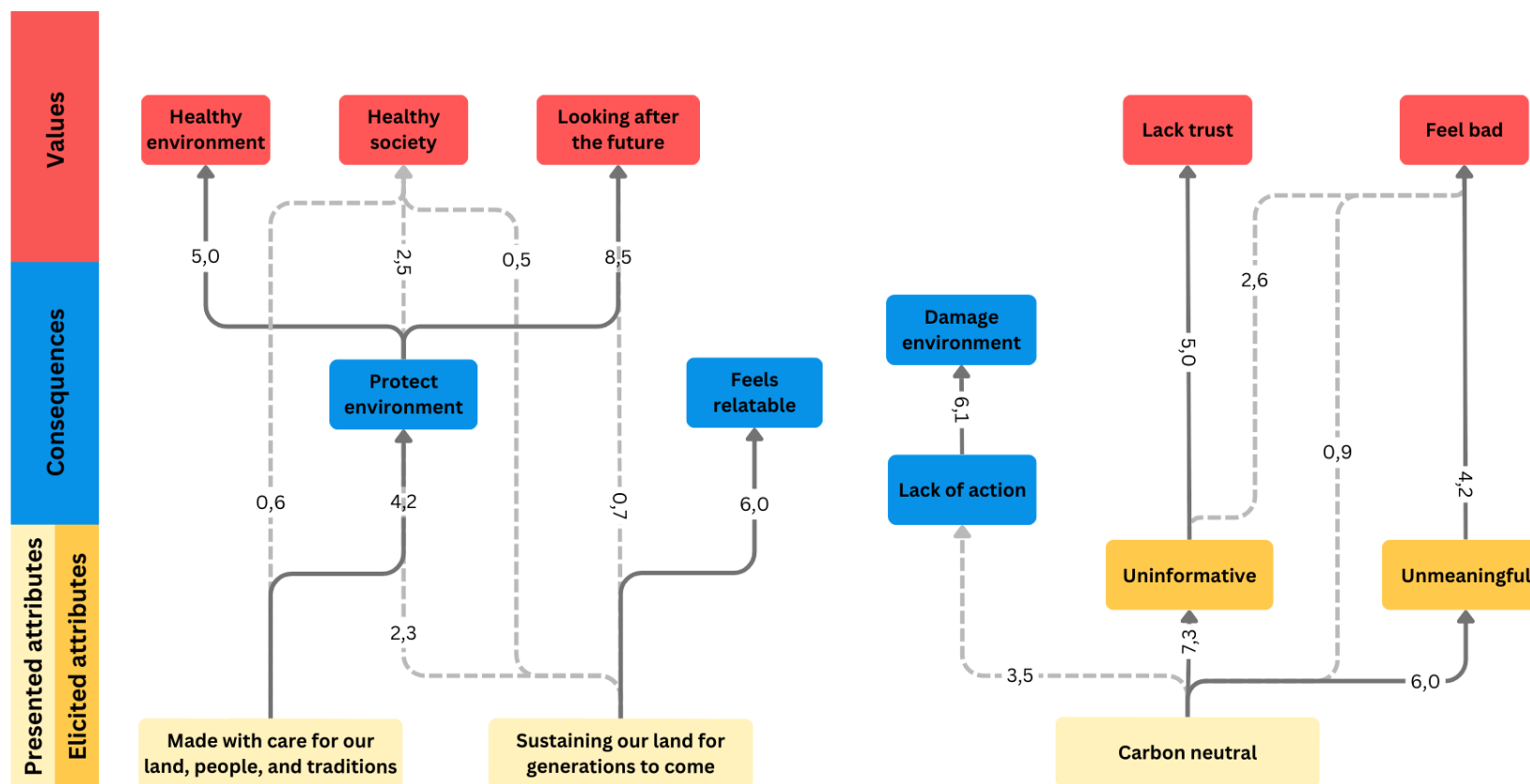


Figure 4.13: Hierarchical value map of parent constructs for Aotearoa NZ Activity 2, at a cutoff level of 5.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

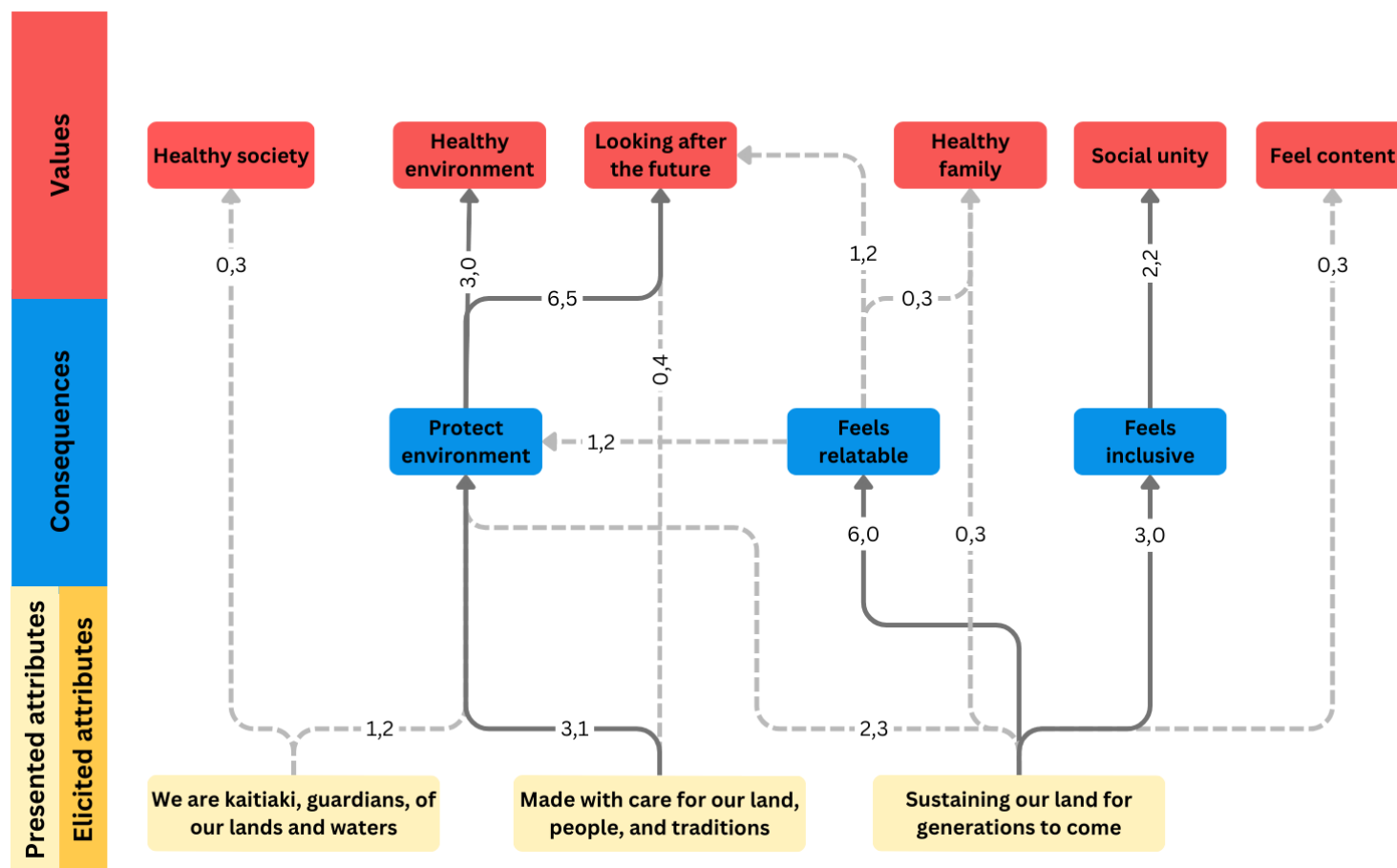


Figure 4.14: Hierarchical value map of child constructs for Aotearoa NZ Activity 2, at a cutoff level of 3.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

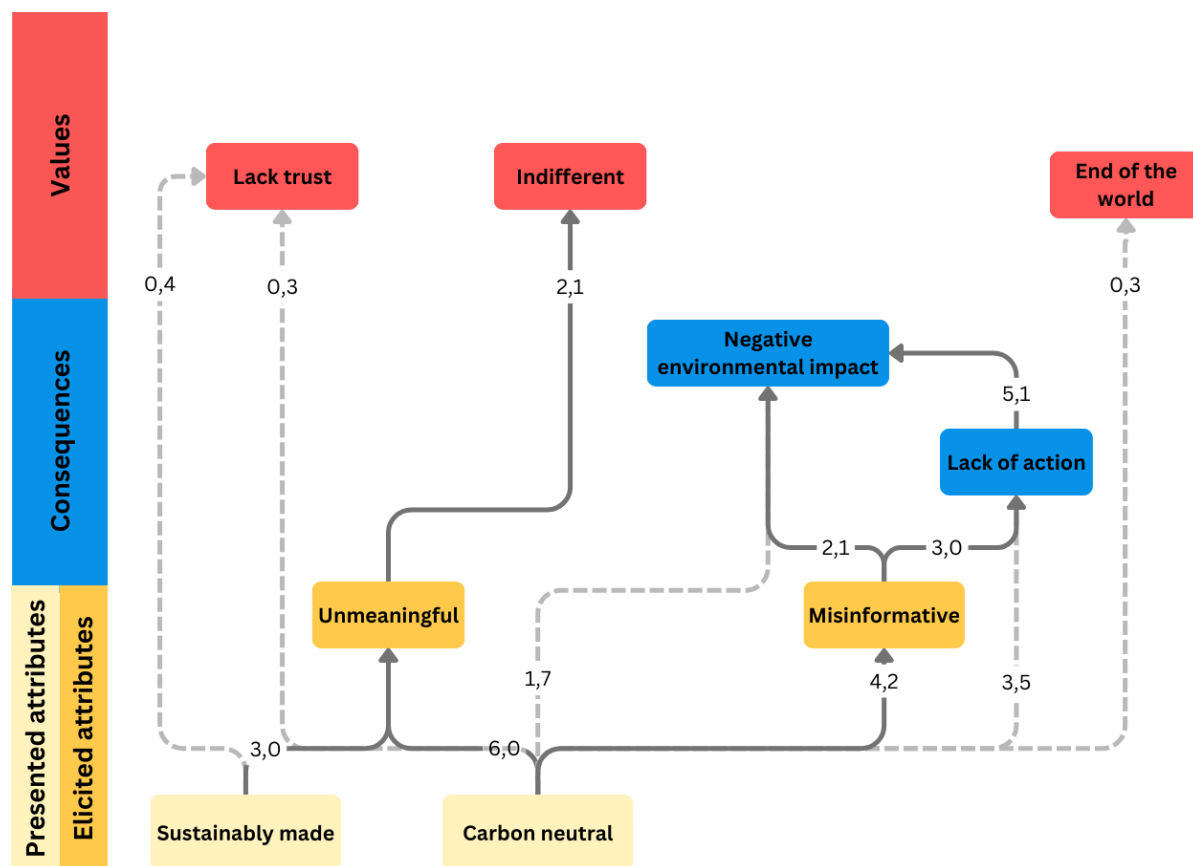


Figure 4.15: Hierarchical value map of child constructs for Aotearoa NZ Activity 2, at a cutoff level of 3, continued.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

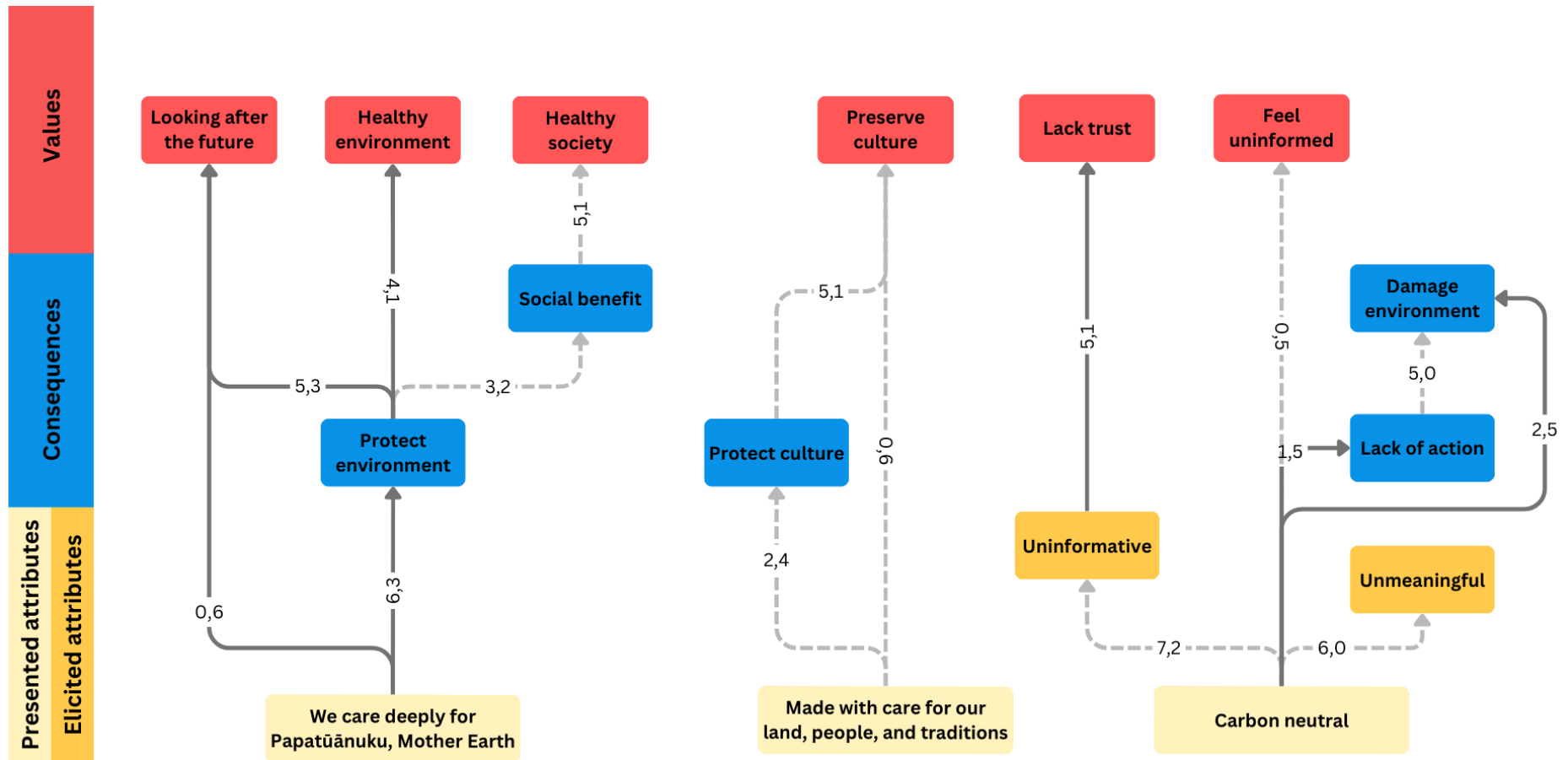


Figure 4.16: Hierarchical value map of parent constructs for Singapore Activity 2, at a cutoff level of 5.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

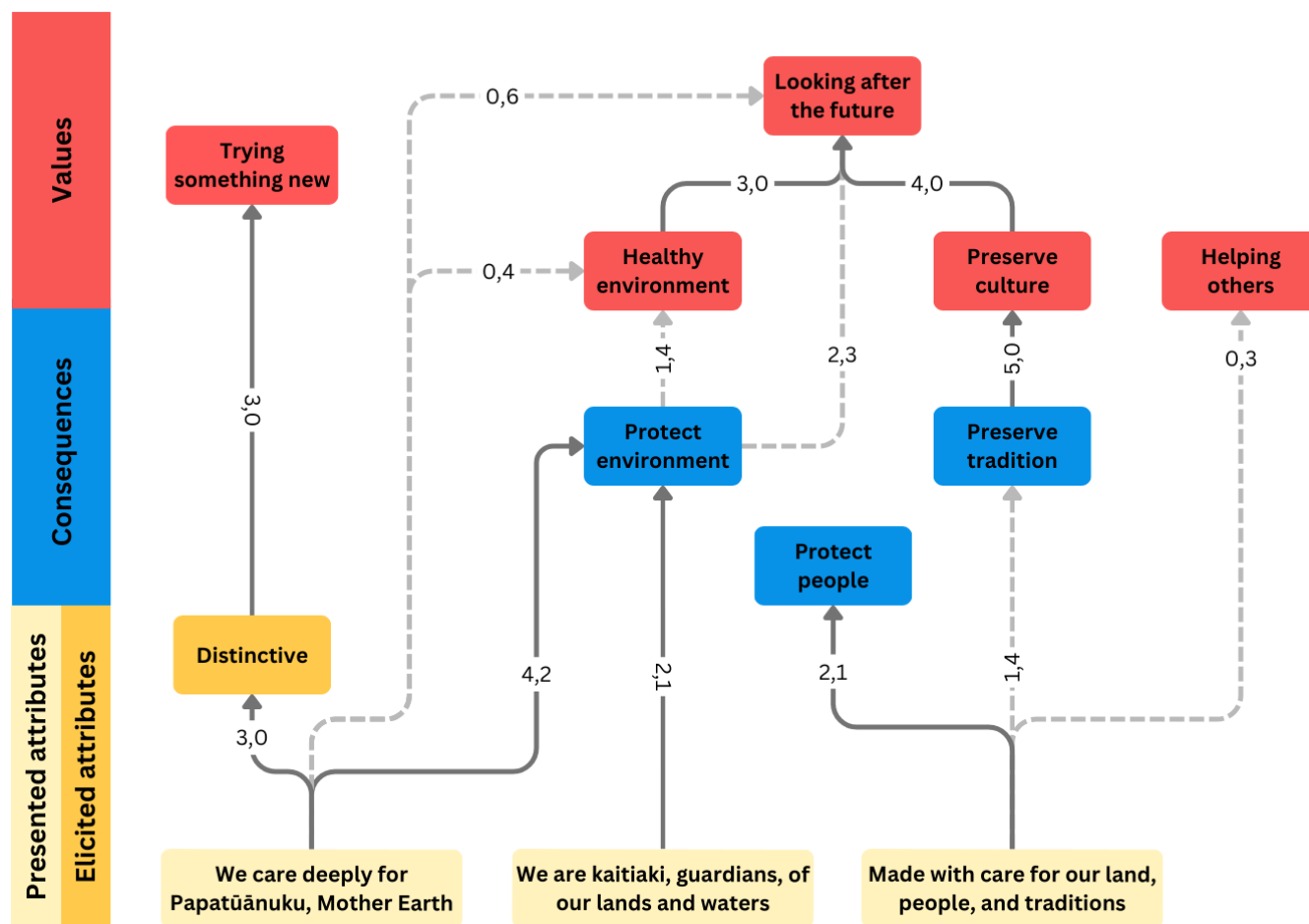


Figure 4.17: Hierarchical value map of child constructs for Singapore Activity 2, at a cutoff level of 3.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

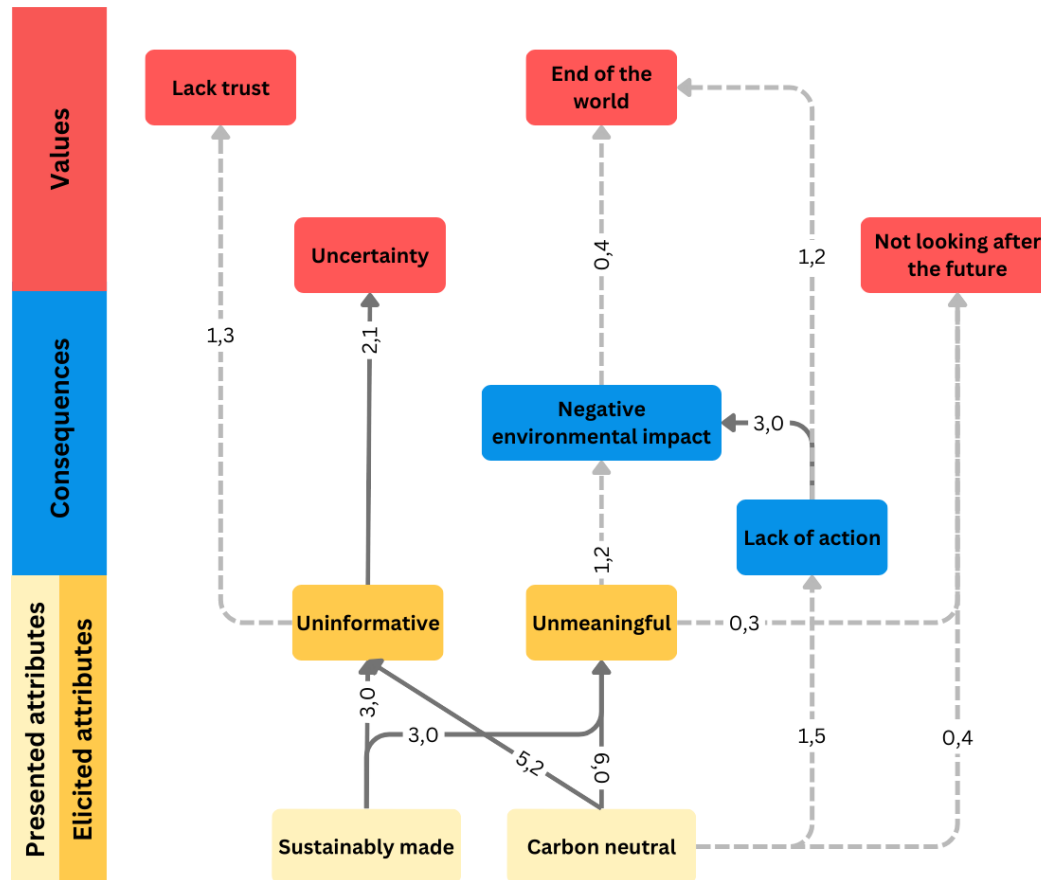


Figure 4.18: Hierarchical value map of child constructs for Singapore Activity 2, at a cutoff level of 3.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

4.3.3.3 Dominant perceptual orientations towards commercially available products

Both groups frequently selected and laddered attributes relating to *Ingredient*, *Origin*, *Award*, and *Aunties*. In the Aotearoa NZ parent map (Figure 4.19), the most frequent and direct links are from *Origin* (EA) to *Supporting others* (C), to *Social benefit* (C), and to *Healthy society* (V). *Origin* (EA) also frequently indirectly linked to *Economic impact* (C), which directly linked to *Healthy society* (V). For over half (n=16) of the Aotearoa NZ participants, knowing the Origin enabled them to ladder indirectly to *Healthy society* (V). Examining the Aotearoa NZ child map (Figure 4.20) *Handmade at Omaka Marae* (EA) was the most commonly expressed *Origin* (EA) to link to *Healthy society* (V). Attributes relating to *Aunties* (EA) led to *Feels relatable* (C), *Feels inclusive* (C), *Feel good* (V) and *Connection* (V).

For the Singapore parent map (Figure 4.21), the most frequent links were from *Ingredient* (EA) to *Natural* (EA) and *Health benefit* (C), to *Good health* (V). Singapore also selected *Origin* (EA) as a standout attribute, but they linked it to *Protect environment* (C) and *Healthy environment* (V), rather than to society-related constructs in the Aotearoa NZ map. For Singapore, attributes relating to 'Aunties' (EA) were laddered to *Traditional* (EA) and to *Feels relatable* (C). Examining the Singapore child map (Figure 4.22), *Natural Organic* (EA, child of *Ingredient*) directly led to *No pesticides* (EA) and then to *Good health* (V). Like Aotearoa NZ, *Origin* (EA) was also positively laddered, but to environmental constructs. The Singapore child map shows that the most frequent *Origin* (EA) child construct was *Ethically sourced* (EA), which positively linked to environmental constructs, and also connected to *Fairness* (V). Aotearoa NZ also frequently selected this attribute but laddered it to society-related constructs. Both groups positively laddered from *Awards* (EA) to *Good value* (EA); Aotearoa NZ linked it to *Feel good* (V), while Singapore linked it to *Good health* (V).

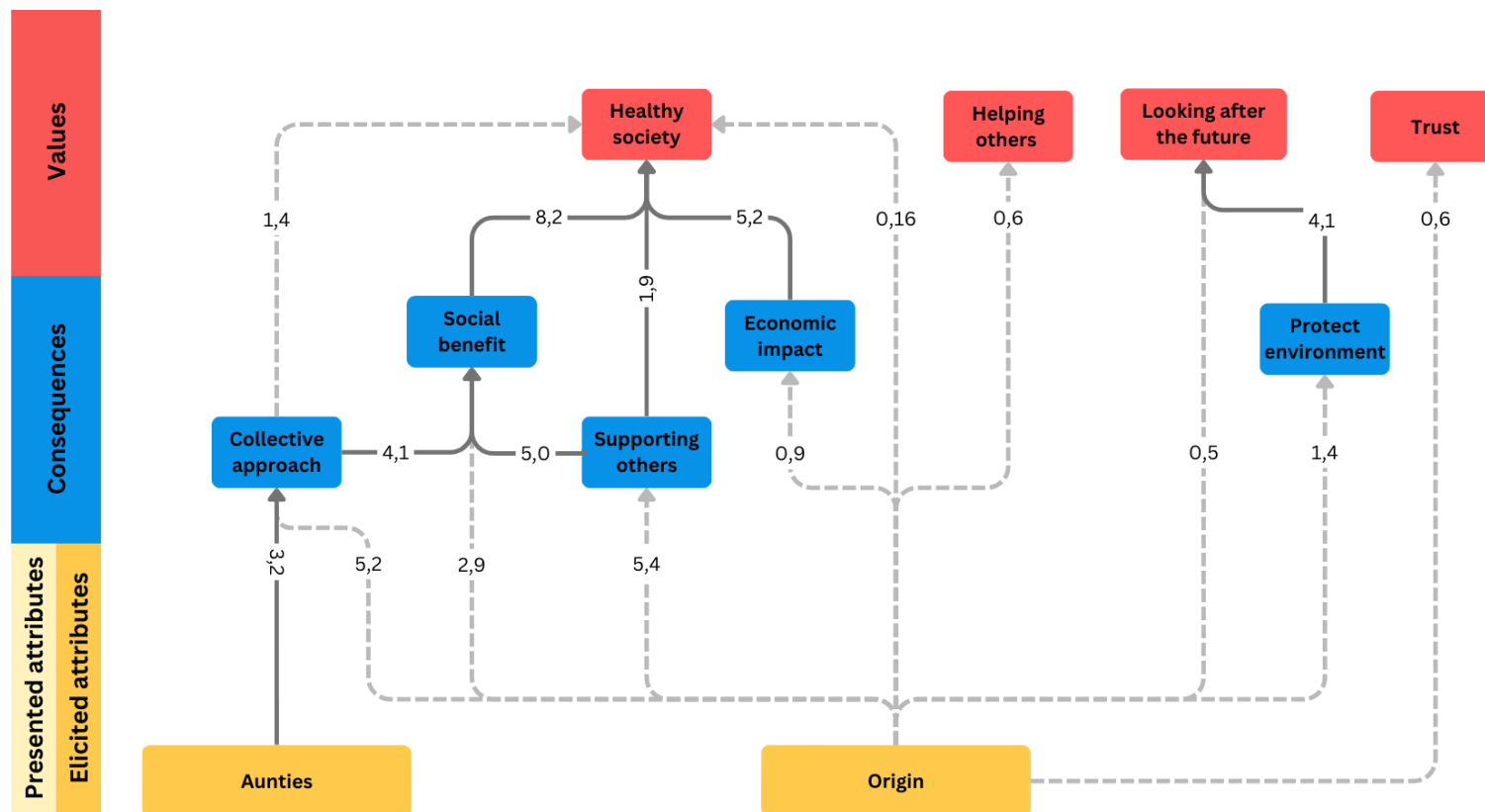


Figure 4.19: Hierarchical value map of parent constructs for Aotearoa NZ Activity 3, at a cutoff level of 5.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

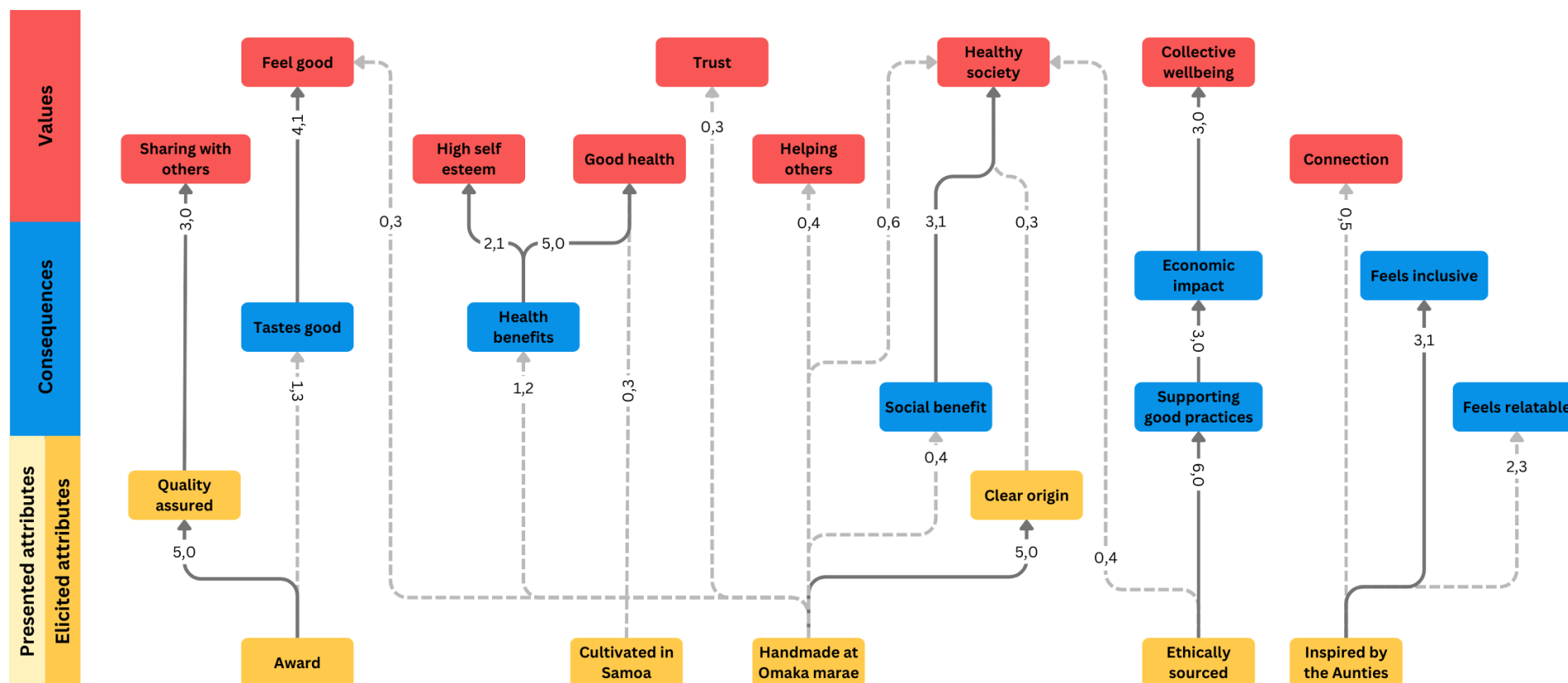


Figure 4.20: Hierarchical value map of child constructs for Aotearoa NZ Activity 3, at a cutoff level of 3.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

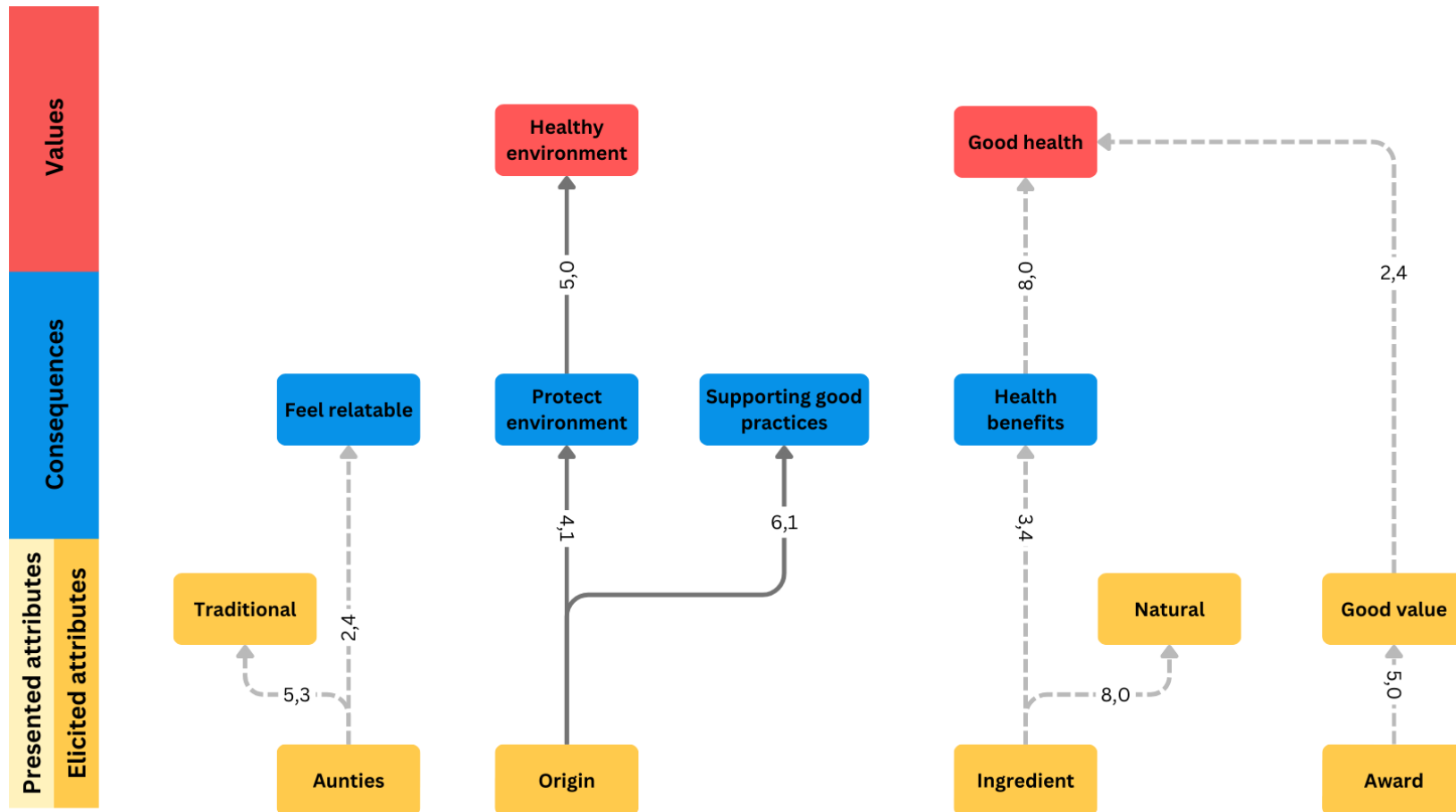


Figure 4.21: Hierarchical value map of parent constructs for Singapore Activity 3, at a cutoff level of 5.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

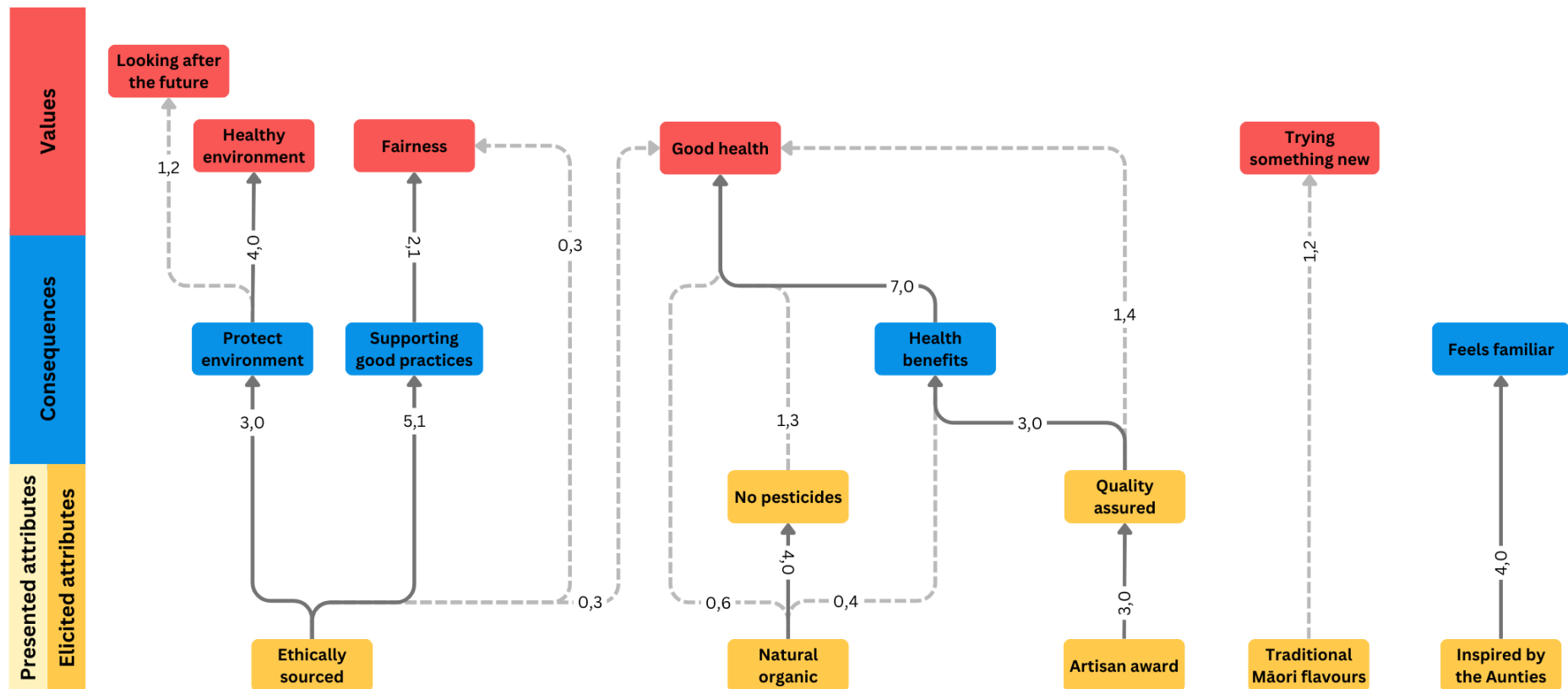


Figure 4.22: Hierarchical value map of child constructs for Singapore Activity 3, at a cutoff level of 3.

Presented attributes (light yellow) sequentially link to elicited attributes (dark yellow) to consequences (blue) and to values (red). Links between constructs that were more often direct than indirect are shown as a full line, while links that were more often made indirectly are shown as a dashed line. The number of direct and indirect links are indicated along the link line.

4.4 Discussion

Across the cultural contexts of Aotearoa NZ and Singapore, critical consumers expressed a range of perceptions towards Māori place attributes. Various perceptions of place branding emerged and highlighted across both groups the importance of a clear origin. Both groups made positive, but different links from Indigenous attributes. Incorporation of Māori culture and use of te reo Māori was positively perceived by both Aotearoa NZ and Singapore. While Aotearoa NZ was more expressive of society-related constructs, Singapore produced perceptions more centred on environmental attributes and personal outcomes such as health benefits. The cultural contexts of these places contribute to shared and divergent perceptions of Māori branding. The impact of consumption on Indigenous people is a previously overlooked aspect of critical consumption and is a novel branding angle for Māori enterprise looking to appeal to critical consumers in diverse cultural contexts.

4.4.1 Shared perceptual orientations amongst critical consumers of Aotearoa NZ and Singapore

4.4.1.1 The importance and functions of a clear place

Despite existing in different cultural contexts, critical consumers in both Aotearoa NZ and Singapore had shared perceptual orientations towards place elements. A descriptive origin, both in the presented attributes and on commercially available products, was laddered positively by both groups. This demonstrates, for the first time, that consumers positively perceive Māori place branding, and indicates a viable pathway for critical consumers to identify and engage with Māori economies.

Knowing the origin of a food fulfils various functions; it can signify various dimensions of value of the product (Thøgersen, 2023). The constructs that Māori place branding evoked differed between Aotearoa NZ and Singapore. For Singapore, clear Māori origins evoked health and productivity, while for Aotearoa NZ, a clear provenance was linked to positive impacts on Māori and society at large. References to Māori place names and cultural sites evoked notions of a harmonious society. Interestingly, the provenance statement “Handmade at Omaka Marae” was positively perceived by Aotearoa NZ, in terms of societal wellbeing. This is also an example of provenance that draws on enterprise ownership and operation structure, which has been noted as powerful opportunity for Aotearoa NZ place branding (Rout & Reid, 2019b). The positive perception of marae-based production and implied conditions is a novel finding, and other Māori enterprise should leverage such statements where appropriate.

Māori movements have long sought to protect and revitalise Māori language and practices in the wake of widespread and aggressive subjugation (Smith et al., 2017). The 2016 Te Ture

mō Te Reo Māori Language Act recognises the interrelated roles of both Māori and the Crown in revitalisation of te reo (O'Toole, 2020). Local, regional, and national shifts in the recognition and support of te reo, by both Māori and non-Māori, represent a significant cultural transformation in Aotearoa NZ. Non-Māori have reported that learning te reo is a means of demonstrating civic responsibility for the achievement of a bicultural nation and the construction of their identity as a New Zealander (Berardi-Wiltshire & Bortolotto, 2022; O'Toole, 2020). The practice of te reo by non-Māori has been associated with nation-building value (Berardi-Wiltshire & Bortolotto, 2022; Te Huia, 2022) and the use of Māori place names with decolonisation of social landscapes by both Māori and non-Māori (Albury & Carter, 2017). This is corroborated here, where the use of te reo Māori on a product invoked a utopian image of a bicultural nation at peace, indicating that the nation brand is a relevant element in food consumption for critical consumers in Aotearoa NZ.

Unclear origin statements also summoned a contested sociopolitical landscape for the Aotearoa NZ group and were linked to cultural disharmony and unfairness. Some participants felt that these constructs reflected either non-Māori assertions to Māori lands, or overreach by Māori in claims to land. Māori alienation from lands enabled the establishment and expansion of the New Zealand state, while destroying the pre-existing bases of Māori economies, politics, and food systems, and severely compromising knowledge governance and identities. Land is a contentious issue in Aotearoa NZ because it ignites issues about Indigenous and non-Indigenous rights in a political and economic context that has carried out aggressive transfer of power away from Māori in the 'public interest', where benefits and harms are inequitably dispersed in society (Sullivan, 2017). This study confirms that Māori place elements are perceived at both poles by critical consumers in Aotearoa NZ. While the goal of this study was to determine dominant perceptual orientations, the occasional ladder from individuals may reveal interesting aspects of cultural context that are not dominant enough to have been expressed by many in the studied group but nonetheless are worthy of comment. For example, one participant, when they observed an image of what is commonly known as the Tino Rangatiratanga flag (a flag designed by Māori women Hiraina Marsden, Jan Dobson and Linda Munn and has come to represent a Māori nation) on one of the commercially available products, became upset and explained that it represented a problematic Māori separatism that unfairly disrupted society. Indeed, this is reported elsewhere, where flying the flag can signal separatism that is perceived as threatening to current social arrangements (Terruhn, 2015). Studies of marketing and branding are generally not used to explore macro forces like Indigenous-settler relations (Firat & Dholakia, 2017) but this type of study contributes to understanding the consumptive landscapes in these contexts. This is the first time Māori branding and Indigenous place branding have been linked to consumption in this manner.

For Singapore, Māori provenance attributes summoned different perceptions. Clear and unclear origins were linked to food safety and unsafety, respectively. Country of origin attributes are known to interact with perceptions of food safety (Thøgersen et al., 2019), and Aotearoa NZ does have a good food safety reputation internationally, including in Asian countries (Dalziel, Saunders, Tait, et al., 2018). Food safety is a ubiquitous prerequisite for healthy food and is a socially negotiated process that organises consent around how food is made and consumed (Hatt & Hatt, 2012) influenced by historical and contextual factors (Tarulevicz, 2020). In Singapore, food safety and culinary culture are connected to its history as a tropical port through ancient, colonial, and postcolonial periods. Colonial-era disruptions to local food systems through exploitative trade have contributed to unsafety of food and has influenced Singapore's status as a food-insecure nation (Ray, 2003, as cited in Tarulevicz, 2020). The loss of substantive local agriculture in post-colonial 1980s and consequent reliance on food imports means that Singaporeans cannot rely on close relationships with food producers to achieve food safety. Instead, food safety in Singapore begins in long supply chains, often far away, and is locally managed (Tarulevicz, 2018). Therefore, it is unsurprising that food safety featured in dominant perceptual orientations towards Māori attributes presented in this study.

Interestingly, 'New Zealand' was frequently seen as an uninformative message and appealed negatively to both the Aotearoa NZ and Singapore groups. This contrasts with other literature, where 'New Zealand' evokes a range of positive attributes (Dalziel, Saunders, Tait, et al., 2018). However, some negative attributes have been linked by consumers to 'New Zealand', including isolation (New Zealand Story, 2024a), low innovation (Dalziel, Saunders, & Saunders, 2018), and compromised freshness (Hay et al., 2021). As Rout and Reid (2019b) note, it is not sufficient to print a provenance statement on a label; place branding requires robust verification. During interviews, some participants discussed feeling patronised by origin statements like 'Made in New Zealand', which to them lacked meaning and amounted to a cheap provenance that leaned on a bygone or unearned reputation. To the authors' knowledge, the New Zealand nation brand has not been explicitly associated with distrust by consumers, domestically or internationally, before. The generation of negative ladder data such as this was a major strength of this study.

4.4.1.2 Varying appeal of Indigenous attributes

Participants in both cultural contexts linked Indigenous attributes to positive outcomes, albeit along different pathways. For Singapore, Indigenous attributes connected to naturalness, health benefits, health, and productivity, where both generic Indigenousness/indigeneity as well as the incorporation of Māori culture and use of native plants underlaid dominant links. The most dominant positive perception by Singapore for environmental attributes was towards

the statement 'we care deeply about Papatūānuku, Mother Earth', where it eventuated in values for environmental protection. Māori researchers have theorised that Māori place branding could be appealing where it makes explicit an animist perspective of the environment and non-human relations (Reid & Rout, 2016). This study confirms that animist statements are appealing even where a concept like Papatūānuku is not well understood, when it has more context surrounding it.

Aotearoa NZ frequently articulated societal constructs in response to Indigenous attributes, whereas Singapore did so less often. This was unsurprising, as Māori have greater social, cultural, political relevance in Aotearoa NZ society than Singapore. Conversely, the Singapore group ladderred via environmental benefits more often than Aotearoa NZ. Singaporeans have been described as being concerned about environmental sustainability (New Zealand Story, 2024a). Accordingly, when presented with attributes in the context of Māori foods, environmental constructs may be more relevant for Singapore than Māori social issues. However, this did not entirely preclude Singapore respondents from linking society-related impacts to Māori attributes. Interestingly, despite the visibility and role of Māori culture in Aotearoa NZ, constructs related to cultural preservation did not appear among the most dominant links for Aotearoa NZ, whereas they did in Singapore. Both Singapore and Aotearoa NZ have experienced the hegemonisation of the English language above Indigenous and other languages (May, 2023; Tang, 2020). However, Singapore has longstanding policy agendas for multicultural and multilinguistic continuation (Noor & Leong, 2013; Wee, 2014), while the NZ state has historically marginalised te reo Māori and there continues to be a racialised opposition to te reo in Aotearoa NZ society (May, 2023). The role of te reo in Aotearoa NZ society is debated; te reo is a taonga and belongs to Māori, but also has a role as a 'civic language' where it carves out a national heritage that does not belong only to Māori but to New Zealand (Rata & Tamati, 2013). Māori indigenisation aspirations are connected to bicultural projects, which are more often state-led than Māori led, but fundamentally are distinct movements with different politics (Rata & Tamati, 2013). Therefore, for Aotearoa NZ respondents, who were largely non-Māori, cultural preservation did not appear in the HVMs, possibly because of the divergent nature of these movements. The conscientisation of te reo revitalisation and Indigenous politics was reflected in some of the responses by the Aotearoa NZ group where they recognised te reo use as contributing to a healthy society, but not in terms of cultural preservation like in Singapore.

Additionally, it is not to say that Singapore consumers or Singaporeans more broadly do not experiences issues of social harmony. Like Aotearoa NZ, the cultural context of Singapore contends with its own colonial legacies and multicultural ideologies and policies (Lynn-Ee Ho, 2006). It is just that these notions were largely not expressed in response to Māori attributes,

which were perhaps perceived as a distant Other with little relevance to Singapore society. Singaporean respondents may have also had more critical views than those they reported, as a “courtesy bias” in East Asian and Southeast Asian contexts can enable polite but less truthful responses (Banks, 1997; Baumgartner & Steenkamp, 2001; Jones, 1993; Witkowski et al., 2003). In summary, the reasons NZ and Singapore consumers link Indigenous attributes to positive outcomes vary, depending on cultural context.

4.4.2 Implications for Māori enterprise and future foods

Place branding is not necessarily the be-all and end-all for Māori food branding; social responsibility and traditional culture have been rated as the least important food product attributes in some measurements of relevant export markets (Guenther et al., 2015). Country provenance statements may also have limited influence on purchasing decisions (Samiee et al., 2024), or have significant influence (Thøgersen, 2023), depending on geographic and product context (Insch & Cuthbert, 2020). On the other hand, consumers who want to express values for environmental, social, and political wellbeing are said to be a growing group and represent one mechanism of change for food systems (Isenhour, 2011).

Despite their different cultural backgrounds, critical consumers in Aotearoa NZ and Singapore exhibited positive perceptual orientations towards Māori and Indigenous attributes. This is a novel finding for place branding of Indigenous foods. It suggests that Māori branding can resonate across different contexts, although each context presents varied opportunities and challenges for effective storytelling. In Aotearoa NZ, Māori branding can resonate with critical consumers when appealing to concepts that evoke social issues or solutions. Tugging at Aotearoa NZ sociocultural tensions could galvanise brand identity and awareness for a brave enterprise, while also negatively appealing to some consumers, as demonstrated here. For Singapore, Māori branding may succeed via environmental appeals, but whether positive perceptions elicited in this study would translate to meaningful opportunity in the competitive export market of Singapore is unknown. Additionally, most Singaporean participants did not select the provenance attribute referencing ‘Aotearoa’, indicating low awareness of this place name and its associated characteristics. While low international awareness of Māori place names has been documented (Ministry for Primary Industries, 2024) it also signals an opportunity to develop Māori place brands.

Participants frequently expressed distrust towards ambiguous environmental statements in both contexts, highlighting a need for transparency and evidence to support such messaging. While explicit attributes about food sovereignty and self-determination were not tested in this study, participants in Aotearoa NZ did express constructs related to protection of Māori interests, indicating that future foods could leverage these kinds of statements to connect with

critical consumers. Food security and sovereignty are also relevant to Singaporeans, as well as protection of culture and identity, and so these attributes could be positively leveraged by Māori future foods. For both contexts, trust was engendered from clear provenance statements. However, just a statement alone is often not sufficient (Rout & Reid, 2019b) and robust authentication is required, and Māori enterprise should consider how to communicate clearly and in media outside the food label, such as websites, which are a useful place-branding mechanism (Rout & Reid, 2019b).

Māori culture for agrifood marketing is often characterised as a mechanism for fetching a premium return (Ministry for Primary Industries, 2023a, 2023c, 2024). While this is indeed true and is important for Māori enterprise, place branding may also fetch other forms of value for Māori. Improving the articulation of Māori provenance with compatible offerings like future foods could contribute to Māori visibility and leadership in the food sector (Hutchings et al., 2020). This in turn could enhance Māori power in nation branding and inform priorities for food system change. More Māori presence in high-value food production could also create momentum for protection of Māori culture and foods in, and from, the market. Māori place branding need not just be leveraging associations for profit generation; however, it is not known what conditions are required for Māori place branding, or place branding in general (Andéhn & L'espoir Decosta, 2018) to achieve these functions.

4.4.3 Strengths, limitations, and recommendations for future research

This study explored multiple dimensions of place and its relationship to food consumption, contributing to both place research (Andéhn & L'espoir Decosta, 2018), to an ecosystems view of consumer research via Indigenous marketing (Love & Hall, 2024) and to understanding Māori future foods. It specifically examined Māori place branding and consumer place associations within the broader contexts of Māori and Indigenous marketing, cognitive psychology, and consumer science. This integrated approach represents a unique contribution to each of these fields.

There were some limitations regarding MEC and laddering practice. The interview structure might have prompted unrealistic responses from participants; in that the presentation of pre-selected attributes, isolated from a real product context, may not reflect how they actually appear or are perceived in the world. Also, the perception and importance of provenance messages depends on the product type (Ozretic-Dosen et al., 2007) and so the perceptions expressed in this study may not translate to all Māori offerings. Further, the attitude–behaviour gap is a known phenomenon where values do not always decide food consumption (Carrington et al., 2014; Vermeir & Verbeke, 2006). This research did not seek to weight

importance or actual behaviour, which could be seen as a limitation. On the other hand, investigating the reasons and pathways for perception of place branding was a novel contribution to Māori and Indigenous marketing.

The Aotearoa NZ group had few Māori participants, who are likely to be particularly receptive to Māori offerings. This study therefore was unable to draw robust comparisons between Māori and non-Māori respondents in the Aotearoa NZ group. Future research could explore Māori perceptual orientations in more depth. In addition, since this study focused only on critical consumers, a broader exploration of the Aotearoa NZ population's perceptual orientation may also be valuable. The impact of consumption on Indigenous groups is often underrepresented in literature around critical or ethical consumption. However, it represents a significant and intriguing dimension that warrants further exploration in consumption discourse.

4.5 Conclusion

This study confirmed that a variety of Māori place elements are positively perceived by critical consumers across domestic and international contexts. Both groups expressed various social and environmental outcomes of Indigenous production, which highlights novel branding angles that Māori enterprise could leverage across different contexts. The findings of this chapter establish some implications for enterprises operating or wanting to operate in these markets. The impact of consumption and marketing on and for Indigenous peoples is an overlooked aspect of consumer research and marketing and this work contributes a critical perspective of Māori and Indigenous place branding and brings a rich account to cross-contextual consumption research. Building on the previous chapters, this chapter is a contribution to a still-gestating Māori and Indigenous marketing sphere.

Chapter 5

Discussion & Conclusion

5.1 Discussion

The aim of this thesis was to explore the productive and consumptive landscape for Māori future foods, focusing on identifying key alignments, challenges, and opportunities for Māori. Initially, Māori future foods were broadly conceptualised as processes and outcomes of food production that foster positive impacts on planetary, human, and kin health, and which may be underpinned by Māori worldviews and imperatives. Investigation of Māori future foods was essential because they can align with Māori food philosophies and contribute to realising Māori aspirations and wellbeing. It was also essential because as food system transformation gains prominence, Māori and Indigenous leadership and participation are required for any such process to be just and truly transformative. The research addressed significant knowledge gaps regarding the connections between future foods, Māori enterprise, and their potential to support Māori economies. It highlighted the importance of place branding as a strategy for value protection and cultural expression in the context of Māori future foods and examined how Māori place branding resonates with potential consumers. The novelty of this thesis lies in its transdisciplinary approach, integrating insights from Māori food enterprise, future foods, place branding, and consumption research. By applying a critical lens to past, present, and future food systems, it provides a description of Māori future foods grounded in Māori histories, priorities, and aspirations.

As this thesis concludes, it is important to highlight three key messages that encapsulate its central findings, contributions, and implications. First, Māori future foods possess characteristics that render them important and relevant to Māori on several levels. Second, Māori future foods are enabled by place branding. Third, Māori place branding in a food context contributes to Māori enterprise development and advancing Māori and Indigenous marketing. The findings of this thesis have implications for developing Māori future foods and advancing the research and practice of Māori and Indigenous place branding. By examining these interconnections, the research contributes to a deeper understanding of how Māori aspirations can shape and benefit from future food systems.

5.1.1 Characteristics and significance of Māori future foods

The first key message of this thesis is that Māori future foods possess distinct characteristics and are important on multiple levels. This theme was established in Chapter 2, which aimed to explore key alignments, opportunities, and challenges for Māori plant-based future foods (PBFFs), through interviews with participants working in Māori enterprise. Alignments between Māori and PBFFs were important to describe for numerous reasons, including, known and growing value of Māori horticulture (BERL, 2020); coalescence with cultural knowledge and kinship relations with plants (Wehi & Roa, 2019); a need for Māori agrifood diversification and

resilience in an era of anthropogenic climate change (Manatū Ahua Matua & Ngā Pouwhiro Taimatua, 2021); global recognition of the benefits of plant-based diets for food futures (Willett et al., 2019); potentiality of Indigenous plant foods for food system change; and concomitant Indigenous marginalisation from decision making in such change (Cardoso et al., 2022).

A key finding of Chapter 2 confirmed that PBFFs align with Māori enterprise approaches and aspirations because they facilitate kinship responsibilities, enable the expression and protection of multiple forms of value, and are a vehicle for food sovereignty and self-determination. The holistic approaches of Māori enterprise and the multimodal value of Māori food were already known in Māori scholarship (Awatere et al., 2017; Hutchings et al., 2020; Mika et al., 2022; Wolfgramm et al., 2020). The findings of Chapter 2 contribute new insights by articulating the relevance of PBFFs. Māori enterprise leverages PBFF production to extend benefits across kinship networks, prioritising relationships in kinship networks that include taonga, land, family, atua, and tribal entities. Participants also highlighted the political nature of food production, emphasising that self-determination and sovereignty are foundational for Māori PBFFs. The role of kinship dynamics and tino rangatiratanga embedded Indigenous imperatives in the concept of future foods, thereby broadening their potential scope, and validating their relevance for Māori. While future foods have received focus from government, industry, and academic spheres in recent years in Aotearoa NZ, there was a scarcity of Māori perspectives. Confirming the unique alignments, opportunities, and challenges for Māori future foods is a significant contribution to national discourse on this emerging sector.

Challenges specific to Māori future foods included balancing cultural protection and tikanga-led practices with commercial imperatives, scaling these practices, and uncertainties about what tikanga-led PBFFs entail. Participants also highlighted systemic issues, such as historical injustices, an imbalanced treaty relationship with the Crown, and the difficulty of protecting mātauranga Māori. This challenge informed the focus on place branding in Chapters 3 and 4 and expanded the thesis to address future foods more broadly than PBFFs. These findings underscore significant equity considerations, as Māori face unique barriers compared with non-Māori food innovation in Aotearoa NZ, complicating future food development and PBFFs for Māori. A treaty and agrifood environment that is more responsive to Māori rights and aspirations and prioritises Māori leadership was identified as necessary to facilitate flourishing food futures; the potential for Māori participation in future foods, as a food regime that is more responsive to Indigenous leadership, has been noted elsewhere (Sinclair-Thompson, 2022). Indigenous treaty dynamics are often not mentioned in food systems transformation, and this thesis confirms that ‘future foods’ of Aotearoa NZ necessarily involve te Tiriti and agrifood policy that commits to values-based transformation for the agrifood sector.

Chapter 2 also identified potential mitigating factors for a variety of these challenges. Participants identified the formation of PBFF clusters and collaborative approaches, grounded in genuine relationships and Māori economic principles, as powerful enablers for advancing the sector. Such collaboration, which is well-documented within Māori enterprise (Mika et al., 2021; Rout et al., 2020; Ruwhiu et al., 2021), offers a feasible pathway to address challenges while fostering a streamlined and sustainable future for PBFFs. Participants noted that lessons learned in other sectors, such as the translation of cultural values into food production, can be applied to PBFFs. The branding of Māori future foods, particularly cultural and place branding, was identified by participants as an area of simultaneous challenge and opportunity. Branding of Māori PBFFs involved culturalisation of enterprise and communication about the unique aspects of Māori future foods, though these narratives can be difficult to balance in terms of consumer intelligibility and authenticity. Māori provenance was also described by participants as incredibly valuable, but vulnerable to misappropriation, which initiated the focus on place branding in the following chapters.

5.1.2 Māori future foods can be enabled by place branding

The second key message of this thesis is that place branding plays a crucial role in enabling the development of Māori future foods. Place branding was relevant for Māori for several major reasons; Indigenous relationships with their places are inextricably connected with their identities, knowledge, foods, and wellbeing; place branding is highly political and is a mechanism for sovereignty and self-determination, as well as colonisation or decolonisation; and place branding can facilitate Māori influence in the agrifood sector.

Each study in this thesis investigated different mechanisms through which place branding benefits Māori food enterprises. Building on the potentiality of Māori provenance as identified by Chapter 1 and Chapter 2, Chapter 3 examined the use of place content on Māori food and beverage packaging. This research confirmed that place branding was prevalent and explored the functions of Māori place branding in the food context, such as expressing Māori language, culture, and identity. This key finding further confirmed the relevance of place branding for future foods, as expressed by participants in the first study. The second study also addressed gaps in place branding literature by highlighting Indigenous assertions to place function within a non-dominant Māori economy, contributing to the emerging field of Māori and Indigenous marketing (Love & Hall, 2024). Further, it made a novel contribution to place literature, which has tended to focus on narrow conceptions of value and place (Andéhn & L'espoir Decosta, 2018), by illuminating the nature of Indigenous places and branding application within a non-dominant economy, i.e., the Māori economy.

Given the prevalence of Māori place branding, and potential relevance for future foods, the final study in Chapter 4 aimed to determine the dominant perceptual orientations of critical consumers in Aotearoa NZ and Singapore towards Māori place attributes. This study's key, and novel, finding was that critical consumers across both contexts had a positive perception of various Māori place attributes. This conclusion added resolution to what participants had expressed in Chapter 2, revealing precise cognitive pathways where the value of Māori place branding is perceived and understood by likely consumers of Māori future foods. The perceptual orientations uncovered also signal potential branding strategies suited to each country context, as well as attributes that were negatively perceived and should be used carefully or avoided. Additionally, in recent years, Aotearoa NZ brands have generally failed to capitalise on place attributes for agrifood, which suggests ripe opportunity for Māori (Rout & Reid, 2019b).

This thesis offers a timely examination of Māori place branding, an emerging area in academic literature (Reid & Rout, 2016; Sharma et al., 2021). While the negative impacts of commercial capitalist marketing are well-documented, the potential of Māori, Indigenous, and decolonial marketing practices are only now gaining recognition (Love & Hall, 2022; Love & Hall, 2024; Raciti, 2022). Accordingly, this thesis provides a foundational contribution to place branding literature, the majority of which has been produced out of North America, Europe, and Australia, with minimal exploration of the experiences of marginalised and Indigenous groups (Lew, 2017). Place branding literature also predominantly focuses on tourism and built environments, and less on food and food systems, despite historical and ongoing relevance of place branding to food (Nevett, 1987). Place branding for sustainable development is an emerging theme in marketing, but this alignment has few contributions from a future food angle (Aguilera-Cora et al., 2024). Therefore, research at the intersection between place branding and future foods, with attention to Indigenous places and priorities, significantly enriches the literature, particularly given that Indigenous perspectives remain marginalised in marketing (Raciti, 2022).

5.1.3 Importance of developing and protecting Māori place branding

The third key message of this thesis is that developing and protecting Māori place branding is essential because it offers significant benefits for both Māori and Aotearoa NZ at large. Understanding the functions and implications of Māori place branding contributes to domestic discussions on future food systems in Aotearoa New Zealand, as well as to Māori and Indigenous food and marketing scholarship. While there are several pathways to enable Māori place branding and place-branded future foods, challenges and uncertainties remain, highlighting opportunities for future research.

Perhaps one of the most important aspects of place branding for Māori future foods is its ability to protect Māori cultural and intellectual property. Participants in Chapter 2 emphasised that Māori provenance reflects distinct Māori identities, making some aspects inherently difficult for non-Māori to misappropriate. This aligns with broader research, which notes that unlike most marketing techniques, place branding is harder to replicate due to the physical uniqueness of a place, its kin networks, and its Indigenous outlook and stories (Charters et al., 2017). However, participants also pointed out that certain elements of Māori provenance remain vulnerable to copying and would benefit from stronger protection.

Chapter 3 revealed that despite the frequent use of Māori cultural expressions, formal IP protection mechanisms were absent from most products studied. While recognising the limitations of the existing IP system in safeguarding cultural property, this research suggests that Māori enterprises could more actively use formal IP protections on product packaging where appropriate, as one important lever for the protection of Indigenous interests (Taubman, 2012). Nonetheless, the current policy environment is widely regarded as inadequate for protecting taonga Māori (Mead et al., 2022; Waitangi Tribunal, 2011), even as Māori cultural and intellectual property is increasingly leveraged for the national agrifood sector (Ministry for Primary Industries, 2021a, 2023a). Given these challenges, it is essential to employ all available tools to safeguard Māori property and propositions. This research emphasises that place branding is a critical lever for advancing Māori enterprise and protecting Indigenous interests.

Māori place branding in the future food context is important for several reasons. First, as noted, it can express and protect value for Māori. Second, place branding can influence broader outcomes, benefitting both Māori and Aotearoa. Participants in Chapter 2 discussed how Māori values, articulated through mechanisms including provenance, have led to multisectoral shifts. Place branding has been documented as a tool to modify national food cultures (Askegaard et al., 2017). Such shifts are evident in recent documents, such as the Fit for a Better World plan (Ministry for Primary Industries, 2021a), which references Māori worldviews and concepts, when this has not been standard practice in the past. Other Māori food scholars have also noted how Māori values in food production can shape nationwide approaches (Hutchings et al., 2020; Reid et al., 2021), which is important in a context where agrifood environmental externalities need to reduce (Hoff, 2021; Ministry for the Environment, 2022). This thesis highlights place branding as a lever for communicating Māori approaches and values, which may foster systemic shifts and directly benefit Māori enterprise.

The influence of Māori place branding on broader food systems, however, is not guaranteed. Māori values are increasingly co-opted into national food narratives, where Māori culture is

used for brand differentiation (Ministry for Primary Industries, 2021a, 2023a, 2023b). However, without comprehensive protection of Māori interests, the extraction of Māori concepts may not fully realise Māori place branding's potential. Worse, misappropriation could harm its reputation, to Māori and wider detriment. Participants in Chapter 2 emphasised the need for government commitment to developing and protecting Māori provenance and for clarity on the overlap between national and Māori provenance. Creating a credible place brand requires a heterogeneous and coordinated mix of governmental, commercial, and non-governmental actors (Eden et al., 2008) and participatory approaches are essential when top-down policy-driven approaches are used (Kavaratzis, 2012). Existing Māori spheres of influence, such as the Māori Primary Sector Forum, can drive and protect a unique Māori place story for future foods, though promising initiatives like Te Hono have recently been affected by economic pressures (Food Ticker, 2024). Programmes of work, such as Te Pae Tawhiti (the first public government engagement with Wai 262), are very vulnerable to changes in government (Houghton, 2021). The current government in 2025 appears thoroughly committed to an agenda that prioritises commercial interests and destabilises the constitutional makeup of Aotearoa NZ (Nelson, 2024; Roper, 2024).

Returning to the benefits of Māori place branding, it also has the potential to challenge dominant narratives and connect with consumers through shared values. Indigenous place branding has proven to be a corrective force against colonial narratives (Heith, 2019). Likewise, Māori place branding via future foods could similarly serve as a corrective to historical place brands, such as the Empire's Dairy Farm described in Chapter 1, by communicating about Māori relationships to places and associated food stories. It is important to locate and challenge colonial narratives, because they are implicated in Indigenous oppression, and mischaracterise places. Chapter 3 established that te reo and Māori place names are prevalent on Māori food and beverage products, and discussed how their use might constitute Indigenous assertions to place and challenges to colonial narratives. A novel and major finding of Chapter 4 was that critical consumers in Aotearoa NZ positively perceive the use of te reo and Māori place names because it indicates social transformations that lead to better outcomes for Māori and for society at large. Singaporean participants also positively perceived Māori provenance and resonated with Māori attributes on the grounds of cultural preservation and authenticity, demonstrating that Māori assertions of Indigeneity can benefit Māori enterprise while also communicating broader sociopolitical shifts that are both recognised and valued by consumers. These findings also demonstrate that place branding can serve Māori interests in a way that extends through, and beyond, economic prerogatives. Extracting Māori and Indigenous notions of place from dominant economic interests, which by

and large tend to protect and proliferate current food regimes, has been identified as critical by other writers on Māori provenance (Reid & Rout, 2016; Sharma et al., 2021).

The benefits of Māori place branding also extend to research in place branding. The International Place Branding Association's 2023 manifesto emphasises that place brands can only succeed by contributing to local quality of life and wellbeing. While most place branding literature tends to view it as a public good that enhances regional reputations (Aguilera-Cora et al., 2024), this thesis offered a more critical perspective of place branding. Chapter 1 highlighted how the construction of the settler nation brand in The Empire's Dairy Farm was linked to damage of Māori places, showing that place branding in Aotearoa NZ succeeded in some areas while causing harm in others, something which has scarcely been acknowledged (Brooking & Pawson, 2020). Participants in Chapter 2 expressed that non-Māori in Aotearoa NZ continue to reap Māori provenance and must develop their own place brands without extracting from Māori culture, so that benefit can be protected for Māori. This contradicts the 2023 manifesto's notion of place branding as an equally shared public good. While Māori culture has indeed been perceived (Thomson, 2015), and treated, as though it were public property of all New Zealanders, this has contributed to loss of Māori control over Māori rights and interests in their own belongings (Waitangi Tribunal, 2011). This thesis asserts that Māori sovereignty over Māori property, including place branding, is essential, and that Indigenous rights and equity should be central to place branding discourse and practice. Such integration would attract further Indigenous participation and interest.

As Indigenous places become commercially relevant, there is an increased risk that Indigenous culture will be politicised and managed in a top-down manner by government and market actors (Cassel, 2019). Participants in Chapter 2 discussed how non-Māori provenance often depends on Māori provenance, using Māori culture to add value in the agrifood sector, and mātauranga Māori remains poorly protected and poorly remunerated. However, there is an urgent need to better protect mātauranga Māori, particularly given the Ministry for Primary Industries' acknowledgement that there is a lack of strategy for its protection (Mead et al., 2022). Some agrifood strategies mention the importance of safeguarding mātauranga Māori (Ministry for Primary Industries, 2023b; Primary Sector Council, 2019), but the mechanisms remain unclear. Geographic indications (GIs) have been described as a relevant tool for the protection of Māori interests in agrifood products and associated mātauranga, and a related work programme has been recommended (Tuffery-Huria & Gibson, 2020). Currently, GIs are not used on Māori food and beverage products, as reported in Chapter 3. Implementation of a GI programme, and its integration into agrifood strategies, could support Māori place branding for future foods.

5.1.4 Limitations

5.1.4.1 Limitations of place branding

It is important to note the potential limitations of place branding, which also relate to limitations of this research. At a consumer level, place branding operates on the assumption that revealing specific information about a place will lead consumers to interpret it accurately or favourably, ultimately influencing their behaviour to purchase the associated product. At each turn, however, there are factors that may interfere with these processes. Place brands are continually in flux, making them hard to interpret, and consumer perceptions can change over time (Eden et al., 2008; Pilelienė & Liesionis, 2014) or be misinformed (Thøgersen, 2023). Although origin is often an important attribute for foods, it may be traded off for other qualities (Loose et al., 2013), and a study of Aotearoa NZ consumers found that country of origin was the least relevant attribute when purchasing foods (Insch & Jackson, 2013). While Chapter 4 demonstrated positive perceptions of Māori place attributes, these perceptions do not necessarily predict real-world consumption behaviour. Even when people report a willingness to pay for credence attributes (Kovacs & Keresztes, 2022; Maesano et al., 2020), this may not translate into consumption of sustainable foods (Munro et al., 2023; Schäufele & Janssen, 2021; Vermeir & Verbeke, 2006). The relevance of a place element also varies considerably across product types (Balcombe et al., 2016; Insch et al., 2017), with reportedly lower willingness to pay for origin attributes in plant-based foods compared with animal-based foods (Yeh & Hirsch, 2023). Additionally, when consumer values align with a place-branded product, they may still be unable to afford it, especially if provenance attributes are framed as a premium return mechanism. Therefore, while positive consumer perceptions of place branding can benefit Māori enterprise, further research is needed to understand its real-world effects.

Awareness of a place is also required to positively influence the perception and consumption of the place (Tregear et al., 1998), which can demand more resources from an enterprise to raise awareness of the place brand. In Chapter 4, the provenance attribute containing 'Aotearoa' in activity 1 did not feature in the hierarchical value maps for Singaporean participants, meaning that it was often not selected as either a positive or negative attribute, indicating low awareness of 'Aotearoa'. Low international awareness of Māori place names and associated characteristics has been described previously (Ministry for Primary Industries, 2024). However, this may also indicate an opportunity to generate awareness, as part of the careful development of Māori place branding. Origin statements may also undermine their associated provenance characteristics, creating a counter-intuitive effect of increasing scepticism, as observed in negative perceptions of 'New Zealand' in Chapter 4. However, this can be mitigated by building credibility for the place brand (Eden et al., 2008), further indicating a need for targeted investment by government and from Māori agrifood actors. Literature also

suggests that place branding may have limited potential for rural areas that do not already have a developed provenance (Tregear, 2003; Watts et al., 2017). Place branding is vulnerable to how well the production they signify are regulated, and how effectively the benefits can be substantiated (Watts et al., 2017). Specialised production, which may occur in Māori future foods, could lead to a situation where specialists compete against each other for small niche markets, increasing economic vulnerability (Watts et al., 2017). Additionally, just communicating about place on a food label is not sufficient to establish a recognised provenance; thorough authentication and traceability are critical practices that underpin a place brand (Rout & Reid, 2019b). Place branding must occur along the value chain and requires significant resources from an enterprise. Participants in Chapter 2 reported that Māori provenance is comprised of Māori narratives and approaches to food production, and so Māori place branding may occur naturally along the value chain, thereby making the process of communicating the place brand more authentic and less resource intensive than is the case for other place brands.

5.1.4.2 Limitations of the consumer and of future foods

Chapters 3 and 4 of this thesis offered a consumption-focused perspective on Māori future foods. Consumption was a relevant research angle because it provided a flexible lens with which to view the topics at hand, and an opportunity to contribute to budding Māori and Indigenous marketing thought. However, it is crucial to question the relevance of individual consumers in enabling the development of Māori future foods. Changes in consumption at a population-level are urgently needed, but the ability of individual consumer choices to challenge food paradigms is highly contested. On the one hand, consumer action creates change at several levels, including uptake of food system issues into mainstream discourse (Lorenzini, 2019), mobilising political action (Micheletti, 2003), influencing corporate behaviour (Clouder & Harrison, 2005; Schmelzer, 2010), and encouraging innovation (Branstad & Solem, 2020). On the other hand, consumer movements have failed to materialise systemic change at the rate hoped for and needed (Isenhour, 2011; Reese, 2020). Despite increasing availability of sustainable and ethical foods, they make up a small portion of diets in wealthy countries like Aotearoa NZ (Isenhour, 2011). Change is also heavily resisted and undermined by the incumbent system and actors who benefit from it (Gilmore et al., 2023; Nibert, 2013). Consumer responsabilisation may also further legitimise devolution of state power and responsibility and concomitant growth in commercial power that increasingly externalises the harm of market activities and entrenches unjust systems (Gilmore et al., 2023; Lorenzini, 2019; Mukherjee & Banet-Weiser, 2012), while also constraining imagination and other types of activism (Eli et al., 2016; Huddart Kennedy et al., 2018; Lightfoot, 2019). Emphasis on consumer-led change as a remedy for problems arising out of unjust production and economic

systems obscures inequity and power imbalance between people and commercial actors (Watts et al., 2017). In contrast, it has been argued that the most important contribution of consumer-based shifts is the expression of values that can be translated into cultural codes that further stimulate structural change (Halkier, 1999). As discussed earlier in this chapter, application and communication of Māori values in food production has been described as a catalyst for value shifts in the broader Aotearoa NZ food system (Hutchings et al., 2020; Reid et al., 2021). Therefore, Māori approaches to food production can also act through consumers to facilitate sociopolitical change; this is a novel finding with regards to Indigenous food enterprise that has not previously been articulated.

Finally, it has been stated that only a 'revolution-level' change in food systems will deliver adequate outcomes (Willett et al., 2019). Such change requires fast, effective, and just transformations that address the root causes of current problems (Jones et al., 2022). Producing food for a wealthy consumer niche within the existing economic paradigm does not feel like 'revolution-level' change. However, visions for relational planetary health grounded in kinship and justice are becoming more viable the more they are conscientised (Jones et al., 2022). Imagining economic and wellbeing transformations through values-based foods may seem utopian given the preponderance of challenges to be overcome, but without Māori aspirational imagination for future economies they are not able to occur (Dell et al., 2018).

When imagining and working towards food futures, it is critical to reflect on available and possible mechanisms for change. This thesis focused initially on PBFFs and then future foods in a broader sense. One reason for this widened focus is that plant-based alternative to meat and dairy have arisen in capitalist markets, in response to animal welfare, environment, and human health issues associated with animal-based food products. But producing and consuming food products through those same markets is not a comprehensive solution to the ideologies and structures that create and maintain unjust systems (which are creating the problems PBFFs are responding to in the first place). Even if Māori enterprises created a range of extremely successful PBFFs, the forecasted food futures surely still involve global boiling, social and political inequities, continued ecological collapse, animal suffering, and food insecurity. Future foods, whether they are PBFFs or something else, must be imagined and created as part of a broader suite of work that challenges and upends dominant economic modes. A critical part of this work, as laid out in Chapter 1, is acknowledging how the current food paradigm in Aotearoa NZ was created, i.e., through violent dissolution of traditional Māori food systems and ecologies, and the laying-down of the vast pasture. The colonial place brand is key to this story. Confronting this history and the realities of a pasture-dominant export food economy will be pivotal for just food futures and consequent future foods, whether they are PBFFs or not.

5.1.4.3 Other limitations of the research

A strength of this thesis is the drawing together of a number of disciplines in a new way, to provide unique insights on consumption of Indigenous future foods and Indigenous place branding, in the context of Aotearoa NZ. However, the breadth of each field on its own and the often exploratory and transdisciplinary nature of the approaches used in the thesis precluded the ability to dive deeply into every specialist topic examined. Nonetheless, taking a wider view that crosses academic silos acknowledges the complexities of food futures, and aligns with a holistic Māori worldview (Moewaka Barnes et al., 2021). Food systems are complex, converging diverse institutions and actors that are difficult to examine and change. Uncertainties remain about the conditions needed to unlock the opportunities presented by Māori future foods. Chapter 2 participants noted the lack of evidence for the health benefits of some future foods, hindering investment. They also emphasised that current policy and treaty environments stifles Māori future foods, and policy and law changes are essential to drive food system transformation, though this was only briefly addressed across the thesis. Indigenous food futures require political recognition, but Indigenous people are often marginalised in policy (Lopes et al., 2023; Vijayan et al., 2022). Identifying and assessing policy and regulatory frameworks, and ways to improve current ones, is needed to drive transformative shifts in an Aotearoa NZ context and essential for advancing a Māori food economy that fully leverages the potential of future foods. Some suggestions for agrifood policy were offered here, such as integrating protection of Māori cultural and intellectual property into strategies. This thesis argues that policy should centre Māori leadership, rights and interests, rather than positioning Māori culture solely for premium returns without comprehensive protection mechanisms. Given the current volatile political climate, the potential for progressive government action is increasingly uncertain.

5.1.5 Recommendations for Māori enterprise and future research

5.1.5.1 Recommendations for Māori enterprise

Māori enterprise should develop place brands specific to places they have relationships with. This thesis highlighted a range of content that can be leveraged by Māori enterprise to substantiate their place brands for future foods. Participants in Chapter 2 emphasised the importance of clustering efforts. Like-minded Māori enterprise could collaborate on place brands, and on other areas of future food development, to facilitate their success. Chapter 4 confirmed that numerous elements including te reo, Indigenous wellbeing and sovereignty, and kinship relations will be positively perceived by some consumers. Communicating about enterprise structure is also beneficial, as it contributes to transparency of the brand and is positively perceived. Clarity of message and verifiability of statements are critical, especially for environment-related declarations.

Delineating what constitutes Māori provenance from a wider national provenance was described by Chapter 2 participants as vital, because this would protect Māori branding. Chapter 4 highlighted that some negative perceptions of brand NZ exist, and separation of Māori from the mainstream nation brand may protect Māori enterprise in the long term. However, as stated in Chapter 3, national provenance is well-established and already prevalently used by Māori. Brand NZ should still be employed to improve the mobility of Māori provenance in consumer minds, especially overseas.

Additionally, a disruptive potential exists in place branding that explicitly challenges historical place brands of New Zealand. This could be achieved with assertions of Māori sovereignty, which at present are not commonly deployed on food products as stated in Chapter 3, but were positively perceived by some, not all, critical consumers in Chapter 4. Clean, green empty pasture imagery that is often associated with Aotearoa NZ, and with Māori absence, could be creatively subverted. Such branding may initially be less viable overseas, given low awareness of Māori place names in Singapore, but awareness-raising could be carried out by Māori enterprise.

For the wider benefits of Māori place branding to be realised via food, Māori enterprise need to communicate about their activities, aspirations, and approaches to positively influence other food production. While this thesis focused on food packaging, there are diverse avenues for place branding, and Māori enterprise should make use of diverse digital media. IP protections are important and should be employed wherever appropriate and feasible. International collaborations amongst Indigenous peoples to develop the practice of place branding in a context of cultural protection would be potent.

5.1.5.2 Recommendations for future research

Future research could explore Māori future foods and place branding from various perspectives. As noted in Chapter 2, case studies of successful Māori future foods could catalyse sector development and provide valuable insights. A case study tracing Māori future place branding from its origin to consumption would deepen understanding of Māori and Indigenous place branding practices. A case study of Māori future food place branding, from the very start of a Māori value chain (e.g. from atua) to the point of consumption would be a crucial way to deepen understanding of how Māori and Indigenous place branding operates. A study of the development of a GI for a particular place or for a Māori future food would be useful to understand their practice, strengths, and limitations in a specific context, as little is known about GIs in Indigenous and developing economies (Cardoso et al., 2022). Additionally, while this thesis offered novel insights into Māori future foods, research on the systems that provide such foods remains scarce globally (Watts et al., 2017). How successful

Māori and Indigenous food systems may function contemporaneously requires significant further research (Cardoso et al., 2022). Modelling of successful Māori agrifood enterprise and implications for agrifood sectors has been suggested as a relevant research area (Reid et al., 2021); a focus on future foods and plant-based foods could be part of such modelling. Given that much Māori agrifood occurs in rural settings, investigating how place branding supports rural Māori economies is also essential, and would contribute to literature gaps in rural place branding (Lopes et al., 2018). Research that supports the development of protections of Māori cultural property is also required (Tuffery-Huria & Gibson, 2020), as shown in Chapter 2, where participants identified major gaps in protection of mātauranga Māori.

How Māori place branding navigates social tensions and contested place meanings is relevant for global place branding scholarship (Cassinger et al., 2021). Exploring other media used in place branding, e.g., social media, has been highlighted as a useful area for place branding research (Acharya & Rahman, 2016). Websites of Indigenous tourism brands have been analysed to understand how their place brands are constructed (Cassel, 2019; De Bernardi, 2021; Olsen, 2008). Websites, and other digital fora, can also function to protect traditional cultural knowledge on a global stage (Lee, 2018) and enable place branding in the identification of rightful knowledge holders (Sterling, Riddle, Tūrongo Brooks, et al., 2021). Research in digital place branding would build understanding of how Māori food place brands function via media other than food packaging.

Lastly, the research in Chapter 4 focused on critical consumer perception of place branding, and future research could investigate the perceptions of other groups, as well as how these perceptions translate into purchasing and consumption practices. This would be valuable because while critical consumers are a growing group, they are likely not a dominant group in Aotearoa NZ or abroad. Specifically, a focus on Māori consumers would be valuable because Chapter 4 had only a small proportion of Māori consumers, and understanding Māori perceptions of Māori, who are a heterogeneous group, could enable fine-tuning of Māori branding for future foods.

5.2 Conclusion

Māori future foods present significant opportunities, aligning with kinship networks and offering pathways to alternative and flourishing food futures. This research highlights how place branding can support Māori future foods throughout their production and consumption, thereby addressing important gaps in the study of future foods and place branding. Enabling Māori and Indigenous food futures, particularly through place branding, represents a crucial inflection point for developing food systems that uphold Indigenous aspirations for cultural, ecological, and social wellbeing. By exploring Māori future foods, this research lays the

groundwork for future studies in place branding and its role in Māori and Indigenous food systems. In a context where economic interests increasingly draw on Te Ao Māori to shape the national food narrative, such as the New Zealand Story, there is a critical need to ensure that Māori place branding serves Māori interests. This thesis underscores the importance of protecting these branding practices, both to support the growth of Māori future foods and to address their broader sociopolitical implications.

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Appendices

Appendix A: List of codes, subthemes, and themes identified through thematic analysis of interviews

Theme A) Value creation, capture, and expression
Subtheme A1) Knowledge generation and protection
Branding & IP – opportunities
A-1 Communicating values and culture appropriately is an important aspect of capturing value
A-2 Data sovereignty captures value for Māori plant-based foods
A-3 Increased sophistication in Māori articulation of values is leading to rapid, multisectoral and systemic shifts which may enable plant-based food
A-4 Using te reo in branding adds value
A-5 Values-based production creates authenticity in IP
A-6 Communicating to consumers how taonga are regarded adds to a value proposition
A-7 Branding plant-based foods can draw on traditional narratives
A-8 Promotion of health benefits of plant-based foods is beneficial for storytelling
A-9 Communicating climate sustainability to consumers is valuable
A-10 Māori are skilled storytellers
A-11 Māori provenance is unique and creates a unique value proposition
A-12 Protecting Māori provenance also protects provenance for Aotearoa
A-13 Authentic Māori product design facilitates trade with groups and consumers who have aligned values
A-14 The Māori value proposition is still in its infancy
A-15 Te Ao Māori is unique to Aotearoa and can create distinct products in a global market
A-16 Māori are yet to take Māori branding to the global market
A-17 Products can be socially tested to check their legitimacy
Branding & IP – challenges
A1-18 Barriers to data sovereignty impede plant-based innovation
A1-19 A need to attain culturalised commerce, avoid commercialised culture
A1-20 Careful development of Māori plant-based IP is required, otherwise it will be stolen
A1-21 Critical to protect te reo

A1-22 Protecting IP is critical and intelligent strategies are required
A1-23 Cost of protecting and defending IP is prohibitive for Aotearoa-based businesses
A1-24 Lack of resources makes it difficult for Māori to commercially protect their proposition from misappropriation
A1-25 Māori concepts are easily misappropriated by non-Māori
A1-26 Non-Māori in Aotearoa are misappropriating Māori culture and approaches to their advantage
A1-27 Māori value propositions are vulnerable on the global stage, unless protected and developed carefully
A1-28 Lack of clarity on the overlap between Māori provenance and Aotearoa provenance
A1-29 Aotearoa provenance is vulnerable to incongruent sustainability messaging vs environmental realities
A1-30 Non-Māori need to put in the effort to find and tell their own story, and not take Māori provenance
A1-31 Loss of oral histories inhibits Māori in storytelling for plant-based products
A1-32 Poor product design can lead to misperceptions of Māori culture
A1-33 Māori businesses need to balance social good with protecting their proposition in a commercial setting
A1-34 The value proposition for plant-based foods is difficult to communicate to consumers
A1-35 Unclear whether Māori values resonate with export markets
A1-36 Need for authenticity between messaging in market and wellbeing of people at home
Subtheme A2) Self-determination
A2-1 Broad political challenges motivate Māori interest in creating self-reliance through plant-based foods
A2-2 Self-determination in food value chains is necessary
A2-3 Self-determination, Tino rangatiratanga, cultural legitimacy, and sustainability are interwoven and are relevant for plant-based food production
A2-4 Māori businesses aspire to iwi-owned and controlled food systems
A2-5 Horizontal service model amenable to iwi-owned and controlled food systems
A2-6 Vertical integration grants more control over food production
A2-7 Māori businesses aspire to control more points of the plant-based value chain
A2-8 Clash between Māori aspirations and surrounding environments make it hard to enable plant-based food
Subtheme A3) Production
Production – motivations
A3-1 Māori businesses recognise food has value in both physical and spiritual dimensions
A3-2 Plant-based foods can align well to kai Māori
A3-3 Māori businesses want to move away from commodity-based to value-add ventures
A3-4 Māori businesses want to create value across the whole value chain
A3-5 Cultivating plants can contribute to revitalisation of mātauranga Māori
A3-6 Adding to mātauranga is an indicator of business success

A3-7 Plant-based foods have less ethical barriers related to their production

A3-8 Māori are yet to drive change in horticulture

A3-9 Modern diets are creating social and health issues

Production – opportunities

A3-10 A values-based culturalised approach to food production ensures value capture

A3-11 Māori can combine multiple aspects of value to make standout plant-based products

A3-12 Combining mātauranga Māori with other forms of knowledge can benefit plant-based food development and tikanga-led production

A3-13 Protecting the environment during food production adds value to food and future-proofs Māori propositions

A3-14 Maramataka can inform food production

A3-15 There is significant future opportunity for Māori horticulture for future foods

A3-16 Aotearoa is only just beginning its journey to create high-value products

A3-17 Māori can apply unique strategies to be successful in a new sector

A3-18 Controlling more of the supply chain enables more opportunities to create value

A3-19 More focus at the intersection of health benefits, indigenous species, and mātauranga Māori benefits plant-based foods

A3-20 Opportunity in adding cultural gastronomy to consuming plant-based foods

A3-21 Renewable energy resources could enhance sustainability of food produced

A3-22 Ethical nature of a product adds value

A3-23 Knowledge for sustainable high-value production already exists in communities

A3-24 Clinical trials capture and defend value of a plant-based product

A3-25 High concentrations of beneficial phytochemicals add value to plant-based products

A3-26 Māori could appropriately lead frontiers of cellular agriculture

A3-27 Transitioning agricultural practices is ongoing and reflective to ensure practices are values-based

A3-28 Māori businesses are practicing regenerative agriculture

A3-29 A longer-term vision and approach will foster future foods

A3-30 An amenable socio-political climate will accelerate plant-based foods

A3-31 Māori businesses are prepared to take ownership in leading change

Production – challenges

A3-32 There is a need for more examples of success in plant-based food to increase Māori industry confidence in the sector

A3-33 Mātauranga not remunerated equally

A3-34 Lack of Aotearoa-specific information about sustainability of plant-based crops

A3-35 There is a need for clear strategies to unlock plant-based foods

A3-36 Being both culturally legitimate and commercially successful is difficult

A3-37 It is difficult to apply Māori values relating to food and land to improve modern agricultural practices
A3-38 Instituting tikanga-led agriculture is a prolonged and ongoing process
A3-39 Takes more effort to be tikanga-led at scale compared to those more profit-focused
A3-40 Loss of mātauranga across history limits application of knowledge about native plants to plant-based foods
A3-41 Science for native crop production isn't complete
A3-42 Unclear how cellular agriculture conflicts or aligns with Māori
A3-43 Need to be genuine in critiquing how well practice is aligned with values and where change is needed
A3-44 Climate change is already affecting Māori agribusiness
A3-45 Māori must act quickly to protect opportunities in plant-based foods
A3-46 There is urgency in the changes needed for food systems
A3-47 There is a need for perseverance despite challenges
Subtheme A4) Export
Export – opportunities
A4-1 Shared values around food production in export markets creates opportunity
A4-2 Māori want to participate in export and aspire to export plant-based foods
A4-3 Māori are dynamic when navigating a complex global market
A4-4 Māori storytelling is important for export
A4-5 The plant-based sector is an opportunity for Māori enterprise to expand domestic and export offerings
A4-6 Commercial success in domestic markets can make it easier to export
A4-7 Export is made easier by in-market partnerships
A4-8 Māori values and storytelling may resonate with Chinese consumers due to an alignment between Māori traditional knowledge and traditional Chinese medicine
A4-9 Opportunity in East and Southeast Asian markets for plant-based products
A4-10 Singapore is a more viable export market than others because of its regulation and Food Agency
A4-11 Singapore and Taiwan are testing grounds for export to other Asian countries
A4-12 Australia is an attractive export market
A4-13 Shared food regulation with Australia makes them an easier export market
A4-14 A sophisticated understanding of market and consumer segments is needed for successful targeting of messages
A4-15 Cultural point of difference may be advantageous in Australia and USA
Export – challenges
A4-16 Being genuine in a global market can be difficult
A4-17 Cost of protecting IP prohibits export

A4-18 Exporting native plant species is difficult due to regulation
A4-19 Māori are not prolific exporters
A4-20 Requirements of export markets impede regenerative practices
A4-21 Tension between affordability of products for whānau and serving export markets
A4-22 East Asian markets are harder to export to due to their size and complexity
A4-23 Small size of Singapore market limits export opportunity
A4-24 Unclear how receptive export markets are to hemp due to drug misconception

Theme B) Relationships

Subtheme B1) Kinship relations

Kinship relations – motivations

B1-1 Wellbeing of people and nature are ultimate and interconnected aspirations
B1-2 Environmental outcomes indicate business success
B1-3 Kaitiakitanga fulfils environmental and cultural outcomes
B1-4 Kaitiakitanga motivates Māori interest in regenerative practices
B1-5 Environmental impact of conventional agriculture motivates interest in plant-based food
B1-6 Atua motivate plant-based food development
B1-7 The bidirectional relationship between food and climate change motivates interest in plant-based food
B1-8 Soil health motivates interest in plant-based foods
B1-9 Māori are motivated to address the conflict between inherited land use and values
B1-10 Plant-based foods support Māori aspirations for environmental health
B1-11 Plant-based foods are an opportunity to kaitiaki taonga plants
B1-12 Consumption of taonga plants would improve human health
B1-13 Growing plants is noa
B1-14 Social outcomes motivate interest in plant-based foods and indicate business success
B1-15 Māori businesses are motivated by a need to provide for their communities
B1-16 Food production by Māori enterprise involves reconnecting whānau to their ancestral lands
B1-17 There is a deliberate focus on food sovereignty and employment opportunities for own communities
B1-18 Creating and maintaining iwi partnerships in food production are important
B1-19 Family whakapapa is a motivation to make plant-based foods

Kinship relations – opportunities
B1-20 Aotearoa climate provides an advantage for growing plants with nutritional value
B1-21 Values-based business can find land use opportunities regardless of land classification and size
B1-22 Māori land composition provides opportunities for products using native species
B1-23 Creating high value products can enable deintensification of food production
B1-24 Māori can utilize public lands for procurement of plants
B1-25 Māori businesses see opportunity in making products based on native plants
B1-26 Māori businesses are interested in combining taonga plants with non-native ones to create food products
B1-27 Native seaweeds have potential to address human health and environmental health
B1-28 Diversity of native seaweed species make them a viable opportunity
B1-29 Māori intergenerational focus is advantageous
B1-30 Plant-based food can provide education opportunities for hapū and iwi
B1-31 Māori businesses have advantage owing to their tribal relationships
B1-32 Māori businesses work collectively with iwi and whānau to create plant-based foods
Kinship relations – challenges
B1-33 Land alienation, including leasing, is an ongoing, significant challenge for Māori
B1-34 Designing strategies to make sure whānau are engaged in future foods ventures is important
B1-35 Tension between long-term intergenerational view and entrepreneurial focus on moving quickly
Kinship relations – general
B1-36 Risk in using taonga plants is navigated based on their preservation
B1-37 Access and benefit sharing is important for plant-based foods that use taonga species
B1-38 Access and benefit sharing is an evolving, ongoing process
B1-39 Māori businesses are codeveloping intergenerational, tikanga-led strategies with whānau
B1-40 Māori business practices are informed by intergenerational goals
Subtheme B2) Relationships with other business and research entities
Relationships with other business and research entities – opportunities
B2-1 Collaboration increases capacity and resource access
B2-2 Plant-based foods are supported by relational economies
B2-3 Formation of business collectives and clusters would accelerate plant-based foods

B2-4 Māori businesses can access external support from large food businesses
B2-5 Pākehā benefit from Māori collaboration
B2-6 Joining research to business action can accelerate plant-based food
B2-7 Māori businesses can take advantage of business and research networks in Singapore
B2-8 An economy of mana contributes to Māori business success
B2-9 Māori collaboration goes beyond basic trade and into reciprocal relationships
B2-10 A Tiriti-based partnership approach to business enables collaboration
B2-11 Being a values-based business engenders goodwill and buy-in from collaborators
B2-12 Shared cultural protocols between Māori and non-Māori enhance collaboration
Subtheme B3) Engaging consumers
Engaging consumers – opportunities
B3-1 Consumers are connecting with Māori provenance in plant-based products
B3-2 High demand for Aotearoa-produced food is advantageous for plant-based food
B3-3 Young people may be more likely to embrace values-based food
B3-4 Markets for future foods may be in local Māori markets
B3-5 Domestic markets have significant growth potential because it is not yet saturated
B3-6 Premium markets are the most viable markets for Māori businesses
B3-7 Consumers will pay more for products with proven health benefits
B3-8 Interest in testing consumer reactions to Māori branding
B3-9 Consumer-led approaches are beneficial
Engaging consumers – challenges
B3-10 Identifiable consumer segment is required to undertake plant-based food production
B3-11 Difficult to clearly communicate Māori-specific values in a global market
B3-12 Having a viable pathway to market is critical
B3-13 Aotearoa consumers are less open to future foods than consumers in other countries
B3-14 Making minimally processed plant-based products that are still appealing to consumers is a challenge
B3-15 Consumer attitudes are shifting faster than policy
B3-16 Unclear where the market lies for values-based foods
Subtheme B4) Relationships with Government

Relationships with Government – opportunities
B4-1 Genuine treaty partnership from Government enables Māori innovation in plant-based foods
B4-2 Lobbying to government can fast track future foods
B4-3 Future policy may incentivise plant-based production
B4-4 Government co-funding and science investment is enabling
B4-5 Māori are able to exert strong influence on resources and areas beyond their immediate control
Relationships with Government – challenges
B4-6 Current policy environment stifles innovation in future foods
B4-7 Government needs to demonstrate commitment to wellbeing to create values-based food provenance
B4-8 Short-sighted land management impedes future capacity for plant-based value chains
B4-9 Productive potential of small land blocks is not always recognised by Government
B4-10 Need for strong advocacy from industry to government to grow seaweed innovation
Theme C) Resources
Subtheme C1) Capability resources
Capability resources – opportunities
C1-1 Māori businesses draw on diverse capabilities for developing plant-based foods
C1-2 Other sectors have transferable skills that can benefit the plant-based value chain
C1-3 Māori businesses have an advantage owing to a unified value base
C1-4 Critical for Māori capability building to unlock plant-based foods
Capability resources – challenges
C1-5 It is difficult to bring together existing capability from other sectors
C1-6 Difficult to attract rangatahi to agribusiness
C1-7 There is a shortage of capability in the Māori workforce to develop plant-based foods
C1-8 Highly skilled, expensive workers are required to make value-added foods
C1-9 Lack of rangatahi development stifles future foods
C1-10 Being Māori and doing business in a colonised society is inherently disadvantageous, compared to non-Māori
C1-11 Historical deprivation contributes to lack of capability today
C1-12 Mindsets of some Māori in agribusiness are hard to shift towards exploring plant-based food

Subtheme C2) Financial resources
Financial resources – opportunities
C2-1 Treaty settlements can unlock opportunities in plant-based food for Māori
C2-2 Post-settlement entities are enabling plant-based entrepreneurship
C2-3 Te Puni Kōkiri enables Māori entrepreneurship through funding
C2-4 Māori businesses are not necessarily more conservative in investment strategy
C2-5 Lack of capital is not a significant impediment to seaweed innovation
Financial resources – challenges
C2-6 Lack of capital prevents plant-based innovation
C2-7 High cost of entry into the plant-based supply chain prohibits Māori
C2-8 Māori entities are still over-invested in industries that are not values-aligned
C2-9 Māori entities have less success receiving grants
C2-10 Need to get better at planning and activities that enhances ability to leverage government funding and support
C2-11 Hesitance to divest away from conventional farming inhibits plant-based food development
C2-12 Food innovation can be risky and requires investment
C2-13 Some Iwi are focused on capital gains which diminishes action in future foods
C2-14 The high cost of land makes food production expensive
Subtheme C3) Infrastructure resources
Infrastructure resources – opportunities
C3-1 Māori can exploit existing infrastructure from other sectors
C3-2 Not owning the entirety of the value chain is not a barrier to success
C3-3 Economic and logistic challenges in using small land blocks can be overcome by growing high-value crops
C3-4 Horizontal business models mitigate some challenges along the supply chain
C3-5 Māori businesses overcome infrastructure challenges by investing in equipment
C3-6 Vertical integration enables innovation across the value chain
C3-7 Circular economies can underpin value-adding processes
C3-8 Māori are interested in emerging technologies that support sustainable agriculture
C3-9 Māori businesses can access significant government funding to support infrastructure investment
Infrastructure resources – challenges

C3-10	Having a strategy for scaling up production precedes success
C3-11	Lack of infrastructure for scaling up production of plant crops for food
C3-12	The plant-based sector lacks a reliable degree of infrastructure
C3-13	Few tikanga-led growers able to work at a large scale
C3-14	Need for integrated, horizontal value chains
C3-15	Agricultural innovation can be easier to achieve at a small scale than at a large scale

Appendix B: Codebook of content-analysed parent and child (lettered) ladder constructs, with corresponding code numbers, levels of abstraction as attribute, consequence, or value

Construct number	Construct type	Construct name
1	Presented attribute	Carbon neutral
2	Presented attribute	Sustainably made
3	Presented attribute	Made with care for our land people and traditions
4	Presented attribute	Sustaining our lands for Generations to Come
5	Presented attribute	We care deeply for Papatūānuku, Mother Earth
6	Presented attribute	We are kaitiaki, guardians, of our lands and waters
7	Elicited attribute	Informative
7a	Elicited attribute	Clear origin
8	Elicited attribute	Distinctive
9	Elicited attribute	Holistic focus
10	Elicited attribute	Meaningful
11	Elicited attribute	Unmeaningful
12	Elicited attribute	Uninformative
12a	Elicited attribute	Unclear origin
12b	Elicited attribute	Misinformative
12c	Elicited attribute	Incongruent
13	Elicited attribute	NZ Brand
13a	Elicited attribute	Patriotic
14	Elicited attribute	Good Value
14a	Elicited attribute	Fresh
14b	Elicited attribute	Sense of care
14c	Elicited attribute	Quality assured
15	Elicited attribute	Poor value

16	Elicited attribute	Safe food
17	Elicited attribute	Unsafe food
18	Elicited attribute	Natural
18a	Elicited attribute	No pesticides
18b	Elicited attribute	Less processed
18c	Elicited attribute	Less fertiliser
19	Elicited attribute	Made by people
19a	Elicited attribute	Not mass produced
20	Elicited attribute	Small business
21	Elicited attribute	Indigenous
21a	Elicited attribute	Incorporates Māori culture
21b	Elicited attribute	Use native plants
21c	Elicited attribute	Uses te reo Māori
22	Elicited attribute	Traditional
22a	Elicited attribute	Traditional knowledge
22b	Elicited attribute	Intergenerational
23	Elicited attribute	Local
24	Consequence	Learning
25	Consequence	Trying something new
26	Consequence	Feel relatable
27	Consequence	Feels familiar
28	Consequence	Feels inclusive
29	Consequence	Feels trustworthy
30	Consequence	Anti-consumption
31	Consequence	Tastes good
32	Consequence	Health benefits
32a	Consequence	Eat less meat
32b	Consequence	Nutritious
33	Consequence	Negative health impact

34	Consequence	Supporting good practices
35	Consequence	Supporting poor practices
35a	Consequence	Poor animal welfare
36	Consequence	Potential for change
37	Consequence	Lack of action
38	Consequence	Social benefit
38a	Consequence	Protect people
38b	Consequence	Protect country
38c	Consequence	Cultural harmony
38d	Consequence	Less crime
38e	Consequence	Respecting Māori
38f	Consequence	Māori benefit
38g	Consequence	Food security
39	Consequence	Feels divisive
40	Consequence	Protect culture
40a	Consequence	Preserve tradition
41	Consequence	Economic impact
42	Consequence	Negative social impact
42a	Consequence	Loss of self determination
42b	Consequence	Māori don't benefit
42c	Consequence	Māori harmed
42d	Consequence	Social tension
42e	Consequence	Cultural disharmony
43	Consequence	Culture damaged
43a	Consequence	Culture misunderstood
43b	Consequence	Tradition lost
44	Consequence	Protect environment
44a	Consequence	Smaller impact
44b	Consequence	Preserve resources

44c	Consequence	Avoid climate change
45	Consequence	Negative environmental impact
45a	Consequence	Climate changes
46	Consequence	Supporting others
46a	Consequence	Supporting māori
46b	Consequence	Supporting local
47	Consequence	Collective approach
47a	Consequence	Family involved
48	Consequence	Feel better
48a	Consequence	Less stress
48b	Consequence	Feel happy
48c	Consequence	Feel satisfied
48d	Consequence	Feel comfort
48e	Consequence	Feel hopeful
48f	Consequence	Admiration
48g	Consequence	Feel better about self
49	Consequence	Feel connected
49a	Consequence	Feel connected to producer
49b	Consequence	Feel connected to environment
49c	Consequence	Feel connected to Māori
50	Consequence	Feel worse
50a	Consequence	Feel disrespected
51	Value	Familiarity
52	Value	Lack familiarity
53	Value	Trust
53a	Value	Authenticity
53b	Value	Good food safety
54	Value	Lack trust
54a	Value	Inauthenticity

54b	Value	Poor food safety
54c	Value	Uncertainty
55	Value	Uninformed
55a	Value	Misinformed
56	Value	High quality
57	Value	Poor quality
58	Value	Fairness
58a	Value	Respect
59	Value	Unfairness
59a	Value	Disrespect
59b	Value	Misappropriation
60	Value	Looking after the future
60a	Value	Meaningful change
61	Value	Not looking after the future
61a	Value	Lack of Change
62	Value	Preserve culture
63	Value	Culture lost
64	Value	Healthy society
64a	Value	Social unity
64b	Value	Avoid suffering
64c	Value	Collective wellbeing
64d	Value	Prosperity
64e	Value	Incorporation of Māori Values
64f	Value	Tino rangatiratanga
65	Value	Healthy environment
66	Value	Unhealthy society
66a	Value	Poor economy
66b	Value	Conflict
66c	Value	Suffering

66d	Value	Societal fracture
66e	Value	Racism
66f	Value	Māori marginalised
67	Value	Unhealthy environment
67a	Value	Climate change
67b	Value	Biodiversity loss
68	Value	Feel excluded
69	Value	End of the world
70	Value	High self esteem
71	Value	Low self esteem
72	Value	Connection
72a	Value	Sharing with others
73	Value	Lack connection
74	Value	Helping others
75	Value	Nostalgia
76	Value	Productivity
76a	Value	Achievement
77	Value	Unproductivity
78	Value	Better life
78a	Value	Better future
78b	Value	Longevity
78c	Value	Adaptability
78d	Value	Independence
78e	Value	Purposeful life
79	Value	Good health
79a	Value	Family wellbeing
79b	Value	Peaceful death
80	Value	Excitement adventure
80a	Value	Curiosity

80b	Value	Trying new things
80c	Value	Gain knowledge
81	Value	Feel good
81a	Value	Feel content
82	Value	Poor health
83	Value	Feel bad
83a	Value	Feel powerless
83b	Value	Discomfort
83c	Value	Bored/indifferent
83d	Value	Anger
83e	Value	Guilt
83f	Value	Cynical
84	Value	Feel included