Exploring a connection to nature and pro-environmental behaviours in a New Zealand business context

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Abstract

Business leaders are likely to have a key role in driving pro-environmental behaviours in their businesses as they continue to face increasing political, social, and economic pressures to become environmentally responsible. While research has shown that a connection to nature is associated with pro-environmental behaviour uptake in a non-business context, there is limited research that explores how a connection to nature relates to pro-environmental behaviours in businesses. This study investigates how New Zealand business leaders perceive their connection to nature in a business context, and how this relates to the pro-environmental behaviours undertaken within their business now and their plans for the future. Specifically, this study aims to: 1) assess how business leaders perceive their current connection to nature; 2) identify the pro-environmental behaviours that business leaders currently report their business undertakes and the barriers to undertaking these behaviours; and 3) evaluate what environmental and business aspirations business leaders hold for the future.

This study follows a mixed methods approach to gain an in-depth and broad perspective on these key aims. In Chapter 2, a quantitative online survey was used to gather information from 216 individual business leaders from small to medium-sized businesses from across New Zealand. The survey collected information on the business leaders' individual demographics and connection to nature, business characteristics and pro-environmental behaviours, and perceived barriers to undertaking pro-environmental behaviours. Cluster analysis and independent samples t-tests were used to explore how these characteristics were associated and their significance. The results showed that business leaders who more frequently undertake pro-environmental behaviours have a significantly higher connection to nature and perceive less frequent barriers to adopting pro-environmental behaviours in their businesses. Recycling, purchasing of sustainable products, and conserving electricity were the most frequently undertaken pro-environmental behaviours.

In Chapter 3, qualitative semi-structured interviews were conducted with 10 business leaders who had previously participated in the survey. The interviews examined concepts from the quantitative survey in further detail and explored future aspirations of the business

leader. Thematic analysis was used to uncover emerging themes and patterns from the business leaders' responses. The results indicated that business leaders perceive a connection to nature and express this through a variety of different pro-environmental behaviours that were not captured in the quantitative survey, such as sourcing local ingredients for products and utilising virtual teams. Both Chapters 2 and 3 indicate that business leaders currently undertake pro-environmental behaviours that may not have direct effects on conserving biodiversity, instead, they can be associated with 'sustainability' more generally. These commonly undertaken pro-environmental behaviours have previously been classified as individual lifestyle behaviours as opposed to conservation behaviours. Business leaders hold aspirations for contributing positively to environmental and biodiversity outcomes, as well as aspirations for New Zealand to further realise its clean, green image. Across both studies, not enough time, the current relationship between businesses and the economy, and costs associated with pro-environmental behaviours were the most commonly identified barriers.

In this research, I show that a greater connection to nature in New Zealand business leaders is associated with more frequent undertaking of pro-environmental behaviours in their business. Findings from this research could inform interventions that support business leaders in growing their connection to nature, potentially leading to more widespread adoption of pro-environmental behaviours in the business community. Findings might be beneficial for organisations that support businesses to become more sustainable because they may be able to anticipate some of the barriers preventing pro-environmental behaviours, and provide targeted materials to assist business leaders on their sustainability journey. Further research is still required to identify how barriers to pro-environmental behaviours can be reduced to enable business leaders to undertake as much as they aspire to for the environment.

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Chapter 1: General introduction

People's affective, cognitive, and experiential connections to nature are useful dimensions to describe various types of human-nature relationships (Nisbet et al. 2009), and they also have varying links to pro-environmental behaviours. Pro-environmental behaviours can be defined as behaviours which aim to reduce the negative impacts of people's actions on the natural world (Stern, 2000). This chapter focusses on these three dimensions to explore how a connection to nature is relevant to individuals in a business context, and how that might relate to pro-environmental behaviours. Exploring this is important because there are potentially significant outcomes that could be achieved for businesses and the environment when a connection to nature leads to pro-environmental behaviours.

The first three sections of this chapter explore how the science literature describes connection to nature, examine how connection to nature is relevant in a business context, and outlines the relationship between connection to nature and pro-environmental behaviour. The final section explores businesses and connection to nature through explaining the interactions of connection to nature, discussing how businesses benefit from adopting pro-environmental behaviours, and exploring the role of businesses in achieving environmental outcomes. The aim of this chapter is to summarise the current literature on connection to nature and to extend our understanding on connection to nature through incorporating a business lens.

1.1 Affective connection to nature

An affective connection to nature can be defined as a positive conscious relationship with nature that is experienced at the emotional or subjective level of the individual (Kals, 2014). The construct of affective connection in environmental psychology has only recently started to gain attention in the empirical literature (Ives et al., 2017). Research has explored the importance of affective connections to the natural environment under a variety of different terms such as emotional affinity (Kals et al., 1999), love of nature (Gebhard, 1994), the nature relatedness spirituality dimension (Nisbet et al., 2009), and inclusion of nature in self (Schultz, 2001).

Emotional interactions with the natural environment are shown to stem from two mental faculties: 1) *attention*—the ability to be captivated by natural stimuli, and 2) *empathy*—the ability to emotively associate with different life forms (Barbiero, 2011; Gruen, 2009). These faculties along with an individual's past and present exposure to the natural environment are shown to influence an affective connection to nature (Müller et al., 2009).

An affective connection to nature is closely related to the creation of an environmental identity (Hinds & Sparks, 2008). An environmental identity describes how humans perceive their relationship with the natural world (Clayton, 2003). Studies have shown that individuals who hold strong environmental identities perceive themselves as being emotionally connected, or inseparable from nature (Dutcher et al., 2007; Mayer, 2004; Nisbet et al., 2009). Environmental identities are unique because people feel and experience nature in different ways (Kals, 2014).

1.1.1 Affective connection to nature in a business context

Only in the last decade has the literature really begun to explore the role of an affective connection to nature in a business context (Wang et al., 2019). Research has predominantly focussed on the inclusion of the natural environment into business concepts such as corporate identity (Handelman, 2006; Heikkurunen, 2010; Otubanjo, 2013) and stakeholder management (Balmer & Fukukawa, 2007; Garvare & Johansson, 2010; Madsen & Ulhøi, 2001).

Every business has a corporate identity that defines what the organisation is to itself and its stakeholders (Balmer, 1995; Zinkhan et al., 2001). Corporate identities are dynamic and describe how companies perceive the social space in which they coexist with other societal actors—organisations, consumers, and natural spaces (Handelman, 2006). There are clear similarities between an environmental identity and corporate identity; both are unique and based on relationship perceptions (Gray & Balmer, 1998; Kals, 2014). If a business has a positive conscious relationship with nature, then the corporate identity—including activities and status, are likely to reflect an affective connection (Brown & Dacin, 1997).

In the development of a corporate identity, environmental values will have differing levels of importance dependent on the company's stakeholder management perspective (Heikkurinen, 2010). Companies that perceive the natural environment as a stakeholder are more likely to embed environmental values into their identities (Philips & Reichart, 2000; Starik, 1995). In contrast, companies that perceive the natural environment as external to the corporate identity are more likely to adopt environmental values superficially at the corporate image level, in response to stakeholder pressures (Crane, 2000; Heikkurinen, 2010).

1.1.2 Affective connection and pro-environmental behaviour in business

Several studies have shown that an affective connection to the natural environment predicts pro-environmental behaviour (Hinds & Spark, 2008; Mayer & Frantz, 2004; Pereira & Forster, 2015). Such behaviours include, for example, using public transport and joining environmental organisations (Kals et al., 1999), purchasing environmentally-friendly products and conserving water and energy (Schultz & Zelezny, 1998), and participating in green initiatives such as solar electricity programmes (Clark et al., 2003). These behaviours may well be expressed in the workplace, and ultimately this could have significant implications for businesses particularly where business leaders embrace the outcomes. For example, a company leadership that implements solar panels may both reduce the environmental footprint of an organisation and receive financial benefits through reduced electricity costs.

Despite the potentially significant implications for businesses, there are very few studies that examine the direct role of affect in pro-environmental behaviour in the workplace (Russell & Griffiths, 2008). However, the few studies that do exist indicate that a key challenge for engaging employees in pro-environmental behaviours is developing a workplace culture where employees feel committed to sustainable practices (Rezapouraghdam et al., 2018). It has been demonstrated that businesses that incorporate environmental values in their corporate identity have employees who feel more encouraged to participate in pro-environmental behaviours (Goldsmith, 1997; Zientara & Zamojska, 2016). Further research is required in this area because employee pro-environmental

behaviours are likely to contribute significantly to an organisation's environmental achievements (Blok et al., 2015).

1.2 Cognitive connection to nature

A cognitive connection to nature is shaped by pre-conceived attitudes, values, and beliefs (Nisbet et al., 2009). *Environmental attitudes* have been described in the literature as predispositions towards environmentally-related situations or issues (Buijs, 2007). Additionally, *environmental values and beliefs* have been described as being nature-related views that guide what is moral, just, or desirable for the natural environment (Kempton et al., 1995). Research into nature connection has predominantly focussed on exploring a cognitive connection to nature (Ives et al., 2017).

Schultz et al. (2004), claims that connection to nature is inherently cognitive. There is extensive research that explores how a cognitive connection to nature is conceptualised under different values including: biospheric, egoistic, and altruistic (Stern et al., 1995), intrinsic (Chan et al., 2016), and utilitarian, naturalistic, and moralistic (Lumbar, 2017). A cognitive connection to nature has been found to have similar characteristics to personality traits: being different for individuals and groups, relatively consistent over time and in different situations, and having the ability to change (Mayer & Frantz, 2004; Nisbet et al., 2009).

1.2.1 Cognitive connection to nature in a business context

In the business literature, a cognitive connection to nature has been investigated using environmental management concepts. Environmental management covers broad areas of concern including: resource management, pollution, and environmental impact (Kirk, 1995). Early environmental management research focussed on improving financial performance (Klassen & McLaughlin, 1996), reducing business functions that cause pollution (Khanna et al., 2009), and meeting changing government pressures and regulations (Berry & Rondinelli, 1998). More recent research has looked at incorporating environmental values into corporate strategy (Sugiarto et al., 2019), and communicating sustainable environmental actions (Amaladoss & Manohar, 2011).

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Businesses are often considered to have a moral and civic duty to respond to environmental issues (Lent & Wells, 1992). One way businesses have responded to this obligation is by incorporating sustainable business models and frameworks into their corporate strategy (Ekwueme et al., 2013). Since the 1980s, Corporate Social Responsibility has been a model utilised by businesses to guide environmental, social, and ethical practices (Utting, 2007). Businesses that incorporate such models are likely to have a cognitive connection to nature because environmental values are embedded within the company's leadership, culture, and environmental capability (Chen et al., 2012).

1.2.2 Cognitive connection to nature and pro-environmental behaviour in business

When businesses include considerations about the natural environment in their corporate strategies, they are shown to improve environmental performance, particularly when employees are involved in the creation of the strategies (Borial, 2005). When employees are not involved in the strategy creation, it has been shown by Jones et al. (2012) and Tudor et al. (2008) that employees need to be made aware of the strategies through training or visual cues before they are shown to act sustainably. Barriers to adopting environmental actions include time, finances, and a lack of environmental knowledge and skills (Gerstenfeld & Roberts, 2000).

Research investigating how a cognitive connection to nature affects pro-environmental behaviours have mostly used questionnaire scales to measure self-reported behaviours, behavioural intentions, and other concerns for the environment (Dietz et al., 2005). Findings from these studies suggest that cognitive dimensions including attitudes, values, morals, and beliefs influence pro-environmental behaviours such as recycling, energy usage, transportation choice, and purchasing behaviour (Diekmann & Preisendörfer, 1998; Milfont & Duckitt, 2010). Additionally, Howell et al. (2011), claims that individuals who have positive life attitudes and a higher connection to nature engage with more pro-environmental behaviours, while Van Birgelen et al. (2009), suggest that greater knowledge about environmental issues also influences pro-environmental behaviour.

Recent research has indicated that there is growing interest around how to incorporate pro-environmental behaviours in the workplace through culture change and influencing employee perceptions and attitudes of the business (Blok et al., 2015; Lukas et al., 2008). Robertson and Barling (2012), found that environmental leadership and pro-environmental behaviour needs to start with a company's top management, while Daily et al. (2008), concluded that employee attitudes and behaviour are critically impacted by the middle management. Assessing how a cognitive connection to nature leads to pro-environmental behaviour in a business context is difficult due to the complex structure of businesses (Hargreaves, 2011).

1.3 Experiential connection to nature

An experiential connection to nature can be defined as an individual's physical interactions with the natural environment (Ives et al., 2017). Furthermore, Nisbet et al. (2009), describes an experiential connection to nature as an individual's familiarity and attraction to the natural environment. Physical interactions with the natural environment are shown to influence positive environmental attitudes (Rosa & Collado, 2019), environmental knowledge (Bögeholz, 2006), and environmental beliefs (Ewert et al., 2005).

An experiential connection has been explored to understand the interactions between an individual's experiences and local natural areas (Cosquer et al., 2012), health benefits of nature exposure (Shanahan et al., 2015), and the causes and consequences of an experiential connection to nature (Ives et al., 2018). Research has also started to examine the 'extinction of experience' as humans become more dissociated from the natural environment (Colléony et al., 2017; Schuttler et al., 2018; Soga & Gaston, 2016).

In addition to this research, new research around 'reconnecting to nature' is emerging from a range of disciplines including environmental education, conservation biology, sustainability science, and environmental psychology (Ives et al., 2018). Research on the experiential connection to nature is of interest because there is significant evidence which demonstrates the importance of this connection on wellbeing (Shanahan et al., 2015), cognition (Berman et al., 2008), and mood (Ryan et al., 2010).

1.3.1 Experiential connection to nature in a business context

In the business literature, there are many studies looking at how the workplace environment can be changed to improve employee wellbeing, cognition, and mood (Kalliath et al., 2012; Shibata & Suzuki, 2004). However, there are few studies that directly link these improvements to an experiential connection to nature. Despite the research gap, research about workplace environments is important because many people spend majority of their working time indoors (Dravigne et al., 2008).

Research has mostly focussed on improving workplace environments with the addition of, or exposure to natural environmental features. For example, Chang and Chen (2005), found that natural window views improved employee health by reducing nervousness and anxiousness. In a study by Dravigne et al. (2008), employees who owned interior office plants reported better job satisfaction and a better quality-of-life score. While Miller et al. (2009), concluded that exposure to natural sunlight in the office improved work productivity of employees. Businesses that positively influence their employees' physical interactions with the natural environment are shown to have improved business functionality due to the benefits associated with an experiential connection to nature.

While there is resounding evidence for the inclusion of natural features in the workplace, there is little research directly linking these practices to an improved experiential connection to nature. Research that looks at the impacts of biodiversity in the workplace are also limited (Snep et al., 2011). It is important to broaden the scope of research into these areas because urban environments provide an opportunity to reconcile humans to nature where they already exist (Miller, 2006).

1.3.2 Experiential connection and pro-environmental behaviour in business

There is significant evidence in the literature which suggests that an experiential connection to nature influences pro-environmental behaviour. Pro-environmental behaviours that have been associated with an experiential connection to nature include signing environmental protection petitions, recycling, choosing to use public transport (Finger, 1994), spending time outdoors, donating money to environmental organisations, and green consumerism

(Nord et al., 1998). Findings in the literature suggest that people are reconnecting with nature through gardening (Kiesling & Manning, 2010), having plants indoors (Bringslimark et al., 2009), and choosing to participate in outdoor recreational activities such as hiking and bird watching (Karkoff, 2003).

Individuals can improve their experiential connection to nature relatively easily through their behaviour choices; however, there are many factors that influence behaviour choices in a workplace environment (Hargreaves, 2011). In a business context, the adoption and commitment to pro-environmental behaviours depends on the involvement of other employees and the environmental friendliness of the business (Boiral, 2009; Saifulina & Carballo-Penela, 2017).

There is little research in the business literature that focusses on how sustainable buildings or green environments affect pro-environmental behaviour in the workplace. One study by McCunn & Gifford (2012), showed that green workplaces were not associated with a direct effect on employee pro-environmental behaviours. This contradicted their hypothesis that exposure to green workplaces would be positively associated with pro-environmental behaviours. Further research is needed to determine how green environments might influence workplace pro-environmental behaviours, considering how exposure to nature has been shown to predict pro-environmental behaviour in other studies (Pensini et al., 2016; Whitburn et al., 2019).

1.4 The connection to nature and businesses

Affective, cognitive, and experiential connections to nature interact (Ives et al., 2018). For example, Lin et al. (2004) demonstrated that people who held a positive psychological perception of nature (emotional and cognitive connections) were more inclined to visit nature reserves and parks (experiential connection). Similarly, Cheng and Munroe (2010), concluded that a child's emotional connection to nature—sense of oneness and empathy for creatures, influenced how they participated in future nature-based activities (experiential connection). In another study, Koenig-Lewis et al. (2014), showed that purchasing intention

of green packaging by individuals was influenced by their concerns for the environment (cognitive connection) and positive and negative emotions (emotional connection).

From a theoretical perspective, it is evident that a connection to nature is complex and multifaceted. While understanding each dimension separately is important, it is crucial to acknowledge that these dimensions interact with each other to form an individual's or business's connection to nature. Affective, cognitive, and experiential dimensions in combination are shown to influence pro-environmental behaviours.

1.4.1 Business benefits of pro-environmental behaviours

In practice, businesses that integrate environmental values within the company's culture and pro-environmental behaviours are more likely to achieve better operational and marketing performance (Fraj et al., 2010). Additionally, businesses that communicate their pro-environmental behaviours to employees, consumers, and stakeholders also have benefits such as more satisfied and loyal customers (Menon & Menon, 1997), enhancement of environmental reputation (Miles & Covin, 2000), access to green partnerships (Sadovnikova & Pujari, 2017), entry into new markets (Weber, 2008), and ultimately increased revenue (Malik, 2015). There is resounding evidence in the literature which suggests that embedding environmental values that lead to pro-environmental behaviours in a business creates competitive advantage (York, 2009).

1.4.2 Potential role of businesses to achieve environmental outcomes

When businesses engage in pro-environmental behaviours, they are able to achieve impactful environmental outcomes. For example, businesses that provide environmental education and awareness training are shown to influence the many daily decisions and actions of employees which accumulate to large improvements for the organisation's environmental impact (Perron et al., 2006). Furthermore, the sheer size and distribution of organisations means that they are well placed to contribute resources and time to achieve environmental outcomes, compared to any other group (Studer et al., 2006). Large businesses also have the ability to influence environmental policy and regulations (Child & Tsai, 2005). When businesses adopt pro-environmental behaviours, they have the potential

to conserve finite resources and improve environmental conditions globally (Rondinelli & Berry, 2000).

1.5 Importance of conducting research

Extending our knowledge of connection to nature through a business lens is important because it is becoming apparent that businesses can achieve significant environmental outcomes while benefiting from adapting their current primary business operations to include pro-environmental behaviours. While this is becoming clear in practice, there are knowledge gaps in the literature that could be explored to promote further connection to nature and pro-environmental behaviour in businesses. The affective, cognitive, and experiential dimensions identified by Nisbet et al. (2009) provide a useful construct for understanding connection to nature and pro-environmental behaviour of individuals, and this can be translated in theory into a business context as demonstrated throughout this chapter. However, there is very limited literature that examines this issue explicitly. Further research is necessary to understand the existing connection to nature of individuals in businesses to promote future pro-environmental behaviours in the workplace due to the significant outcomes that could be realised when businesses are shown to adopt pro-environmental behaviours.

1.6 Key questions and thesis outline

This thesis explores how New Zealand business leaders perceive their connection to nature in a business context, and how they currently, and may in the future, contribute positively to environmental outcomes. Specifically, this thesis aims to:

1. assess how business leaders perceive their current connection to nature;
2. identify the pro-environmental behaviours that business leaders currently report their business undertakes, and the barriers to undertaking these behaviours; and
3. evaluate what environmental and business aspirations business leaders hold for the future.

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This thesis consists of two stand-alone manuscripts formatted for publication in peer-reviewed journals. Chapter 2 follows quantitative methods with the aim to measure associations between business leaders' connection to nature, pro-environmental behaviours, and barriers to adopting pro-environmental behaviours. Assessing these factors in conjunction provides insight into how New Zealand business leaders currently connect to nature and how this is associated with their businesses' pro-environmental behaviours. Chapter 3 utilises qualitative methods with the aims of investigating how business leaders individually express their connection to nature in their businesses and exploring their future aspirations. Evaluating how connection to nature is expressed in current businesses reveals how business leaders may contribute to current and future positive environmental outcomes. Chapter 4 provides a general discussion regarding findings from the previous two data chapters and outlines future research directions.

Chapter 2: The association between business leaders' connection to nature and pro-environmental behaviours

2.1 Introduction

New Zealand is promoted internationally as clean and green, and New Zealand businesses often trade off this branding (Bell, 2008). Additionally, New Zealanders perceive a connection with the land as a central crux to their identity as a nation (Brown, 2008). Despite the natural environment shaping our identity, there is limited research that explores how this connection to nature translates into pro-environmental behaviours in a business setting.

Business and nature are inherently connected in an interactive system—whereby energy and materials continuously cycle in a feedback loop of nature and industry (Rosen, 2005). Research aimed at understanding this connection, and people's role in it, is important because businesses play a crucial role in the achievement of sustainable development goals including responsible consumption and production, promoting inclusive and sustainable economic growth, and fostering sustainable industrialisation and innovation (OECD, 2017). Previous research has focussed on large firms, where environmental and economic reporting are more easily accessible in annual reports (Collins et al., 2007); fewer, more recent studies are beginning to examine the environmental role of small to medium-sized businesses. Blundel et al. (2013), claim that small to medium-sized businesses have an important role in addressing current environmental challenges. In New Zealand, there is a significant opportunity for this group to play a key role in addressing environmental challenges because they make up 97% of all classified businesses and employ more than 630,000 people, or 29% of all New Zealand employees (*"Supporting SME's,"* 2020). When looking internationally, small to medium-sized businesses are a substantial group that could contribute to positive environmental outcomes considering that they make up 99% of all businesses across the Organisation for Economic Co-operation and Development (OECD, 2019). While by definition these businesses are small, their numbers ensure that together they have a significant impact on environmental outcomes.

The expression of pro-environmental behaviours in a New Zealand business setting is increasing, and takes many forms. In a longitudinal survey study by Collins et al. (2010), the average number of companies in New Zealand adopting pro-environmental behaviours increased by 10% over a three-year period, with the most common behaviour being recycling programmes. In another survey study, Lewis and Cassells (2010), found that a group of small to medium-sized businesses in the New Zealand manufacturing industry were most actively engaged in waste management practices when compared to other pro-environmental behaviours including operational practices, design for the environment, and environmental management. These commonly adopted pro-environmental behaviours are the ones that make good business sense because they are relatively easy to adopt while simultaneously improving organisational efficiency and producing some positive environmental results (Benn et al., 2014).

Many factors may influence whether a small to medium-sized business engages in pro-environmental behaviours. For example, there is a strong connection between how a business values nature and its environmental performance (Vazquez & Liston-Heyes, 2008). Some research concludes that an individual business leader's values and beliefs are significant motivating factors for adopting environmental responsibility and pro-environmental behaviours within their business (Cambra-Fierro et al., 2008; Hemingway & Maclagan, 2004). However, this area of research is still understudied and consists of mostly informal analysis, and I am aware of no studies addressing this knowledge gap in New Zealand. More commonly, research has investigated barriers that business leaders' encounter when trying to implement pro-environmental behaviours in their businesses. In such research, small business owners often characterise a lack of time as one of the most common reasons for not engaging with pro-environmental behaviours (Lepoutre & Heene, 2006). Other common barriers for small business owners include a lack of awareness of environmental legislation (Stokes & Rutherfoord, 2000), lack of human and financial resources (Rutherfoord et al., 2000), and limited managerial expertise (Vernon et al., 2003).

Not all pro-environmental behaviours are equal in how they affect the natural environment. Previous studies have classified pro-environmental behaviours into distinct

categories, specifically 'individual lifestyle behaviours' and 'conservation behaviours' (Cooper et al., 2015; McMullin et al., 2007). Conservation behaviours such as habitat restoration or volunteering for conservation have been defined as being able to alter ecosystems or influence the availability of natural resources (Stern, 2000). These types of pro-environmental behaviours are shown to have direct effects on biodiversity conservation (Veríssimo, 2013). In contrast, individual lifestyle behaviours such as reducing electricity usage and waste minimisation may only have limited effects on environmental quality (Poortinga et al., 2004). Ceballos et al. (2017), claims that people need to start engaging in pro-environmental behaviours that actively support the restoration of biodiversity, both flora and fauna. This is reflected in Te Mana o te Taiao—Aotearoa New Zealand Biodiversity Strategy 2020, whereby everyone—whānau, hapū, iwi, Māori communities, organisations, environmental non-governmental organisations, central and local government, businesses, industry, and every individual needs to be actively involved in actions that protect and restore biodiversity.

While studies have looked at a connection to nature, pro-environmental behaviours, and barriers in isolation, or in some combination, there is a need for research that investigates how these factors interact together in a business context. Further research is needed to understand how a business leader's connection to nature influences their pro-environmental behaviours to inform decision-making across multiple areas which include pro-environmental behaviours that deliver positive biodiversity outcomes, corporate social responsibility goals in businesses, policy making in government, and encouraging further research and social awareness in this area.

In this chapter, I aim to investigate the New Zealand small to medium-sized business landscape to examine whether and how a connection to nature is related to pro-environmental behaviour in a business setting. This study examines the association between business leaders' connection to nature and their businesses' pro-environmental behaviours, while considering characteristics and barriers that may influence pro-environmental behaviour uptake. Specifically, this quantitative data chapter aims to:

1. identify what and how often businesses are currently undertaking pro-environmental behaviours;

2. analyse the different types of pro-environmental behaviours—conservation versus individual lifestyle, engaged businesses are taking, and determine whether there are different groups within this environmentally engaged community; and

3. examine the extent to which pro-environmental behaviours within businesses are associated with the connection to nature of their business leaders.

2.2 Methodology

2.2.1 Survey design

A survey was designed and deployed to target individuals who are small to medium-sized business leaders from across New Zealand who are likely to already be involved in some sort of environmental action. The survey was designed with the goal of collecting information on business leaders' individual demographics and connection to nature, business characteristics and pro-environmental behaviours, and perceived barriers to undertaking pro-environmental behaviours. This work was carried out under the Victoria University of Wellington Human Ethics approval number #0000028328.

The survey was created in Qualtrics Survey Software. To encourage responses and reduce non-response bias, the survey included brief and succinct questions with no jargon, limited/ optional open-ended textboxes, and utilised drop box and ticking measures to capture answers. The survey was also kept to under 10 minutes to reduce respondent fatigue. The survey content outline is shown below in **Table 2.1** and a full copy of the survey can be found in **Appendix 1**.

Table 2.1: *Variables included in the survey, measures for each variable, and rationale for including the variable.*

Variable name	Measure	Description/ rationale
Business leader	Yes (respondent is a business leader)—survey continues; No (respondent is not a business leader)—survey terminates	Determines whether the respondent can make decisions in a New Zealand business.
Industry type	Respondent selects the most relevant from same categories as those used in the New Zealand Census: Agriculture, forestry and fishing; Mining; Manufacturing; electricity, gas, water and waste services; Construction; Wholesale trade; Retail trade and accommodation; Transport, postal and warehousing; Information media and telecommunications; Financial and insurance services; Rental, hiring and real estate services; Professional, scientific, technical, administrative and support services; Public administration and safety; Education and training; Health care and social assistance; Arts, recreation and other services; Other (please mention) Categories from the New Zealand Census Classification Categories	Industry type may have an important influence on pro-environmental behaviour because industry-specific conditions influence an organisation's ability to engage in environmental practices (Aragón-Correa et al., 2008). Certain industries have better plausibility and capability for corporate social responsibility activities (Porter & Kramer, 2006).
Postcode for business location	Open ended textbox	Determines whether the business is located in New Zealand (i.e. relevant to the study).
Number of employees	Category selected from those identified in the Ministry of Business, Innovation and Employment Small Business Factsheet, and include: 1–5; 6–19; 20–49; 50–99; 100+ Categories from Ministry of Business, Innovation and Employment Small Business Factsheet	The size of an organisation may have an important influence on pro-environmental behaviour. While there has been less research into small to medium-sized businesses, larger firms have been shown to contribute proportionately more funds into social and environmental interests (Adams & Hardwick, 1998; Hoogendoorn et al., 2015).
Organisation structure	Category selected from those identified in business.govt.nz: Sole trader; Company; Partnership; Other, please detail Categories from business.govt.nz	Organisation structure may have an important influence on pro-environmental behaviour because it outlines the co-ordination of activities to achieve an organisation's objectives and goals (Maduenyi et al., 2015).
Years of operation	Category selected from: Less than 1 year; 1–5 years; 6–10 years; More than 10 years	How long a business has been operating may have an important influence on pro-environmental behaviour as new organisations have been found to more easily adopt environmental practices (Schick et al., 2002).
Affiliations with a business network	Yes, please list; No	An affiliation to a business network may have an important influence on pro-environmental behaviour because inter-company relationships are shown to influence a company's policies and environmental practices (Wagner & Svensson, 2014).

Accreditations or certificates related to protecting the environment	As above.	Accreditations or certificates related to protecting the environment may be influenced by a leader's connection to nature and/or influence a leader's access to information and social networks that support pro-environmental behaviour.
Nature relatedness scale	Five-point Likert agreement scale against 21 items developed by Nisbet, et al. (2009).	Measures the affective, cognitive, and experiential aspects of an individual's connection to nature.
Pro-environmental behaviours	Five-point Likert scale measuring importance and option of 'don't know'. Types of behaviours outlined below in section 2.2.2.1	Identifies what type of behaviours are currently being undertaken in businesses and how frequently.
Barriers	Five-point Likert scale measuring importance and option of 'don't know'. Barriers outlined below in section 2.2.2.2	Identifies key barriers preventing business leaders from undertaking as much as they would like to for the environment.
Age	Category selected from those used in the New Zealand Census Classification Categories. Measured in (years): less than 20; 20–24; 25–29; 30–34; 35–39; 40–44; 45–49; 50–54; 55–59; more than 60 Categories from the New Zealand Census Classification Categories	This variable was included because it has been shown to influence pro-environmental behaviour and has been linked to a connection to nature (Allen & Spialek, 2017; Dean et al., 2018).
Gender	Category selected from those used in the New Zealand Census Classification Categories: Female; Male; Other; Prefer not to say Categories from the New Zealand Census Classification Categories	As above.
Further comments	Open answer textbox	Opportunity for additional information about connection to nature, or pro-environmental behaviours.
Interview interest	Name and contact details (phone and email) provided where relevant. Yes; No	People were invited to indicate interest in participation in further research.

2.2.2.1 Pro-environmental behaviours

The survey provided a list of 17 pro-environmental behaviours adapted from McMullin et al. (2007) and Cooper et al. (2015), and requested respondents to indicate how frequently they undertook the behaviour on a 5-point Likert scale (never, rarely, occasionally, often, and very often). This expands on previous studies which have predominantly focussed on individual lifestyle behaviours that only have a small effect on environmental qualities, while overlooking conservation behaviours that alter ecosystems, or change resource availability (Poortinga, et al., 2004; Stern, 2000). When constructing the list of pro-environmental behaviours, I chose to include both individual lifestyle behaviours:

- recycling,
- using public transport,
- conserving water,
- conserving electricity,
- green purchasing,
- composting,
- supporting green policies,
- picking up litter,
- green supply chain,

and conservation behaviours:

- pest control,
- volunteering for conservation,
- donating to conservation,
- contacting government agencies about environmental issues,
- reading and watching material related to protecting the environment,
- growing native plants,
- habitat enhancement,
- joining environmental groups.

2.2.2.2 Barriers to pro-environmental behaviours

The survey examined the importance of six barriers to pro-environmental behaviours for the business leaders, which were adapted from Blake (1999). Both internal and external factors influence behaviour (Kollmuss & Agyeman, 2002); therefore, it is important to acknowledge both types of barriers when trying to understand why people may or may not undertake pro-environmental behaviours. Barriers included were internal:

- availability of time,
- lack of resources,
- lack of interest,

and external:

- lack of opportunity,

- lack of encouragement,

- lack of information.

Respondents were requested to indicate how frequently these six barriers to pro-environmental behaviours affected them in their business based on a 5-point Likert scale (never, rarely, occasionally, often, and very often). Respondents could also identify and rank their own barriers through an open-ended textbox.

2.2.2 Survey distribution and data collection

Initially, I contacted 15 different New Zealand business networks via email asking them to share my survey link with their members. Following this email, I rang leaders of the different networks asking if they could share my survey with their members. Both distribution methods varied in success; some business networks forwarded the survey link directly to their members via email, others added the survey link to their newsletters, some shared the survey link on their social media platforms, and a few declined my request to share the survey link. One network invited me to share my research/ survey during a networking lunch.

When survey responses from the business networks started to slow down, I began to contact (email and phone) different organisations who may have been interested in distributing the survey. I also shared the survey more broadly on Facebook in different community groups. As a final method of collecting responses, I contacted businesses directly via email asking them to complete my survey.

All complete and incomplete survey responses were recorded in a secure online Qualtrics file.

Respondents who were not business leaders were removed from the survey response pool, and respondents from outside New Zealand as indicated by the postcode were also

excluded. Where respondents had provided 'other' responses, these were read and recategorised into an existing category if appropriate, or a new category was created where necessary.

2.2.3 Data analysis

Data for nature relatedness measures (affective, cognitive, and experiential) were calculated into scores for each respondent following the method from Nisbet et al. (2009). Four new variables were created: NR Self, NR Perspective, NR Experience, and Overall NR.

Response validity was tested through two measures. Firstly, common method variance was tested using Harman's single factor in IBM SPSS Statistics (version 26.0) (Podsakoff & Organ, 1986). Common method variance represents the spurious association between variables that are generated by using the same method (i.e. self-reported survey) to measure each variable (Jakobsen & Jensen, 2015). Harman's single factor test is used to identify if the variance from the survey variables are below the recommended 50% threshold (Tehseen et al., 2017). Secondly, non-response bias occurs when there is a difference between respondents and non-respondents (Berg, 2005). To test non-response bias, variables from early respondents can be compared against late respondents to determine any differences (Armstrong & Overton, 1977). The study dataset was divided into thirds based on survey completion date, then an independent samples t-test was conducted between the first and last responses to test if there was a significant difference between scale variables.

After checking the validity of the data, frequencies and cross-tabulations of variables were first explored in Microsoft Excel, before using cluster analysis in SPSS to group respondents based on their pro-environmental behaviours. Cluster analysis was the chosen analysis because it addresses the aims of this chapter by being able to identify and classify different groups of business leaders based on the type of pro-environmental behaviours they undertake, connection to nature, individual demographics, and businesses characteristics.

Cluster analysis is a collection of different multivariate statistical methods that structures similar sets or groups based on observations in a dataset (Ketchen & Shook,

1996). Two-step cluster analysis is one method that sorts natural groups within a dataset based on pre-clustering followed by hierarchical methods (Wendler & Gröttrup, 2016). Two-step clustering was chosen over other clustering techniques because it: 1) works well with large datasets, 2) determines the optimal number of clusters automatically and, 3) identifies the predictor importance of variables in the cluster solution (Tkaczynsk, 2017). Clustering techniques can be used in conjunction with other statistical methods to test cluster validity and reliability of results (Ketchen & Shook, 1996).

When considering variables to use in cluster analysis, it is important to carefully consider including variables with a low predictor importance rating (0.02 or below) in the final solution (Tkaczynsk, 2017). Any pro-environmental behaviour variables that had a predictor importance rating of below 0.02 were removed.

Specifically, the first aim of this chapter was answered by calculating total percentages for each pro-environmental behaviour to show the frequency at which the pro-environmental behaviour was being undertaken by businesses. Secondly, cluster analysis was used to analyse individual demographics, business characteristics, connection to nature, and perceived barriers to determine whether there are different groups of business leaders. SPSS results were overlaid to compare the different business leader groups. Finally, independent samples t-tests were conducted, where appropriate, to confirm the cluster results and examine the extent to which pro-environmental behaviours within businesses are associated with the connection to nature of their business leaders.

2.3 Study results

A total of 320 responses were recorded over a three-month period. Of these responses, 216 were complete and valid (**Table 2.2**), 69 were incomplete, and 35 did not meet the first criterion of being a business leader in New Zealand.

Table 2.2: *The number of respondents and the equivalent percentage of survey responses for each business and individual characteristic question. Responses for each variable are ordered from the most frequent to the least frequent.*

Business Characteristics					
Structure	**N**	**%**	**Operation time**	**N**	**%**
Company	176	81.5	5 years or more	173	80.1
Sole trader	18	8.3	4 years	17	7.9
Partnership	8	3.7	2 years	13	6.0
Charitable Trust	7	3.2	3 years	8	3.7
Not-For-Profit	4	1.9	1 year or less	5	2.3
Other, please detail	3	1.4			
Industry			**Number of employees**		
Professional, Scientific, Technical, Administrative and Support Services	60	27.8	1 - 5	100	46.3
Retail Trade and Accommodation	33	15.3	6 - 19	56	25.9
Manufacturing	18	8.3	20 - 49	25	11.6
Construction	17	7.9	100 +	24	11.1
Arts, Recreation and Other Services	13	6.0	50 - 99	11	5.1
Financial and Insurance Services	13	6.0			
Information Media and Telecommunications	13	6.0			
Education and Training	12	5.6	**Network**		
Agriculture, Forestry and Fishing	11	5.1	Yes	118	54.6
Tourism	8	3.7	No	98	45.4
Health Care and Social Assistance	7	3.2			
Transport, Postal and Warehousing	5	2.3	**Accreditation or certificates**		
Wholesale Trade	4	1.9	No	153	70.8
Rental, Hiring and Real Estate Services	2	0.9	Yes	63	29.2
Individual Characteristics					
Age	**N**	**%**	**Gender**	**N**	**%**
45 - 49 years	39	18.1	Male	117	54.2
40 - 44 years	35	16.2	Female	96	44.4
more than 60 years	35	16.2	Prefer not to say	3	1.4
50 - 54 years	31	14.4			
55 - 59 years	31	14.4			
35 - 39 years	20	9.3			
25 - 29 years	12	5.6			
30 - 34 years	10	4.6			
20 - 24 years	3	1.4			

There was no indication that non-response bias was a problem in this dataset based on the independent samples t-tests (**Table 2.3**) which indicates no statistically significant difference in the mean nature relatedness measures between first-third and last-third of all respondents based on response time.

Table 2.3: *Results from the independent samples t-test results for non-response bias between first, second, and last third of respondents.*

Variable	n	t-value	p-value
Overall NR	142	-1.20	.233
NR Self	142	-1.00	.317
NR Perspective	142	0.64	.522
NR Experience	142	-1.75	.083

$p<0.05$

The results from Harman's single factor test extracted 27 factors, with the first factor accounting for 26.11% of the total variance. Based on these results, common method variance is assumed not to be an issue in this dataset because the total variance from the first factor is less than the recommended 50% threshold.

2.3.1 Pro-environmental behaviours
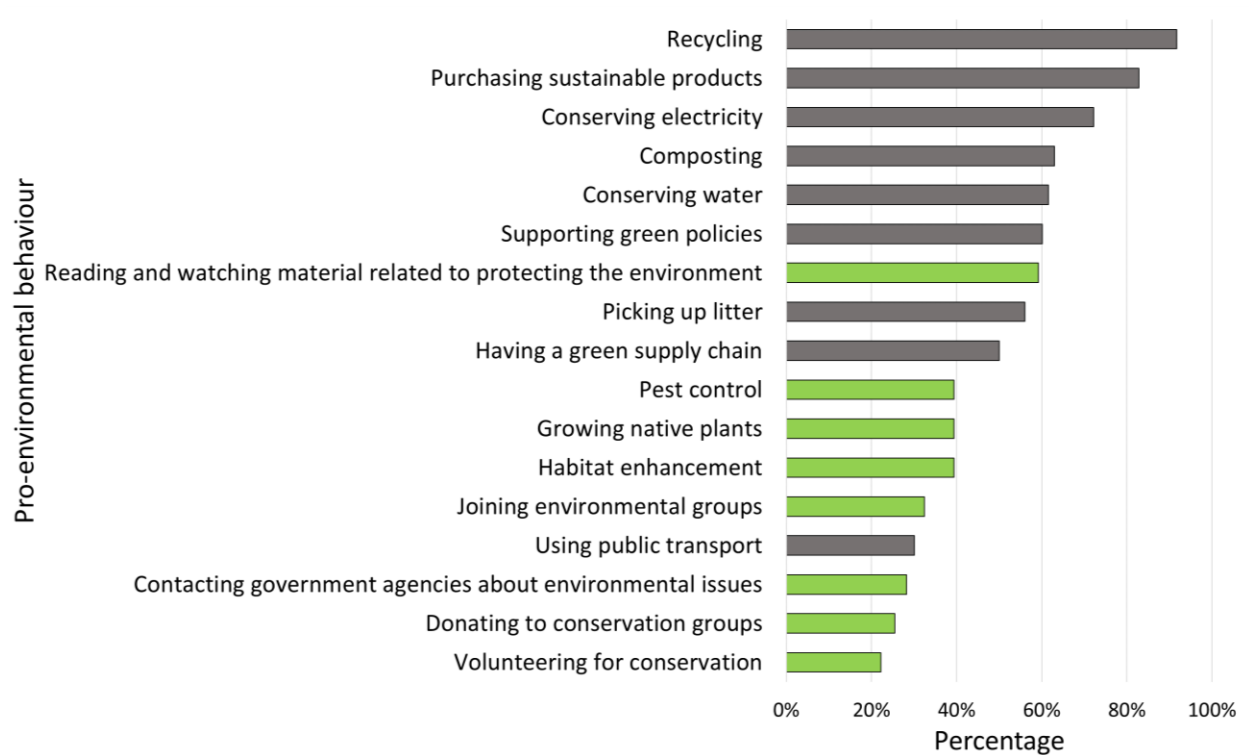
Figure 2.1: *Grey bars represent individual lifestyle behaviours while green bars represent conservation behaviours. The total percentage of respondents who chose 'often' or 'very often' for each pro-environmental behaviour are shown as total percentages for each pro-environmental behaviour.*

The most frequently undertaken pro-environmental behaviours were recycling (92%), purchasing sustainable products (83%), and conserving electricity (72%) (**Figure 2.1**). These three most frequently undertaken behaviours were classified as individual lifestyle

behaviours. The most frequently undertaken conservation behaviour is reading and watching material related to protecting the environment, with 59% of respondents selecting 'often' or 'very often' (**Figure 2.1**). The most frequently undertaken conservation behaviour appears as the seventh most frequently undertaken pro-environmental behaviour.

The least frequently undertaken pro-environmental behaviours were volunteering for conservation (22%), donating to conservation groups (25%), and contacting government agencies about environmental issues (28%) (**Figure 2.1**). These three least frequently undertaken behaviours were all classified as conservation behaviours.

Other pro-environmental behaviours reported by business leaders included choosing sustainable transport options (electric vehicles and bikes), carbon offsetting, reducing landfill waste, avoiding excess travel through working remotely and using technology, and becoming plastic free.

2.3.2 Barriers to undertaking pro-environmental behaviours
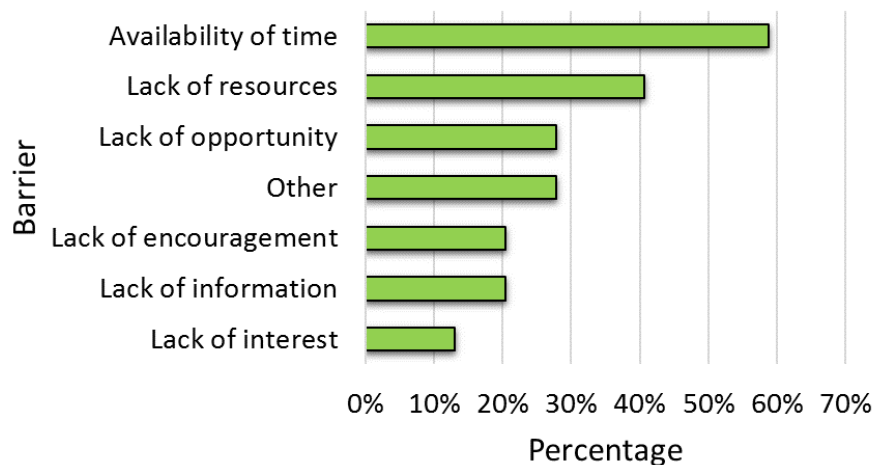
Figure 2.2: The total percentage of respondents who chose 'often' or 'very often' for the barrier are shown as total percentages for each barrier.

The reported barriers for all respondents were primarily lack of available time (59%), lack of resources (41%), lack of opportunity (28%), other barriers (28%), lack of encouragement (20%), lack of information (20%), and finally lack of interest (13%) (**Figure 2.2**). The biggest

two barriers identified were both internal barriers while the third biggest barrier of lack of opportunity was an external barrier.

Other reported barriers included legislative barriers, commercial pressures, public perception, lack of relevance to business, and difficulties around co-ordination of focus and direction.

2.3.3 Cluster analysis results

In an initial two-step analysis, 14 of the 17 pro-environmental behaviours had a significant predictor importance of above 0.02. Conserving water, having a green supply chain, and pest control had a predictor importance below 0.02, so were removed before conducting a final two-step cluster analysis. This two-step cluster analysis of 14 pro-environmental behaviours produced two clusters. Cluster one had 117 respondents (60.9%), and cluster two had 75 respondents (39.1%).

2.3.3.1 Cluster characteristics
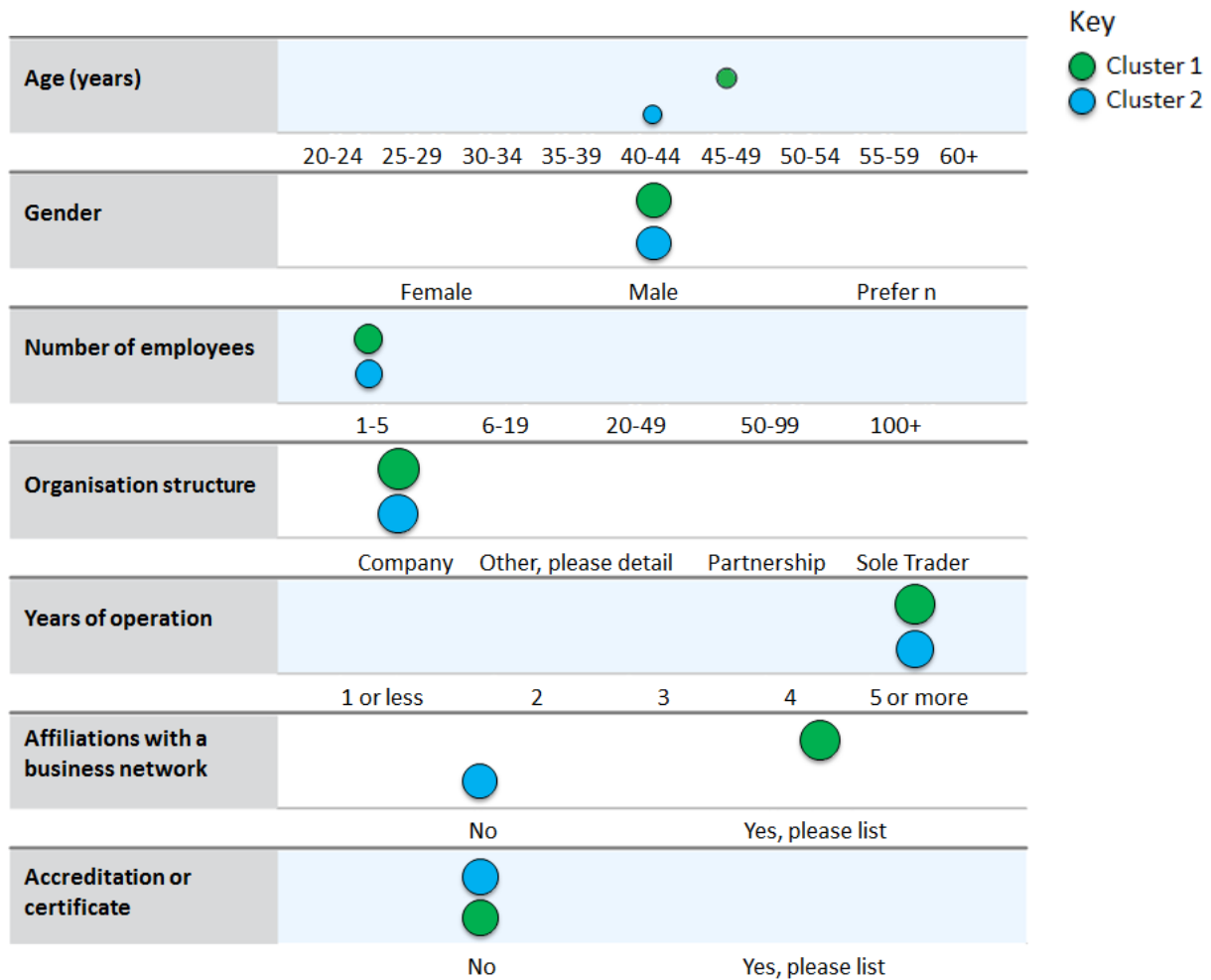
Figure 2.3: *Depiction of differences between clusters of business leader survey responses showing the most frequently chosen respondent characteristics. Cluster one is represented by the green circle and cluster two is represented by the blue circle. The size of the circle for each cluster is indicative of the mode size.*

Based on cluster modes, both clusters were predominantly characterised as having a company organisation structure, being of male gender, five years or more operation time, no accreditation or certificate related to protecting the environment, and one to five employees (**Figure 2.3**).

There were very limited demographic differences between clusters; cluster one was slightly older, but both were predominantly male. Cluster characteristics differed based on age and being a member of a business network. Based on modes, cluster one was aged between 45 and 49 years (18.8%), with business network associations (66.7%). While

cluster two was aged between 40 and 44 years (22.7%), with no business network association (65.3%).

Conducting an independent samples t-test showed no statistically significant age difference between the two clusters; t(190)=0.43, p =.664.

2.3.3.2 Cluster pro-environmental behaviours
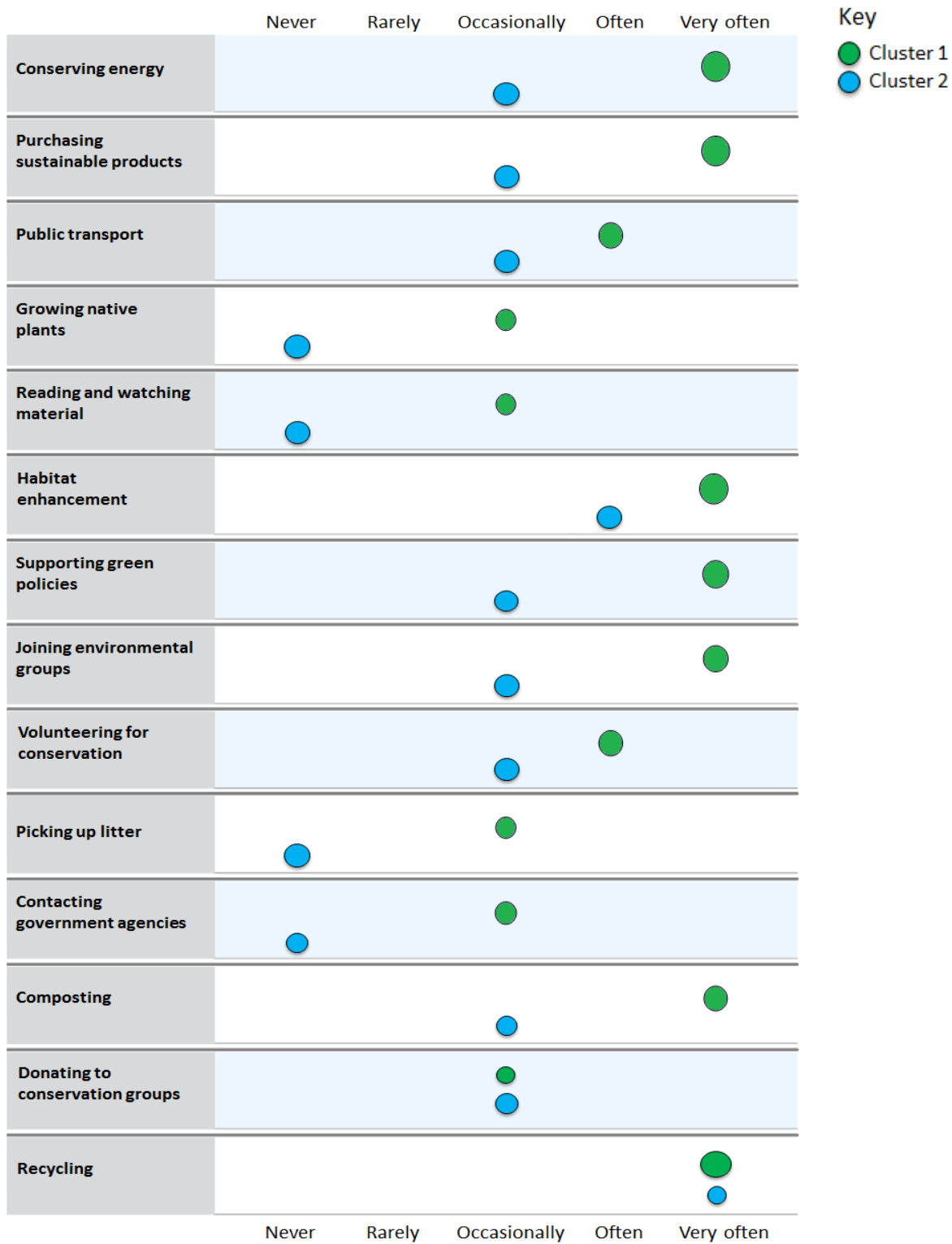
Figure 2.4: *Depiction of differences between clusters of business leader respondents, showing the most frequently undertaken behaviours. Cluster one is represented by the green circle and cluster two is represented by the blue circle. The size of the circle for each cluster is indicative of the mode size. The further right the circle, the more frequent the behaviour.*

Based on cluster modes, cluster one business leaders undertake the pro-environmental behaviours at the same or higher frequency than cluster two (**Figure 2.4**). The two pro-environmental behaviours where cluster one and cluster two business leaders undertake at the same frequency were: donating to conservation groups (occasionally) and recycling (very often).

Cluster one business leaders reported 'very often' to six pro-environmental behaviours: conserving energy, purchasing sustainable products, composting, enhancing habitats, supporting green policies, and joining environmental groups. Additionally, they reported 'often' to public transport, and volunteering for conservation. The minimum pro-environmental behaviour frequency was recorded as 'occasionally'.

In comparison, cluster two business leaders only reported 'very often' to one pro-environmental behaviour which was recycling, and 'often' to habitat enhancement. Cluster two business leaders report 'never' to undertaking four pro-environmental behaviours: growing native plants, reading and watching material related to protecting the environment, contacting government agencies, and picking up litter.

Business leaders from both clusters undertake a mixture of conservation behaviours and individual lifestyle behaviours. Cluster one business leaders report more frequently undertaking conservation behaviours than cluster two. Business leaders in cluster one, reported 'very often' to undertaking three conservation behaviours: habitat enhancement, supporting green policies, and joining environmental groups. However, cluster two business leaders only reported 'often' to one conservation behaviour which was habitat enhancement. Both clusters of business leaders did not have pro-environmental behaviours modes marked as 'rarely' being undertaken.

2.3.3.3 Cluster barriers
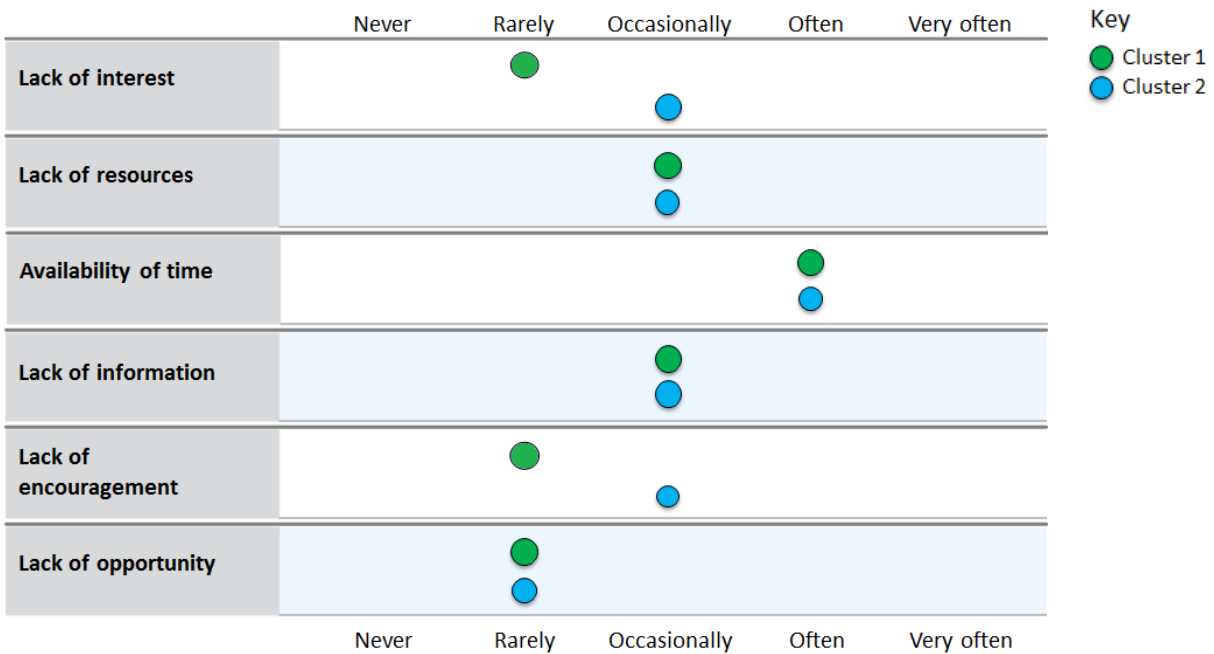
Figure 2.5: Depiction of differences between clusters of business leader respondents, showing the most frequent barriers. Cluster one is represented by the green circle and cluster two is represented by the blue circle. The size of the circle for each cluster is indicative of mode size. The further right the circle, the more frequent the barrier.

Business leaders from both clusters identified the internal barrier of availability of time as the most frequent barrier preventing them from undertaking as much as they would like for the environment (**Figure 2.5**).

Cluster one reported a lack of resources and lack of information as occasionally being a barrier while cluster two also reported a lack of encouragement and lack of interest as also being an occasional barrier. While cluster one reported a lack of interest, lack of encouragement, and lack of opportunity as rarely being a barrier, cluster two business leaders only identified lack of opportunity as 'rarely' being a barrier. None of the six barriers were identified as 'never' or 'very often'.

Overall, cluster two identified the barriers as being more frequent in preventing them from undertaking as many pro-environmental behaviours as they would like to compared to cluster one.

2.3.3.4 Nature relatedness of respondents within clusters

Table 2.4: *Independent sample t-test results comparing both clusters on overall nature relatedness, nature relatedness self, and nature relatedness experience. Significant results are indicated by an asterisk above the p-value.*

Variable	n	t-value	p-value
Overall NR	190	2.38	.018*
NR Self	190	2.19	.030*
NR Perspective	190	-0.16	.876
NR Experience	190	2.38	.019*

*p<0.05

Cluster one had a significantly higher Overall NR, NR Self, and NR Experience score compared to cluster two (**Table 2.4**). These results show that business leaders who perform pro-environmental behaviours more often tend to have a higher nature relatedness across most dimensions of its measurement.

However, the NR Perspective measure was not significantly different between cluster two and cluster one (**Table 2.4**). This result shows that there is no perspective nature relatedness score difference between business leaders who undertake pro-environmental behaviours more or less frequently in their businesses.

Figure 2.6 below illustrates these findings.
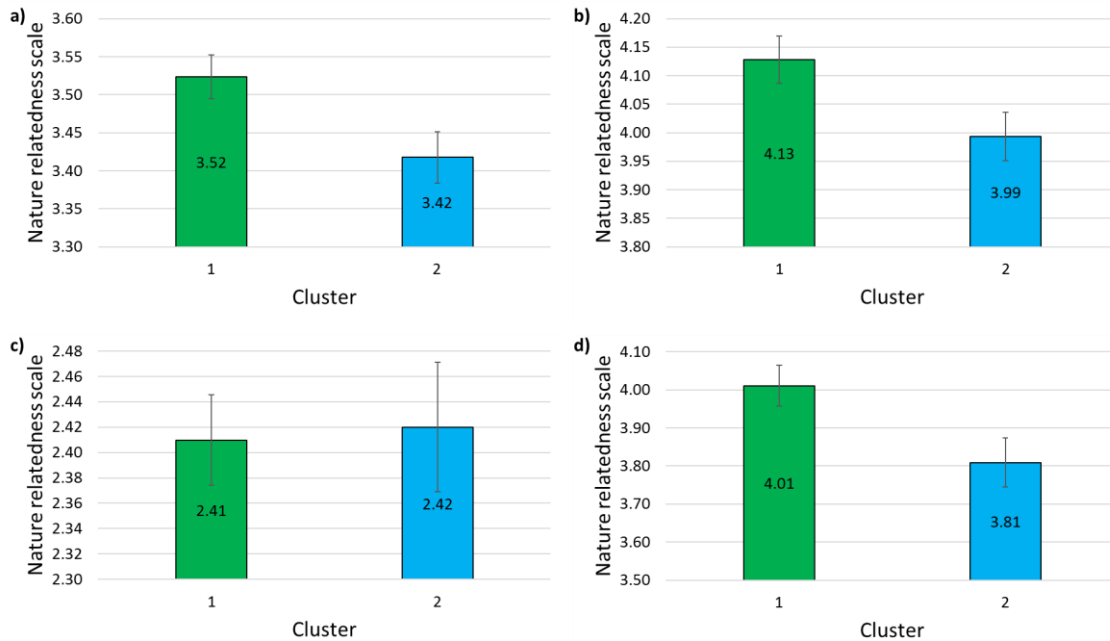
Figure 2.6: *Means of nature relatedness for two clusters of survey respondents. Graphs show a) overall nature relatedness, b) nature relatedness self, c) nature relatedness perspective, and d) nature relatedness experience. Error bars represent standard error of proportion.*

2.4 Discussion

This chapter explores the relationship between New Zealand business leaders' connection to nature and pro-environmental behaviours in a business setting. Here, I have shown that there is a positive association between a connection to nature and the uptake of pro-environmental behaviours in a New Zealand business context. Specifically, business leaders who reported performing pro-environmental behaviours more often were found to have significantly higher overall nature relatedness, nature relatedness self and, nature relatedness experience scores compared to business leaders who reported less frequent pro-environmental behaviour uptake. This positive association between a connection to nature and pro-environmental behaviour is consistent with findings in the literature (Mayer & Frantz., 2004; Nisbet et al., 2009; Tam, 2013).

This research identified two distinct clusters of business leaders, with cluster one business leaders being shown to more frequently partake in conservation behaviours. Business leaders who more frequently undertake conservation behaviours such as habitat enhancement, supporting green policies, and joining environmental groups demonstrated a higher connection to nature. Cluster analysis indicated that there were limited differences between clusters based on individual demographics and business characteristics, except for business leaders in cluster one generally being slightly older and members of a business network. Based on these limited differences, there are likely to be other important reasons that drive business leaders to partake in pro-environmental behaviours. Cluster results for barriers to undertaking pro-environmental behaviours showed that cluster one perceived the barriers as less frequently preventing them from undertaking further pro-environmental behaviours. Cluster analysis was beneficial for determining different groups within the business leaders and analysing their pro-environmental behaviours and perceived barriers to undertaking further pro-environmental behaviours.

Business leaders who reported a higher connection to nature self dimension may participate in more pro-environmental behaviours because emotions and beliefs have been found as influential drivers of environmental attitudes that lead to environmental action (Pooley & O'Connor, 2000). Another explanation is that people who have a greater affective

connection with the natural environment have greater intentions to engage with it (Hinds & Spark, 2008). In my study, business leaders who more frequently undertake pro-environmental behaviours reported rarely facing the barriers of a lack of interest, lack of encouragement, or lack of opportunity. This suggests that business leaders who undertake more frequent pro-environmental behaviours are aware of opportunities for environmental action, are interested in being involved in pro-environmental behaviours, and receive the encouragement needed to partake in as much as they can to protect the natural environment. Findings from this study support existing evidence in the literature that a stronger affective connection to nature influences pro-environmental behaviour uptake (Hinds & Spark, 2008; Mayer & Frantz, 2004; Pereira & Forster, 2015).

This chapter also shows that business leaders who reported higher experiential nature relatedness scores more frequently undertake pro-environmental behaviours that have an experiential element, such as growing native plants, habitat enhancement, volunteering for conservation, and composting—notably these are mostly conservation behaviours. Rosa and Collado (2019), list several reasons which may explain why a higher experiential connection to nature influences pro-environmental behaviours including: higher biocentric values (Larson et al., 2011), a greater sense of place attachment (Lawrence, 2012), and increased justice towards the environment (Hahn & Garrett, 2017). An experiential connection to nature defines an individual's physical interactions with the natural environment (Ives et al., 2017); therefore, it seems logical that business leaders who are already interacting and connecting with their natural environments would partake in more pro-environmental behaviours in this study.

Both clusters had near identical nature relatedness perspective scores (which reflects the cognitive dimension of connection to nature). This suggests that they both share similar pre-conceived attitudes, values, and beliefs about the natural environment (Nisbet et al., 2009). Many theoretical frameworks have tried to close the gap between environmental knowledge and environmental awareness, and performing environmental behaviours, however, there are still no conclusive answers (Kollmuss & Agyeman, 2002). My study shows that a cognitive connection to nature is not a differentiating factor for increased pro-

environmental behaviour uptake in business leaders. These results align with findings from Carmi et al. (2015), where solely cognitive dimensions of a connection to nature were not enough to demonstrate pro-environmental motivation. When looking at the types of barriers facing business leaders in this study, they both report occasionally lacking the knowledge needed to engage in actions for the environment. Other influences—affective and experiential connections, may be more significant in influencing pro-environmental behaviour (Pooley & O'Connor, 2000; Rosa & Collado, 2019). It would be beneficial to conduct further research investigating the strength of such a linkage between a cognitive connection to nature and environmental action.

2.4.1 Implications

This chapter provides new insight into the relationship between a connection to nature and pro-environmental behaviour through sampling small business leaders—an understudied population in this research area. Previous research has found associations between a connection to nature and participation in pro-environmental behaviours in university students (Mackay & Schmitt, 2019), landowners (Dutcher et al., 2007), employees (Wesselink et al., 2015), and children (Cheng & Monroe, 2010). Results from this study add breadth to the literature demonstrating that business leaders who partake in pro-environmental behaviours more frequently appear to have a greater connection to nature than business leaders who partake in pro-environmental behaviours less frequently.

Findings from this study are valuable because they suggest that further uptake of pro-environmental behaviours in the workplace may be encouraged by connecting business leaders to nature through an emotional or experiential approach. Businesses can build upon these findings to promote work environments where employees can connect to nature during their normal working day. Studies have shown benefits such as improved productivity from having lunch breaks outside (Loder, 2014), walking meetings (Clayton et al., 2015), and accessing workplace green spaces (Lottrup et al., 2013). Facilitating a connection to nature in the workplace may also have benefits for promoting further pro-environmental behaviour uptake in businesses.

2.4.2 Limitations and future research

Although this study reports important findings concerning the association between a connection to nature and pro-environmental behaviour in New Zealand business leaders, two key limitations must be acknowledged.

The methodological choice of conducting a survey presents limitations. Bias is a potential issue in surveys because answers rely on the self-assessment of participants (Cassells & Lewis, 2011). Following this, participants may interpret, and therefore, answer questions differently to the intended purpose of the question. While steps were taken to reduce and test for bias, and improve the interpretability of questions, findings are likely to still be influenced by some bias. Future research might consider a different methodology to confirm the findings in this research. An experiential study could explore how a connection to nature is actually realised as pro-environmental behaviours in New Zealand businesses as opposed to reported pro-environmental behaviours in a survey.

It is beyond the scope of this study to conclude causation or relationship directionality between a connection to nature and pro-environmental behaviour, instead the research focusses on associations between the two variables to describe existing relationships in an understudied sample. Future research may test the directionality of a connection to nature and pro-environmental behaviour in business leaders to confirm whether participation in workplace pro-environmental behaviours fosters a greater connection to nature or vice versa.

2.5 Conclusion

This chapter shows that New Zealand business leaders who undertake more frequent pro-environmental behaviours demonstrate higher levels of a connection to nature than business leaders who do not frequently undertake pro-environmental behaviours. Between the two clusters of business leaders there are some differences, most notable are 1) the frequency at which pro-environmental behaviours are undertaken, 2) the rate at which barriers prevent them from engaging in as much as they would like to for the environment, and 3) their overall connection to nature dimensions. These findings capture a snapshot of how business leaders

currently connect to nature and how this relates to their businesses pro-environmental behaviours. To encourage further pro-environmental behaviour uptake, especially conservation behaviours, my study suggests it may be most effective to promote affective and experiential connection to nature. Means of recognising and removing barriers to pro-environmental behaviour are also needed to promote further pro-environmental behaviour.

Chapter 3: The role of business leaders' connection to nature in fostering pro-environmental behaviours

3.1 Introduction

Businesses are considered an important part of the solution for environmental crises (Ristovska, 2010). Consequently, the business sector faces increasing political, social, and economic pressures to become environmentally responsible (Baughn et al., 2007). According to DesJardins (1998), environmental responsibility should address two key points: 1) the prevention of environmental and ecological degradation caused by decision-making in business, and 2) it should impact business policy. Business leaders play a significant role in realising environmental responsibility in the business sector because they have the ability to react to external pressures and make decisions on behalf of their businesses (Hollender & Breen, 2010; Zu, 2019).

The theoretical constructs that explore the purpose of business in modern society provide an important framework for the role of business in solving environmental and social challenges (Ashrafi et al., 2020; Montiel, 2008). Following a classical view, businesses exist solely to convert their resources into financial profitability and to engage in activities that serve profit-making-goals that benefit stakeholders (Metcalfe, 1998; Orts & Strudler, 2002). In contrast, a moral or normative view is that businesses exist as social institutions with social, environmental, and economic responsibilities (Lozano, 2015; Vermeulen & Witjes, 2016). Recently, the normative view has become prevalent in the literature and in the business sector as leaders become more aware of the interconnections between economic, environmental, and social factors (Elkington, 2005).

Existing research into business and the natural environment commonly focusses on 'businesses' as the unit of measure (Headd & Saade, 2008). For example, significant bodies of research broadly focus on why and how businesses adopt environmental management models such as Corporate Social Responsibility (Babiak & Trendafilova, 2011; Kudłak & Low, 2015), Triple Bottom Line (Glavas & Mish, 2015; Hidayati, 2011), and environmental reporting (Hahn & Kühnen, 2013; Sharma, 2002). Additionally, research explores the effects

of incorporating such environmental management models based on environmental outcomes (Ammenberg et al., 2002; Nawrocka & Parker, 2009), financial performance (Albertini, 2013; Montabon et al., 2007), and social benefits (Salzmann et al., 2005; Stubbs & Cocklin, 2008). While there is a breadth of research focussing on businesses as a whole and the natural environment, little attention has been given to the role of individual business leaders as key influencers in business activity. This is important because business leaders are the drivers for change in business and are likely to influence pro-environmental behaviour uptake that will have positive impacts on the natural environment (Ferdig, 2010).

There is a growing body of research investigating how an individual's environmental values influence their engagement with pro-environmental behaviours, and this is likely to be highly relevant when considering the role of individual business leaders for informing pro-environmental action. According to Dunlap et al. (2000), individuals who demonstrate concern for the natural environment are more likely to partake in pro-environmental behaviours. Personal beliefs and an affective, cognitive, and experiential connection to nature have also been shown to predict a variety of different pro-environmental behaviours (Nisbet et al., 2009; Stern, 2000). Existing research indicates that there is a positive relationship between individual values and pro-environmental behaviours in a non-business context (Kals et al., 1999; Nisbet et al., 2009; Schultz, 2001).

Of the research that does exist, there are some studies which have examined individual values, factors that influence business leaders, and barriers to adopting pro-environmental barriers. However, further research is still needed to fully understand individual connection to nature and pro-environmental behaviour in a business context. Hemingway and Maclagan (2004), suggest that a business leader's values and beliefs are persuading factors for adopting environmental behaviours. Similarly, Wilson (2002) claims that personal values and interests can influence the adoption of corporate social responsibility in business. While individual values, beliefs, and interests are shown to motivate business leaders, there are numerous external factors that vie for their attention, such as financial, social, legal, and ethical considerations (Baughn et al., 2007; Clegg, 2011). Additionally, common barriers including limited time, finances, and environmental

knowledge are also shown to affect business leaders when trying to undertake pro-environmental behaviours (Gerstenfeld & Roberts, 2000).

In this qualitative study, I specifically focus on how New Zealand business leaders connect with nature, and how this influences their businesses pro-environmental behaviours. Further, I examine barriers and enablers that support the realisation of business leader's pro-environmental aspirations in their business. Through studying the personal values, perspectives, and stories shared by business leaders, the relationship between a connection to nature, business, and pro-environmental behaviours can be explored in depths that the previous quantitative chapter cannot measure. My overarching aim is to provide an in-depth analysis on how business leaders translate their connection to nature into the running of their businesses, which could inform how uptake of further pro-environmental behaviour might be realised in other settings. Specifically, this qualitative data chapter aims to:

1. understand how business leaders currently express a connection to nature in their businesses;
2. explore the relationship between a connection to nature and pro-environmental behaviours in business;
3. determine what environmental aspirations business leaders hold for the future; and
4. identify what barriers business leaders face in their businesses.

3.2 Methodology and methods

3.2.1 Epistemology

Epistemology is a theory of knowledge that evaluates what knowledge is acceptable in a field of study (Bryman, 2016; Saunders et al., 2009). Additionally, epistemology explores relationships between the researcher and the participant, or vice versa (Guba & Lincoln, 1994; Lee, 2012). It is important to disclose the epistemology undertaken in a qualitative study because it can influence what knowledge constitutes as acceptable, and therefore, has impacts on the final results (Ambert et al., 1995).

This research adopts a constructivist epistemology which assumes that there are multiple realities which can be constructed (Guba & Lincoln, 1994). A constructivist approach focusses on what participants think and feel, how they communicate, and aims to illustrate why participants have different experiences (Bahari, 2010). As the researcher, I interpret meaning from my interactions with the participants. The construction of knowledge through interacting with participants supports the development of answers to the chapter aims.

3.2.1.1 Theoretical perspective

A theoretical perspective influences which methodology should be taken and provides a lens for conducting analysis (Malterud, 2016). The constructivist epistemology outlined above is associated with an interpretative theoretical perspective (Schwandt, 1994). An interpretative theoretical perspective claims that reality needs to be interpreted and that individual perspectives can be thought of as 'truth'. Interpretivism has different approaches which can be used to emphasise how people interact with the world (Chowdhury, 2014).

This research follows a hermeneutics approach because it concerns the practice of interpretation to form understanding (Bernstein, 1983; Bleicher, 1980). According to Gadamer (1989), hermeneutic philosophy emphasises language and writing as the means for understanding to be exchanged. In a research context, understanding is achieved through open dialogue between the researcher and the participant (Koch, 1999). Data is collected from interviews and observations for inductive analysis to identify common themes (Paterson & Higgs, 2005). A hermeneutics approach is appropriate for this study because it allows for interpretation of multiple perspectives to form understanding on how business leaders connect with nature and how that influences their businesses' pro-environmental behaviours.

3.2.2 Data collection methodology

This chapter uses qualitative methodology, in line with a constructivist epistemology, to develop an in-depth understanding on how New Zealand business leaders currently connect with nature and how that influences their businesses' pro-environmental behaviours.

Qualitative methodology can be used to explore new study areas and focusses on understanding concepts, opinions, or experiences through collecting and analysing non-numerical data (Creswell & Poth, 2016).

The qualitative methodology used in this study follows grounded theory which considers words as data elements that can be organised into themes (McCaffery et al., 2012). This theory aims to explain specific research phenomena through interviews or focus groups (Sutton & Austin, 2015). Considering the epistemology and methodology described above, and the aims of this research, I chose to use individual semi-structured interviews to collect data. Semi-structured interviews consist of several questions that outline key topics to be discussed with the interviewee. I followed general interview guidelines when conducting interviews (DiCicco-Bloom & Crabtree, 2006; Gill et al., 2008; Jamshed, 2014). The method of semi-structured interviews was chosen because they have the benefit of allowing the interviewer to diverge into ideas or responses bought up by the interviewee. Interviews of this nature usually last between 30-60 minutes (DiCicco-Bloom & Crabtree, 2006). Further, they are an appropriate method to answer the aims of this research because I will be able to prompt business leaders to talk about their businesses, connection to nature, pro-environmental behaviours, and barriers while being able to diverge and explore individual responses provided by each business leader.

3.3.2.1 Data collection

The data collection methods in this chapter were approved under the Victoria University of Wellington Human Ethics number #0000028328.

From the quantitative survey in Chapter 2, 50 business leaders showed an interest in participating in the research further by providing their contact details. From this list, I used a random number generator to select business leaders to call until I had 10 business leaders who agreed to an interview. Following the phone call, I immediately emailed the consent to interview form, information sheet for participants, interview guide, and a summary of the phone call to the business leaders. A URL link to an online consent form built in Qualtrics was also included in the email, for electronic consent if the business leader preferred.

3.3.2.2 Interview methods

Ten semi-structured interviews were conducted either in-person or via video-conferencing based on the business leader's preference. Where in-person interviews were held, they were carried out in locations familiar to the business leader to create an atmosphere where they felt comfortable to share their views, experiences, and perceptions (Longhurst, 2003). Three interviews were conducted in-person in Wellington and seven interviews were conducted online via Zoom—a videotelephony software program. The in-person interviews were held at a local café or in an office meeting room. I followed the thematic interview guide structure below to conduct the interviews (**Table 3.1**).

Table 3.1: *Thematic interview guide with broad themes, main questions, and subtopics outlined.*

Broad Theme	Main questions	Subtopics
Gathering information about the interviewee	Tell me about yourself and your business.	Interviewee information e.g. name, reason for interview, expectations of the interview, general survey/ interview comments etc.
		Business information e.g. name, size of business, location, type, purpose etc.
Connection to nature	Can you tell me about how your business connects with nature?	Thoughts around nature connection to self: environmental/ corporate identity, stakeholder management
		Thoughts around nature connection to perspective: environmental management practices, corporate strategy
		Thoughts around nature connection to experience: workplace environment, green initiatives
Current pro-environmental behaviours	Can you tell me about the pro-environmental behaviours that your business currently undertakes?	Experiences related to business leaders' behaviours
		Experiences related to individual employee behaviours
		Experiences related to organisational behaviours
		Perceived benefits of undertaking these behaviours
Future pro-environmental behaviours	Can you tell me about the pro-environmental behaviours that you would like to undertake in your business?	Thoughts around what future pro-environmental behaviours they would like to undertake
		Reasoning for adopting these pro-environmental behaviours
		Thoughts on what the future of a green business looks like
Barriers to pro-environmental behaviours	Can you tell me about the barriers that are stopping you from achieving the pro-environmental behaviours that you have shared?	Exploring the barriers
		How to overcome the barriers
Feedback and thank you	Do you have any comments or questions based on your participation in the survey and interview?	Comments around how respondent would like to be referred to as in thesis (e.g. retail manager Bob)
		Explore respondents' answers

At the start of each interview, I introduced myself, outlined how the interview would proceed, and provided background for the research. I reiterated that all answers would be confidential and that the utmost care would be taken to ensure not to disclose any information that would identify them in the report. Participants were informed that the

interview would be audio-recorded either via the record feature on Zoom or by the voice recording application on my cellphone. Audio-recording allowed me to focus on listening and responding to the interviewee, without the need to write verbatim (Stuckey, 2014). According to Green and Thorogood (2018), audio-recording is recommended for interviews because it produces the most accurate and reliable transcripts. Prior to asking the first question, I ensured that all concerns or questions held by the business leader were addressed.

During the interview, I adjusted the thematic interview guide structure based on the conversation with each business leader and asked open-ended follow-up questions. This allowed interviewees to respond using their own words and motivated them to share as much or as little as they would like to answer the question (Corbin & Morse, 2003). Open-ended questions along with encouraging signals from the interviewer, prompted interviewees to share their opinions, feelings, and thoughts freely (Albudaiwi, 2017). Encouraging signals include both verbal cues and visual gestures such as nodding, smiling, and affirmative sounds (Prior, 2018). Rich, highly individualised data can be gathered in this manner (Kurasaki, 2000).

At the conclusion of the interview, I answered any questions that the interviewee had before thanking them for their time and letting them know that I would send a transcript of the interview, summary and/or the audio-recording (if they had requested this in the consent form) for their review. All audio-recordings were stored securely on password protected servers and computers to ensure security.

3.2.2.3 Transcription

Transcripts of each interview were created using Otter.ai software—a free online speech to text transcription application. Generated transcripts were downloaded into a word processing format and manually checked for accuracy against the original audio-recording. Transcribing is the first step of interpreting the data, therefore care must be taken to transfer the intended spoken meaning into written text (Stuckey, 2014). As per best practice, I carried out all the transcription as the interviewer (Easton et al., 2000).

Interviewees who indicated they would like to see the transcripts were provided copies for comment if they had any, and these were then finalised. All electronic transcripts and audio-recordings were stored in password protected files without identifiers, and where hard copies existed they were stored in a locked filing cabinet.

3.2.3 Data analysis

Thematic analysis was used to analyse the data. Thematic analysis is used to uncover emerging themes in data to understand a specific context or phenomena (Attride-Stirling, 2001). This method of analysis is appropriate for this study because it can help to identify patterns within a group of individual business leaders. This analysis aligns with grounded theory described in section 3.2.2.

Data analysis in this study follows the six thematic analysis phases outlined by Braun and Clarke (2006) (**Table 3.2**).

Table 3.2: *The data analysis process used in this study was developed based on the six thematic analysis phases outlined by Braun and Clarke (2006).*

Phase	Description of the process
1. Getting familiar with the data	After all the interviews were transcribed, each transcript was read multiple times to familiarise myself with the data. Initial ideas were noted while reading.
2. Generating initial codes	All transcripts were read systematically while freely creating codes across the whole dataset. Relevant data was collated together.
3. Searching for themes	Codes, along with the data points, were grouped into potential themes.
4. Reviewing themes	Firstly, the coded extracts were checked to ensure that they matched the emerging themes. Secondly, the themes were reviewed against the whole data set. Finally, a thematic map of the analysis was created.
5. Defining and naming themes	The specifics of each theme were analysed and changed to generate clear names and definitions for each theme. On-going review shaped the overall story of the data.
6. Writing the report	Powerful and compelling extracts were selected to be included in the final results section. Analysis at this stage also ensured that the selected extracts were relevant to the aims of the research and general literature.

To ensure anonymity of survey participants, pseudonyms alongside the business leaders' generalised industries were used to describe the results, and any other potentially identifiable information was removed.

3.3 Results

3.3.1 Participants

On average, interviews were 44 minutes and ranged from 35 minutes to 1 hour and 6 minutes. Completing the interviews and analysing the responses from business leaders resulted in three overarching themes, specifically: 1) connection to nature, 2) sustainability journey, and 3) aspirations and barriers. Participants were from a range of different industries (**Table 3.3**).

Table 3.3: *The table below outlines the pseudonyms used in this chapter and the general industry of the business leader.*

Pseudonym	Industry
Ben	Healthcare
Craig	Building
Daniel	Education
David	Technology
Fiona	Sales
Grace	Content creation
Penny	Marketing
Shaun	Manufacturing
Tina	Education
William	Agriculture

3.3.2 Theme one: connection to nature

All participants described some affective, cognitive, or experiential connection to nature. There were similarities and differences in how business leaders described their connection to nature which are outlined here. Interview questions related to a connection to nature elicited responses about childhood memories, changing life circumstances, and increasing environmental awareness. Responses also showed how business leaders try to incorporate their connection to nature into their businesses' values, purposes, and, behaviours.

Half of the participants referenced their childhood nature experiences as a key reason that influenced their choice of profession. For example, Daniel and Tina recalled fond memories of being in nature as a child and wanted to share this connection to nature with future generations through their chosen careers in education. Daniel also mentioned that he didn't want to be cooped up in a job from 9 am to 5 pm, and wanted to find work that allowed

him to be mostly outdoors. Their responses described affective and experiential connections to nature. For Daniel, who runs a business leading students in sustainability and enterprise, the experiential and affective connection to nature also acted as a driver towards a cognitive connection to nature:

> *I grew up on the Coromandel, in a small little town, where nature is a big part of living because obviously, we don't have many activities that relate to different environments, no movies, shops, etc., so you create your fun with what you've got there. So obviously beautiful beaches, nice bush, and that sort of stuff. So obviously, that's had a big impact on my development and that was basically the main driver alongside just being a bit of a nerd, and a bit of a science person to go down a sort of environmental science, conservation, career path. (Daniel, education)*

For Tina, her childhood experiential connection to nature resulted in cognitive connections which influence how she runs her business. Tina's business aims to provide children the opportunity to experience nature the way she did growing up.

> *I think probably my biggest memories about being engaged in nature would be from very young. We would kind of go out on a day and just collect everyone from up the road, take a picnic, and go and play in the stream for several hours... I'm a 70's child. And I think back then our upbringing was very much in nature... So, I guess part of what I wanted to bring into our business was that children could have some of those freedoms that they didn't have perhaps naturally or easily in their own home. (Tina, education)*

For other business leaders, a connection to nature was not explicitly tied back to their childhood experiences in nature but rather to changing circumstances later on in life. An interviewee who exemplified this is David, whose main reason for getting involved with a sustainable business was his cognitive connection to nature as he became more aware of environmental issues. Moving back to New Zealand was the nudge he needed to work in a job that better aligned with his values.

I spent some time in the UK, working for a large American corporate—it was everything I thought it was going to be and everything I sort of hated, making money for a giant American company. I suppose it really wasn't values aligned. My awareness of the climate crisis had been growing and I'd definitely become more sustainable and environmental myself, and then coming back to New Zealand, I wanted to put my skills to use with a business that was a New Zealand company that was doing good and wanted to make the world a better place. (David, technology)

3.3.2.1 A connection to nature as an influence on work practices

Interviews with the business leaders revealed that their connection to nature influences their workplace practices. For Grace, who runs a content creation business, her affective and experiential connection grew when she moved to New Zealand where nature was so easily accessible and safe to access. Her connection to nature has had positive influences on her ability to work as a self-employed business leader and has influenced how she makes decisions in her business.

Personally, I love to go walking. It really helps me in business as well—just clears my head and helps me to reconnect... I love being able to go out in nature and take photos, when I can take product shots outside, I prefer that as well. It's much easier in studio lighting conditions to be honest, but I prefer when I can to shoot outside. I find that using nature, natural light, shooting outdoors generally puts me in a better mood. (Grace, content creation)

For Penny, having a connection to nature influences workplace practices because working in or with nature adds value for her business and her clients' businesses. An important theme here is that nature is valuable in business because the effects of physically being in nature can be regenerative.

It's quite incidental that we work with a number of clients that operate and work in the natural world, who work with wildlife, and with the sea, and with water, and with nature, what you and I would call nature. The outdoors, the great

outdoors, the wonderful New Zealand coastlines, and our bush, and mountains, and our beaches, and things… Somewhere in there is the impact of taking a human being into the bush, or the sea, or the surf, or the snow, or whatever, and having them connect with nature when it's not in their usual routine… And that experience of nature is regenerative and can be very positive, and that can create a better world. (Penny, marketing)

The link between a business leader's personal connection to nature as an influencing force on business decisions was a notable theme for Grace and Penny. In contrast, for Fiona, who works mostly indoors in sales, going outside was more of a personal choice that she made during her workday. She noticed that during the New Zealand COVID-19 2020 Level Four lockdown, more people in her neighbourhood were also going out for walks. Her comments share a similar sentiment as Penny's comment on the regenerative effects of being in nature.

Because I work from home, I usually try to schedule a time to go out for a walk during the day. When I go out for my walks, I get really distracted because I'm like, "oh there's more tūi up there" and I'm looking around going "oh wow, so cool"… If I go out at lunchtime, I'm seeing loads of people out for walks and I know a lot of people in the neighbourhood are not fully back into the office yet… And so, it's been really interesting. It's almost like a reset where people have started to prioritise different activities. (Fiona, sales)

3.3.2.2 Connection to nature and environment-based businesses

For some business leaders, establishing and running environment-based businesses was a way for them to contribute to environmental solutions. Craig reflected on his values rooted in his Māori heritage when he described recently pursuing his next business venture in building.

Wairuatanga is the understanding that there is a spiritual essence additional to the physical world. And that is we've got to be connected spiritually to our environment; the Wairua of a person is nourished by their environment… [My

next business] is all about working as a collective creating sustainability, but also creating a better way of life. That's very grandiose. But I'm going to do it. (Craig, building)

While Craig's connection to nature appears spiritual and stems from an affective connection to nature, Shaun and Ben's connection to nature appear more cognitively in their businesses' purpose and values. Both business leaders see environment-based businesses as a way of achieving a more environmentally-friendly and sustainable future. For Shaun, after being involved in work practices which he describes as being 'not very good for the environment', he had the realisation that harmful environmental practices could no longer continue in his own business.

[My wife and I] believe that business has to become sustainable, otherwise, there won't be a world left to do business in and so that's our thing. Sustainability is right throughout the company, not just recycling… Our generation has to step up and show the way, you know, and to a certain degree, have to put some money in to pay for the things that we've done wrong, whether we knew that they were wrong at the time or not… It's not until we get a little older that we realise that the world is a finite place. (Shaun, manufacturing)

When business leader Ben started his new business venture, he looked to solve an existing environmental issue based on his personal environmental beliefs. Ben established his business to help solve the root causes of plastic waste caused by healthcare products. Similar to Shaun, Ben wanted his business to be a part of solving wider environmental issues.

My sustainability comes from my own beliefs, not from an educational background… This particular business started because we wanted to reduce plastic, so it wasn't started because of, "oh what a great business opportunity", it was actually to make a difference, which is probably different to other people who have started a business and then adapted to being a responsible corporate. Mine comes from the other way around. The whole business is about

sustainability. We've chosen to educate people on refusing to use plastics, not about reuse or recycle, but basically refuse. (Ben, healthcare)

This theme highlights how business leaders have personal connections to nature that not only impact their individual decisions but have flow on effects into their businesses. For some business leaders, connecting to nature is ingrained from their childhood, while others became more connected to nature as their perspectives changed throughout adulthood. The responses show that there is an intrinsic relationship between the personal beliefs of the business leader and how their business is connected to nature. Based on this relationship, businesses become connected to nature when business leaders themselves have a personal connection to nature.

3.3.3 Theme two: sustainability journey

Business leaders described being on a sustainability journey where they adopted pro-environmental behaviours that align with their personal values and businesses' purpose. The importance of aligned values, being a role model, educating staff members, and encouraging people to join on the sustainability journey were also key insights that business leaders shared.

For some business leaders, having a connection to nature was a key driver in being involved with pro-environmental behaviours. Daniel and Tina considered that it was important to have a personal connection to nature for them to make decisions and take action for the environment in their businesses. They both described how people need to have a connection to nature in order to care and partake in actions to protect it.

It comes down to the fact that you can't protect what you don't love. I try to get people thinking about why they enjoy the natural world, rather than seeing the natural world as a resource, as a reason to protect it. (Daniel, education)

I think the more you can be in nature, the more you can appreciate it, care for it, and have concern for it. (Tina, education)

Shaun provided a personal anecdote that exemplified how his own connection to nature influenced his behaviour. After seeing the effects of climate change on a childhood holiday location, Shaun became aware of his ability to make sustainable changes in his business.

[With my children] we'd go to places where I'd been as a child and things would be completely different. Just going down to the Franz Josef Glacier, and it's receded by four or five hundred metres from when I was a kid, and I go "man, it didn't look like this". It all started to just fit together and I realised that we've got to do something about this. (Shaun, manufacturing)

The excerpts above demonstrate how having an affinity to nature can influence the type of business individuals establish, and business practices.

3.3.3.1 Pro-environmental behaviours in a business setting

The business leaders in this study shared a wide variety of pro-environmental behaviours which they undertake in their businesses (as shown in **Figure 3.1**).

Figure 3.1: *The word cloud indicates the types of pro-environmental behaviours business leaders undertake in their business, as reported by 10 business leaders in New Zealand. The text size indicates the number of business leaders who mentioned the behaviour during the interview. More commonly mentioned pro-environmental behaviours are shown in a larger font size.*

The conversations around the different ways that business leaders promote and enforce pro-environmental behaviours in their businesses covered a range of topics especially in the context of dealing with employees, suppliers, or customers.

To begin with, business leaders who hire or work with employees discussed how in some way their employees shared similar values and beliefs for working in the business or partaking in pro-environmental behaviours. Business leaders mentioned fostering a workplace culture where employees feel empowered to express their own connection to nature. Penny noted that everyone in her team, as well as client base, hold a key value which unites them together in their purpose:

> *[Sustainability] is one of the unifying themes across our team and our client base… The consultants in our team have all demonstrated a commitment to sustainability through their work, through their career choices, and through their lifestyle choices. So that's what aligns us. We've all had big business experience and now we believe that through our work we can be a force for good to encourage the sort of businesses we want to see prosper. (Penny, marketing)*

Tina encourages her employees to take these core values and the sustainability thinking beyond the workplace. This indicates that for Tina, pro-environmental behaviours are not only something that should be done while being authorised at work, but something that should be upheld independently.

> *We do lots of little things within our team to try and keep us sustained together, sustained in our thinking, sustained in our drive and motivation of what we're trying to achieve… So, this isn't something that we just want our employees to be practicing at work, we want them to go home and think twice about what they're doing at home to. For example, could they think of a different bin system?*

Perhaps their neighbours have chickens and they could give them the scraps? So really encouraging the thinking to go beyond just our space. (Tina, education)

With regards to enforcing pro-environmental behaviours, business leaders had different approaches to encouraging and managing pro-environmental behaviours in their businesses. Some business leaders strictly enforced their employees to undertake pro-environmental behaviours. For Shaun, if his employees were not following the business's protocols around sustainability, then that was enough of a reason for him to end their contract.

It's part of our agreement for our employees, that they follow sustainable practices or they don't work here. And you know, we have terminated people that wouldn't follow the practices. But most people accept our policies, and the ones that make a stand about them don't really fit in with our company culture. (Shaun, manufacturing)

For David, the way pro-environmental behaviours were enforced in his business were the opposite of Shaun's business. Employees in David's business undertake the pro-environmental behaviours that they see align with their own values.

Nothing is enforced. I think the whole thing about our business is that we let people work off their own values and what they care about... So, it's like, everyone sort of has their own piece that they work with. So being a small company, I suppose we've just got flexibility to let people do what they want. There's nothing really enforced but I'd say majority of us take public transport or electric vehicles to work, and yeah, definitely sustainably focussed. (David, technology)

Additionally, if employees do not undertake what might be considered the most pro-environmental behaviours, they are not criticised or pressured. David believes that the best way to enforce pro-environmental behaviours is to create positive associations with the behaviours rather than through strict enforcement.

I suppose we don't put too much pressure on ourselves and not much pressure in the office. If you ate meat or had a plastic coffee cup from Starbucks, or whatever, no one's gonna grill you for it. It's definitely about trying to take people on that same path with you and there's definitely a nice way of doing it. (David, technology)

3.3.3.2 The influence of the business setting on employees

Shaun discussed how educating his staff prompted his employees to perform workplace pro-environmental behaviours at home. He gave an anecdote about a staff member who got into the habit of turning the lights off. Shaun shows how educating staff and changing behaviours at work can influence positive behaviour changes outside of the workplace.

We try and educate our staff on things like energy consumption. Employees say that they get into the habit of turning off the light when they go home. And that when they see their kids leaving the lights on, they'll get into their kids about it. So, once they get into a habit at work, then they get into it elsewhere. (Shaun, manufacturing)

When communicating and encouraging pro-environmental behaviours to employees, clients, and customers, business leaders often stressed the importance of being a role model. For Shaun, being a leader involves modelling pro-environmental behaviours so that his employees understand what behaviours are acceptable in the workplace.

You have to practice what you preach; you have to lead by example and that is one thing that I have always believed. That is what I was taught by my old bosses. That, and never ever ask someone to do something that you would never do. And so, I never ask someone to do something that I won't do, and if I don't recycle, then why would they recycle? (Shaun, manufacturing)

For Fiona and Ben, they believe that being a role model is about acting on their beliefs and taking small steps where they're able to. David suggests that these small steps contribute

to a 'collective community' where individual small efforts can add up to meaningful outcomes.

> *A lot of people just go "the problem is too big, it's a global problem which I can't fix". But my actions can fix it for me and for my world. So, every little step comes to a final, hopefully, fingers-crossed, result that is a good result for us all. (Fiona, sales)*

> *We planted a massive garden, deployed beehives, and made [the back] look nice. It's an industrial area here, it's the only plants around that are flowering all year around and the bees are pretty happy. We're trying to create a great environment as well. So, you know, we don't have many staff, but still you've got to live and breathe what you stand for. (Ben, healthcare)*

For other business leaders, being a role model was about supporting other people to go in the right direction on their sustainability journeys. Similar to Shaun, they achieve this through leading by example.

> *All businesses are somewhere on a sustainability pathway. Some of them are going in the wrong direction and don't realise it... We don't actually have conversations with our clients about values but we like our actions to speak louder than words. (Penny, marketing)*

Responses from the business leaders indicate how being a role model does not necessarily imply performing every pro-environmental behaviour perfectly from the beginning of their businesses, but rather acknowledging that something must be done and then partaking in the behaviours that align with their values. Craig made the analogy that being on a sustainability journey is like becoming more health conscious.

> *There's got to be some compromises, and this is like when you're trying to change the way you eat, it's really hard to do it in one hit. But if you work on it every day, suddenly in a year, you're eating a lot healthier, you might still have a way to go, but it's a journey, rather than a final destination. (Craig, building)*

This theme reveals how business leaders adopt pro-environmental behaviours in their businesses that align with their values. For some business leaders, their connection to nature was a key driver for performing pro-environmental behaviours in their businesses. Business leaders in this study described role modelling, but also communicating and enforcing pro-environmental behaviours to encourage their staff members, customers, and clients to join them on a sustainability journey.

3.3.4 Theme three: aspirations and barriers

This theme explores the future aspirations business leaders have for adopting pro-environmental behaviours in their business, achieving a 'clean and green' New Zealand, and provides insight about future generations and business. This theme also highlights some of the barriers encountered when trying to achieve these aspirations.

In the interviews, some business leaders acknowledged that they do not undertake as much as they would like to for the environment. Grace and Craig revealed aspirations for performing more pro-environmental behaviours in their businesses, however, encounter barriers when trying to pursue them. For Grace, she discussed how "every solution has a pollution" and how she finds it difficult to achieve a balance for this dilemma. Her comments indicate how there can be conflict between values, business decisions, and the environment.

> *My personal values are our environments very important. I don't think I do enough to reflect that... I would love to find companies, technological solutions that don't rely on planned obsolescence, that don't rely on components that are really bad for the environment, and really bad for the people mining the components. It's tricky. I'm not sure. But by the same token, because of those components, I'm able to deliver everything online. So, it's a balance. (Grace, content creation)*

For Craig, he shared how he would like to do more for the environment but struggles to find environmental solutions for some aspects of his business. Craig also mentions how cost can be a barrier for adopting pro-environmental behaviours.

Connecting to the environment at the moment is more of where I want to head, not so much where I am now. I mean, obviously, I have a recycling bin and I do the basics that most people do, but I'd like to do more. The thing is, it's so hard to do more. For example, moving to an electric car at the moment is still too costly. At the moment for my business, I'll need to have a truck that can tow 3,500 kilos and there's no electric solution for that. So, that will be a petrol solution probably, or diesel. (Craig, building)

While these excerpts show how Grace and Craig would like to personally do more for the environment, other business leaders discussed how New Zealand as a country could be doing a lot more to protect the natural environment. New Zealand's 'clean and green' image came up in these conversations and highlight how as a nation, we might not be doing as much for the environment as we claim to be, as noted by Fiona.

Our lovely clean, green image is only really an image, it's not actually real. I think that there are parts of the country where it's not bad, and then there are other parts of the country where it's really crappy. (Fiona, sales)

3.3.4.1 Sustainability as a generational issue

Consideration about the future generation was common when discussing future aspirations. Business leaders expressed hope in the younger generations as they become more involved in business. Ben acknowledged how current and future generations are being brought up in a world where environmental issues are becoming a priority, so is optimistic that future businesses will have an interest in solving these issues at their core.

I hope other businesses will come from a different perspective in the future of start-ups, thinking about an environmental policy that is the heart of the business from the start... I really hope the younger people, the people coming up starting businesses that it'll be a part of their DNA. They are bought up in a world where environmental issues are top of mind... I have a real hope and belief that all start-ups will have that as an important part of their decision-making. (Ben, healthcare)

Grace also shared her hope in future generations, highlighting that current business leaders must embrace environmental values and practices in their businesses or become irrelevant.

I have a lot of hope in the younger generations because they already are thinking differently. They're not going to tolerate the same things—even my generation, we're not going to tolerate it, and they're not going to tolerate it… It's the future so you better embrace it, especially in business. I think you have to embrace it, or you'll be facing down your own irrelevancy in a pretty short period of time and trying to find your way out of it, and that's a scary proposition. (Grace, content creation)

3.3.4.2 Economic and social drivers as barriers and enablers of pro-environmental behaviours

Economic drivers were an important consideration noted by interviewees that could act as a barrier to pro-environmental behaviours in business. Grace believes that there are issues around the economy and protecting the natural environment, however, she believes that this can be changed without too much difficulty.

I do believe that we can change. We've developed this economic system; we can redesign it. I think there's a lot of solutions that we could be looking at. And quickly to, like, I don't think it takes a huge, bloodless revolution to make these things happen. I think it means we just all need to start thinking differently. (Grace, content creation)

In relation to thinking differently about pro-environmental behaviours, Ben references the governments ban on single-use plastic shopping bags in 2019 to highlight how quickly society's attitudes and behaviours can change, especially when policy is involved. At the time, business leaders would have also had to adapt their businesses' practices to comply with the change in policy.

Have you ever spoken to people about when they changed from plastic bags at the supermarket? How many people bitched and complained about how difficult it was? And now do you hear anything? No. You might hear about how it's a bit annoying that they left their reusable bag at home and need to get another one, but it's just so, so easy to change, there is no problem. (Ben, healthcare)

Where policy and government has not come through, business leaders have initiated change themselves. When discussing carbon emission reporting, David demonstrates how his business is involved in monitoring everyday carbon emissions using technology, regardless of having existing policy that supports this:

Hopefully policy comes in as well because we have sugar content, right? So why not carbon emissions? Or how far something has travelled? Or the water involved? I think it should come and hopefully it does. I think policy could definitely help, but again, we've tried with government, we're not waiting for them. We're sort of running it ourselves. (David, Technology)

For Shaun, the business sector has accountability for creating a greener future and he envisions that a lot of green initiatives will become mandated in the future.

I believe that the business sector has got a responsibility to drive it, you know… I think people are certainly becoming more aware about ethical investment. People are starting to say "I don't want to invest in oil, I don't want to invest in tobacco, or invest in coal". With the internet and the connectivity that is in the world now, I think that consumers are much more aware and businesses can only get away with greenwash for so long. (Shaun, manufacturing)

This theme explores the future aspirations that business leaders possess for performing pro-environmental behaviours in their own business, future businesses, and New Zealand. For some business leaders, they revealed that they would like to personally do more to connect with nature and partake in more pro-environmental behaviours. Other business leaders communicated generally about their aspirations and showed how New Zealand, in their view, could be doing more to protect the environment. When looking at

future businesses, business leaders carried hope in future generations to start environmentally focussed businesses. The relationship between the economy and environment, and changing behaviours were barriers mentioned in the interviews, however, business leaders indicated how change can occur with new thinking, policy, and pressure from society.

3.4 Discussion

3.4.1 Connection to nature and pro-environmental behaviour

This research reveals a clear link between individual connection to nature and pro-environmental behaviours in a business context. The results indicate that all the business leaders interviewed described some form of connection to nature that has impacted their businesses. Business leaders described affective, cognitive, and experiential connections to nature which have influenced them to perform a variety of different workplace pro-environmental behaviours. This study supports and extends existing connection to nature theories (Mayer & Frantz, 2004; Nisbet et al., 2009; Pereira & Forster, 2015) that have shown a business leader's connection to nature influences their business's pro-environmental behaviours.

The most commonly mentioned pro-environmental behaviours were similar to those that have been observed in the literature including recycling (Milfont & Duckitt, 2010), conserving water and energy (Schultz & Zelezny, 1998), and choosing greener transportation options (Diekmann & Preisendörfer, 1998). The connection to nature of business leaders in this study was reflected not only in the performance of pro-environmental behaviours themselves, but also through the encouragement and enforcement of these behaviours for employees, customers, and suppliers. Business leaders shared how it was important for them to model the types of behaviours that they expected their employees to perform. Business leaders facilitated connection to nature and encouraged pro-environmental behaviours in their businesses through supporting a green workplace culture, enhancing their natural workplace environments, and empowering employees to follow their own environmental passions through flexible workplace practices.

These findings align with existing literature which suggests that managers and supervisors play important roles when influencing employees to adopt pro-environmental behaviours, and as such this may be an important area of focus for future sustainability initiatives (Boiral et al., 2015; Yaffe & Kark, 2011). If business leaders adopt pro-environmental behaviours that are shown to have direct conservation outcomes, then their employees are likely to act in accordance with the behaviours being undertaken which may lead to greater benefits for the natural environment.

3.4.2 Future aspirations of business leaders

The business leaders interviewed held a normative view of business, claiming that they have environmental, social, and economic responsibilities. When business leaders discussed future aspirations, a key aspect of their responses focussed on future business leaders and the purpose of future businesses. Business leaders expressed hope that the next generation of business leaders would start businesses that would focus on solving environmental issues at their core. This aspiration is captured in the emerging literary field of 'ecopreneurship'. Ecopreneurship is a combination of the words 'entrepreneurship' and 'ecological', and describes businesses that are based on the principles of sustainability (Kirkwood & Walton, 2014; Schaltegger, 2002). Ecopreneurship is likely to be an important part of a sustainable future because it involves innovation and environmentally conscious perspectives in business that help to maintain ecosystems, conserve biodiversity, reverse climate change, and reduce environmental degradation (Dean & McMullen, 2007; McEwen, 2013). While business leaders did not use the term 'ecopreneurship' in their responses, a few did describe this concept sharing how they have started and run sustainable businesses to help solve current environmental issues and protect the natural environment. Current business leaders aspire for future business leaders to do the same.

3.4.3 Barriers to pro-environmental behaviours

The business leaders in this study noted a range of different barriers when trying to do as much as they can for the environment. Barriers shared included economic and social factors influencing business, changing behaviours, costs associated with pro-environmental

behaviours, and environmental solutions not yet existing for specific industry needs. With the exception of cost, these barriers add to those commonly identified in the literature, which includes a lack of time, resources, customer demand, awareness of environmental legislation, and reasons to confront environmental issues (Lepoutre & Heene, 2006; Lewis & Cassells, 2010; Rutherfoord et al., 2000). The added barriers identified highlight the value of taking a qualitative approach to this research, as much of the existing research into pro-environmental barriers has been quantitative. Following a quantitative approach can limit the richness, diversity, and nuances of responses because answer-options are selected by the researcher and questions are often closed-ended (McCusker & Gunaydin, 2015). Through using qualitative methodology, business leaders were able to openly explain the types of barriers that they face in their personal business circumstances. As a result, business leaders predominantly shared barriers that were specific to their business. The results of this study suggest that business leaders are aware and have reasons to address environmental issues, however, face specific barriers in their businesses to achieve as much as they would like to for the natural environment.

3.4.4 Implications

When business leaders express their connection to nature in the running of their businesses, the evidence in this chapter suggests they can achieve environmental outcomes as well as advantageous business benefits. According to Lozano (2015), businesses that are motivated to engage in environmental initiatives can reduce costs while improving processes and minimising waste, avoid fines and penalties related to environmental regulations, enhance their business and brand reputation, create a more unified workforce, and improve relations with stakeholders, suppliers, and customers. Additionally, business leaders might secure a competitive advantage, improve risk management, and foster innovation (Whelan & Fink, 2016). Business leaders in my study reported realising many of these benefits in their businesses through undertaking pro-environmental behaviours that were already a key part of, or related to, their businesses. Given this, when encouraging pro-environmental behaviour uptake in businesses, promoting both environmental outcomes and business benefits may help to motivate business leaders to engage in pro-environmental behaviours.

Businesses are a part of a larger network comprised of multiple stakeholders—government, councils, suppliers, distributers, consumers, and others, and as such it is important to acknowledge business leaders are only one key player in protecting the environment (Lozano, 2015; Zu, 2019). Several studies have concluded that it requires a collaborative effort to generate significant environmental outcomes (Amel et al., 2017; Doh & Benischke, 2019; Viswanathan & Varghese, 2018). Stakeholders play different roles in achieving these outcomes—for example, governments establish and enforce environmental policies and regulations (Viswanathan & Varghese, 2018), consumers demand goods and services that align with their environmental values (Kalamas et al., 2014), and suppliers continue to improve their performance on environmental issues (Lee & Klassen, 2008). Findings from this chapter provide insights into how business leaders are contributing to protecting the environment through undertaking various pro-environmental behaviours in their businesses. Real change for environmental outcomes can be realised when business leaders collaborate and support others who are a part of their network and vice versa.

Understanding the future aspirations business leaders hold for their businesses and the environment can support advancements in achieving positive environmental outcomes (Hanelt et al., 2016). Currently there is very limited literature exploring the environmental aspirations of business leaders and how to support them in realising these, though the research that does exist has examined environmental aspirations such as climate change targets (Dahlmann et al., 2019; Maas & Rosendaal, 2016), and the adoption of green strategies (McCullough & Cunningham, 2010; Olson, 2008). In this chapter, business leaders shared environmental aspirations for their own businesses, future business leaders, and for the fulfilment of New Zealand's clean, green image. When business leaders discussed the aspirations of their businesses, they were specific to the context of their business or industry and personal values. This suggests that when programmes are created to support environmental sustainability in business, the most effective initiatives might be those that are appropriate and specifically relevant to the particular business or industry (Lee, 2008). Recognising future aspirations of business leaders, along with reducing industry specific barriers, will be important if business leaders are to engage further in actions that contribute to positive environmental outcomes (Gardner & Stern, 2002).

3.4.5 Limitations and future research

While business leaders in this study adopt a variety of pro-environmental behaviours in their businesses, there is no clear indication that all of these behaviours have direct effects on positive biodiversity outcomes—a subset of environmental outcomes. Achieving positive biodiversity outcomes broadly means supporting the variety of life on earth—including ecosystems and genes (*Biodiversity*, 2019). The types of pro-environmental behaviours that are most commonly undertaken by business leaders in this study relate to environmental best practices, which do result in some positive environmental outcomes; for example, the reduction of waste, efficient consumption of energy, and minimisation of carbon emissions. However, positive biodiversity outcomes may not be directly realised through these kinds of commonly reported practices. Pro-environmental behaviours mentioned that do have direct effects on biodiversity included habitat restoration, pest control, and growing native plants. While some business leaders did partake in these behaviours, future research could investigate how to further educate and encourage business leaders to adopt pro-environmental behaviours in their businesses that do have direct biodiversity outcomes.

In relation to the qualitative methodology used, this study holds several strengths; however, this approach does have limitations. First, the findings have limited generalisability (Alsaawi, 2014). To mitigate against this issue, quotes were used extensively throughout the results and rich descriptions of the data were included to support the transfer of findings in different contexts. While qualitative methodology was the appropriate method to answer the research aims of this study, future research could expand on the concepts discovered here through quantitative methods.

Second, the method of conducting interviews presents limitations around bias which influence validity and reliability (Smith & Noble, 2014). While numerous steps were taken to ensure the validity and reliability of this study (including clearly describing the epistemology and approach taken in this research, asking open-ended questions during the interviews, providing interviewees the opportunity to review their transcripts after the interview, and including different interviewee perspectives in the results section to present different views), potential biases including recall, observation, or confirmation bias may still

remain (Noble & Smith, 2015). To overcome this limitation, future research would be valuable to support or refute our findings through different methods.

Finally, a limitation of this study is that it relied on self-report of pro-environmental behaviours. The responses from interviewees may not accurately reflect the truth because of recall bias, which occurs when participants do not remember past experiences or events correctly or exclude details (Kvale, 1994). This is an issue because findings are dependent on the responses of the interviewees being valid and reliable. Additionally, unconscious bias may be an issue, whereby interviewees have preconceived expectations of 'correct' answers that the interviewer is trying to collect (Kvale, 1994). An observational study would, therefore, be useful to examine how interview responses from business leaders are realised in their everyday workplace practices. Furthermore, a longitudinal study might add additional insight about the sustainability journey that business leaders described in this study. Future research into the relationship between nature connection and business leaders is needed to extend understanding in this field and encourage future business leaders to adopt pro-environmental behaviours that lead to positive environmental—as well as biodiversity outcomes.

3.5 Conclusion

Based on a qualitative analysis, this chapter illustrates that New Zealand business leaders have an affective, cognitive, and experiential connection to nature that is expressed through pro-environmental behaviours in their businesses. Business leaders hold environmental aspirations for their businesses, future business leaders, and for the country; however, face a number of barriers in realising these aspirations on their sustainability journey. Findings from this chapter support and extend existing theories in the literature that an individual's connection to nature influences their pro-environmental behaviours. Due to the qualitative methodology, results from this study are not generalisable for all business leaders. Despite this, the findings are relevant for providing a rich, in-depth account of how this sample of business leaders connect to nature and how that influences their businesses. The results are important because they reveal that pro-environmental behaviours in business are driven by the connection to nature that business leaders hold. To fully understand the implications of

this study, future research is needed to analyse how business leaders can contribute directly to biodiversity outcomes in their businesses.

Chapter 4: General summary and discussion

4.1 Introduction

The importance of an individual's connection to nature, and how this might relate to pro-environmental behaviours in a business context has received limited attention in the literature, despite the business sector continuing to face increasing pressures to become more environmentally responsible (Baughn et al., 2007). Previous findings have shown that a connection to nature is associated with pro-environmental behaviour uptake in a non-business context (Nisbet et al., 2009; Stern, 2000). Findings have also demonstrated that individuals who show concern for the natural environment perform pro-environmental behaviours more willingly (Dunlap et al., 2000). Exploring whether, and how, these concepts extend into a business context will provide important insights into how businesses can contribute to positive environmental outcomes while still realising their primary business objectives.

This thesis explored how New Zealand business leaders perceive their connection to nature in a business context, and how they currently, and may in the future, contribute positively to environmental outcomes. I aimed to:

1. assess how business leaders perceive their current connection to nature;
2. identify the pro-environmental behaviours that business leaders currently report their business undertakes and the barriers to undertaking these behaviours; and
3. evaluate what environmental and business aspirations business leaders hold for the future.

This research followed a mixed methods approach to gain an in-depth and broad perspective on these aims. Chapter 2 utilised quantitative methods to determine the association between business leaders' connection to nature and pro-environmental behaviours. Chapter 3 followed qualitative methods to investigate the role of business leaders' connection to nature in fostering pro-environmental behaviours. Key findings from these chapters as well as notable future research directions are discussed in this chapter.

4.2 Overview of findings by chapter

4.2.1 Chapter 2: The association between business leaders' connection to nature and pro-environmental behaviours

In this chapter, I aimed to measure associations between business leaders' connection to nature, pro-environmental behaviours, and barriers to adopting pro-environmental behaviours. I carried out a quantitative survey focussing on business leaders across New Zealand to understand what pro-environmental behaviours they undertook in a business setting, and identify what barriers prevent pro-environmental behaviours from occurring. Further, I examined the extent to which these reflect the business leaders' affective, cognitive, or experiential dimensions of connection to nature.

Business leaders who had a higher overall connection to nature (measured by the nature relatedness score; Nisbet et al., 2009) were shown to partake more frequently in pro-environmental behaviours compared to business leaders who reported a lower overall nature relatedness score. Additionally, business leaders who reported undertaking pro-environmental behaviours more frequently showed a significantly higher affective and experiential connection to nature. This indicates that there is a relationship between a connection to nature and the uptake of pro-environmental behaviours in a New Zealand business context. This reinforces previous research findings that have also shown a positive relationship between a connection to nature and pro-environmental behaviours in non-business contexts (Kals et al., 1999; Nisbet et al., 2009; Schultz, 2001).

Recycling, purchasing sustainable products, and conserving electricity were the most frequently undertaken pro-environmental behaviours by all business leaders surveyed. These behaviours are classified as individual lifestyle behaviours (Cooper et al., 2015; McMullin et al., 2007) which may not have direct effects on biodiversity outcomes. Business leaders who showed a higher connection to nature, more frequently reported undertaking behaviours that were likely to more directly affect biodiversity conservation outcomes, such as habitat enhancement, supporting green policies, and joining environmental groups.

Business leaders reported availability of time as the biggest barrier preventing them from undertaking as much as they would like for the environment. Business leaders who are already partaking in more frequent pro-environmental behaviours reported facing fewer barriers than business leaders less frequently partaking in pro-environmental behaviours.

This chapter shows that New Zealand business leaders with greater feelings of connection to nature are associated with higher uptake of pro-environmental behaviours in their businesses, but it is also associated with a lower perception of barriers. Findings from this chapter indicate that facilitating the development of business leaders' connection to nature could be a viable strategy to support further implementation of pro-environmental behaviours in a business context. Additionally, enabling a stronger connection to nature may encourage business leaders to perceive fewer barriers, and therefore, promote them to undertake further pro-environmental behaviours.

4.2.2 Chapter 3: The role of business leaders' connection to nature in fostering pro-environmental behaviours

While Chapter 2 establishes that there is a relationship between connection to nature and pro-environmental behaviours in business, this chapter extends the discovery by taking an in-depth exploration of business leaders' perceptions following qualitative methods. Understanding how and why business leaders currently express their connection to nature in their businesses could provide insights into how further pro-environmental behaviours might be encouraged. I conducted semi-structured interviews with 10 New Zealand business leaders to take a comprehensive look at their perceptions regarding how their connection to nature is expressed in their businesses, and whether (and what) their aspirations might be for extending this.

All the business leaders interviewed expressed some affective, cognitive, or experiential connection to nature that were related to performing pro-environmental behaviours in their businesses. Business leaders referenced their up-bringing, changes in lifestyle, and values as reasons for their feelings of connection to nature. They broadly reported that having a connection to nature influenced the sustainability journey in their

businesses where they educate, enable, and encourage others to perform pro-environmental behaviours, while still achieving their primary business objectives. Recycling, reducing electricity usage, and green transport options were some of the most commonly reported pro-environmental behaviours adopted by business leaders.

Business leaders shared aspirations related to undertaking more pro-environmental behaviours in their own businesses, as well as thoughts on the broader business community including how future business leaders should run environmentally focussed businesses, and how New Zealand's clean, green image needs to be realised in practice. There were a number of barriers identified in achieving these aspirations including economic and social factors influencing the business sector, costs associated with pro-environmental behaviours, and environmental solutions not yet existing for specific industry needs.

Findings from this chapter show that business leaders have an affective, cognitive, and experiential connection to nature that is expressed through pro-environmental behaviours in their businesses. Further, they show that business leaders undertake pro-environmental behaviours that are relevant to their businesses and aligned with their personal connection to nature. This is a particularly important finding as it suggests efforts to promote pro-environmental behaviours in business might be most effective where they focus on activities that have some connection to the business itself. Findings from this chapter also showed that business leaders have aspirations to partake in more pro-environmental behaviours in their businesses; however, they perceive a number of barriers when trying to achieve these aspirations. This suggests that approaches that support businesses in understanding and overcoming real and perceived barriers could support further uptake of pro-environmental behaviours. Significant advancements for the natural environment could be achieved if business leaders were able to fully express their connection to nature and undertake the pro-environmental behaviours that they aspire to perform in their businesses.

4.3 Discussion

4.3.1 Connection to nature in a business context

Both Chapters 2 and 3 found a positive association between a greater connection to nature in New Zealand business leaders and the expression of pro-environmental behaviours in their businesses. These findings reinforce the association between a connection to nature and pro-environmental behaviours that has been found at an individual level in international literature (Mayer, 2004; Nisbet et al., 2009; Stern, 2000). The two studies extend on these findings by providing compelling evidence that indicates the importance of this association in a business context.

In Chapter 2, more frequent pro-environmental behaviour uptake was associated with a higher overall nature relatedness score (Nisbet et al., 2009). However, when nature relatedness was deconstructed into three individual dimensions (affective, experiential, and cognitive) the cognitive connection to nature was not significantly different between business leaders who undertake pro-environmental behaviours more or less frequently. Insights from the interviews with business leaders help to explain why this might be the case. All of the business leaders revealed cognitive awareness to environmental issues, sustainable practices, and environmental responsibility as a business. However, this cognitive awareness did not always translate into pro-environmental behaviours for several different reasons including various barriers to adopting pro-environmental behaviours, pro-environmental behaviours being identified as not relevant to the business, and perceptions of being unable to contribute directly to solving the environmental issue. Previous studies have addressed the gap between attitudes and actions finding that environmental awareness does not necessarily lead to pro-environmental behaviour uptake (Kollmuss & Agyeman, 2002; Zsóka, 2005). Findings in this study support this hypothesis and contributes knowledge into why a cognitive connection to nature in a business context might not result in the uptake of pro-environmental behaviours in businesses.

Findings from Chapter 2 also showed that an affective and experiential connection to nature was higher in business leaders who undertake pro-environmental behaviours more

frequently. Chapter 3 supports this result; when discussing why business leaders adopt certain pro-environmental behaviours in their businesses, environmental values and interactions with the natural environment were common themes that were shared. Most commonly, an affinity with and experiential connection to nature was described over time, from when business leaders were growing up through to how they currently perceive and experience the natural environment. These findings suggest that an affective and experiential connection to nature are deeply personal and change over time, which may explain why affective and experiential dimensions are significantly associated with more frequent pro-environmental behaviours. Findings from this study support previous research that shows that an affective and experiential connection to nature influences pro-environmental behaviour (Hinds & Spark, 2008; Mayer & Frantz, 2004; Pereira & Forster, 2015).

Efforts that increase a business leader's connection to nature, specifically their affective and experiential connection may influence further pro-environmental behaviour uptake in their business (Pensini et al., 2016). My research shows that business leaders are cognitively aware of environmental issues; therefore, further information about these issues may not be significant enough reason for business leaders to undertake more frequent pro-environmental behaviours. Encouraging business leaders to personally connect with and experience their natural environments may be a more successful approach that motivates further pro-environmental behaviour uptake in businesses.

4.3.2 Pro-environmental behaviours in a business context

Both chapters explored pro-environmental behaviours in a business context to understand how these behaviours might contribute to positive environmental and biodiversity outcomes. In Chapter 2, I showed that business leaders most frequently undertake recycling, purchasing of sustainable products, and conservation of electricity, results that support findings in previous studies (Milfont & Duckitt, 2010; Schultz & Zelezny, 1998). These pro-environmental behaviours in businesses may have some positive indirect environmental outcomes but will not necessarily have direct effects on conserving biodiversity. In Chapter 3, I was able to unpack some of the decision-making around what behaviours business

leaders promoted in their companies. Specifically, they reported undertaking a variety of individual lifestyle pro-environmental behaviours because they were identified as being environmentally-friendly, aligning with the businesses' values, or helping to reduce business operating expenses. Conservation pro-environmental behaviours were more often described as aspirational behaviours rather than being a part of the daily running of the business. This suggests interventions that support pro-environmental initiatives in businesses may be most effective if they have a highly targeted approach that suits the business in question, but also supports business leaders in understanding how they can directly improve biodiversity outcomes in their area.

Existing studies into pro-environmental behaviours are predominantly quantitative in the scientific literature (Dietz et al., 2005; Hinds & Sparks, 2008; Nisbet et al., 2009). These studies focus on measuring a select set of pro-environmental behaviours identified by the researchers. In this study, conducting interviews allowed business leaders to freely share the types of pro-environmental behaviours that they are currently undertaking in the context of their connection to nature and businesses. Business leaders reported undertaking a wide variety of different pro-environmental behaviours that are specifically related to their businesses and industries; for example, waste management practices associated with production, sourcing local ingredients for products, digital delivery of content, utilising virtual teams, and taking advantage of fertiliser runoff. My qualitative study identified a number of specific and meaningful pro-environmental behaviours that are rarely, if ever, measured in quantitative studies (Clark et al., 2003; Kals et al., 1999; Milfont & Duckitt, 2010). This finding expands societal understanding of what role the business sector might play in achieving environmental outcomes for New Zealand. In practice, the findings may be useful for business leaders to improve their understanding around what pro-environmental behaviours they could incorporate into the daily running of their businesses—if they are to achieve environmental objectives.

4.3.3 Complexity of terminology

In the quantitative chapter, I constructed the survey based on terminology commonly used in the literature (Blake, 1999; Cooper et al., 2015; Kollmuss & Agyeman, 2002; McMullin et

al., 2007). The term pro-environmental behaviour was chosen because it has been defined as behaviours which aim to reduce the negative impacts of people's actions on the natural world (Stern, 2000). Additionally, the term connection to nature was chosen because it has been identified as an overarching term used to describe how humans connect with nature (Ives et al., 2017). Based on the approach of quantitative methods, participants were restricted to the terminology that I had used in the survey questions. In contrast, participants in the qualitative study were able to freely use their own words to describe their connection to nature and pro-environmental behaviours.

Responses from the qualitative study showed that business leaders were more familiar with the term 'sustainable' when describing behaviours that relate to the environment. Additionally, the terms 'environmentally-friendly' or 'green' were also used to describe behaviours. In the literature, researchers appear to choose and define terms carefully to construct shared meaning (Banwo & Du, 2019). Conversely, in the interviews, business leaders interchanged different terminology when describing their behaviours. The difference in terminology may reflect some disconnect between how researchers frame behaviours that protect the environment and how business leaders adopt and perform these kinds of behaviours in practice. If we are to achieve biodiversity outcomes, then business leaders will need to understand what types of behaviours are the most effective (Rondinelli & Berry, 2000; Studer et al., 2006). The quantitative chapter begins to quantify how many business leaders partake in conservation and lifestyle pro-environmental behaviours in their business, while the qualitative chapter captures what business leaders define as pro-environmental, sustainable, environmentally-friendly, or green behaviours. These findings help to establish a baseline understanding of how pro-environmental behaviours are defined in the literature and how they are implemented by business leaders.

4.3.4 Value of a mixed methods approach

Through adopting a mixed method approach, this research benefitted from strengths associated with qualitative and quantitative methodologies. Specifically, the quantitative approach allowed me to establish that there is an association between a connection to nature and pro-environmental behaviours in business, while the qualitative approach enabled me

to explore this more deeply in the context of the individual business leader's connection to nature and business. This approach is valuable because the findings from each chapter strengthen and build upon each other. By following quantitative methods outlined in Chapter 2, I was able to quantify the connection to nature of business leaders, frequency of pro-environmental behaviour uptake in businesses, and barriers to adopting pro-environmental behaviours, before providing insight on how these variables are associated using cluster analysis. While in Chapter 3, I was able to discuss pro-environmental behaviours and barriers in the context of each individual business leader, and unpack pro-environmental behaviours that were not revealed in the quantitative work. The interviews in Chapter 3 added richness to the conclusions from the quantitative chapter by grounding the findings in the business leaders' own experiences and responses.

Overall, following a mixed methods approach provides quantitative and qualitative evidence that current New Zealand business leaders across different industries are undertaking pro-environmental behaviours in their businesses that are related to their connection to nature and the primary objectives of their businesses. These findings provide insight into how business leaders are currently contributing to environmental outcomes through the daily running of their businesses. Both studies suggest that a connection to nature is an important influencer on business leaders when undertaking and enforcing pro-environmental behaviours in their businesses.

4.3.5 Limitations

While findings from this study indicate an association between individual connection to nature and the expression of pro-environmental behaviours, business leaders in reality are influenced by many different factors which this study does not address directly. For example, sustainable business decisions might be influenced by economic, social, technological, ethical, media, political, and legal factors (Baughn et al., 2007; Clegg, 2011; Hargreaves, 2011). In the quantitative chapter, these factors were considered outside the scope of the study because the aims focussed on identifying what pro-environmental behaviours are currently being undertaken, and establishing associations between connection to nature, pro-environmental behaviours, and barriers. In the qualitative chapter, some of these other

influencing factors did get mentioned by business leaders; however, the scope of the analysis focussed on the relationship between individual connection to nature and pro-environmental behaviour. The findings from the qualitative chapter do indicate that some of these different factors are potentially important when business leaders adopt pro-environmental behaviours. For example, business leaders mentioned financial factors that either prompted them to adopt pro-environmental behaviours (e.g. reducing packaging to save on costs), or not to adopt pro-environmental behaviours (e.g. not purchasing an electric vehicle due to costs). Having a connection to nature is just one of many factors that may influence business leaders to adopt pro-environmental behaviours because decision-making in business is complex and dependent on many factors.

Another limitation relates to the sample of business leaders included in this research. Business leaders have very busy schedules and often face extreme internal and external pressures to perform in their businesses (Bruch & Ghoshal, 2002); therefore, they may not have the time to participate in voluntary surveys. The generalisability of findings from the quantitative chapter are limited by the sample size (n=216). Considering the vast number of small to medium-sized business leaders in New Zealand who could have participated in the survey, this study is unlikely to capture the views of all New Zealand business leaders fully and accurately. Additionally, while Denzin and Lincoln (2008), conclude that six participants are more than enough for qualitative interviews, the interview sample size of 10 is still unable to represent the views of all business leaders in New Zealand. The findings from both chapters can, however, provide a detailed snapshot of an actively engaged sample of New Zealand business leaders who were interested in this research, demonstrate a connection to nature, and undertake pro-environmental behaviours.

An additional limitation relates to the sampling methods used to survey business leaders. During the data collection phase, business networks were targeted because they were an appropriate and accessible group of business leaders to contact for this research. Business leaders in a business network are likely to share similar values, objectives, and purposes, which may not be representative of all business leaders in New Zealand who are not in a network. Additionally, the sampling methods targeted businesses who already

display values and actions related to protecting the environment because these businesses were most likely to have business leaders who would be interested in participating in this research. Findings reflect actively interested business leaders who have volunteered time to partake in research about connection to nature and pro-environmental behaviours; therefore, consideration is needed when extrapolating these results to a broader sample. Future research might aim to focus on business leaders who are not already actively engaged in protecting the environment to determine if findings from this study are transferable to different samples of business leaders.

I undertook numerous steps during the construction and distribution of the survey to try and encourage business leaders to participate in the study. For example, the survey was kept short, included brief and succinct questions without jargon, and utilised ticking measures. When distributing the survey, emails were targeted directly to the business leader using their name (where possible) and personal phone calls were made with business network leaders asking them to distribute my survey to their members. While these steps helped to increase the sample size, future studies might consider surveying methods other than an online survey, to fully sample and represent business leaders, e.g., phone interviews or targeted workshops. Future studies might also include incentives (financial or otherwise) to further motivate business leaders to participate.

4.3.6 Future research directions

This research focussed on business leaders within New Zealand. Two notable areas for future research that stem from this thesis are: 1) research into how the barriers to undertaking pro-environmental behaviours can be mitigated to enable business leaders to undertake as much as they would like to for the environment; and 2) research into encouraging business leaders to adopt pro-environmental behaviours that have direct biodiversity outcomes. A focus on these two areas will provide real advancements for expanding the role of businesses in achieving biodiversity conservation. Research into the first area is important because the results from this study indicate that business leaders are facing similar barriers when trying to adopt pro-environmental behaviours in their businesses. By understanding how to mitigate even some of these barriers, business leaders

will become more capable in being able to contribute to positive biodiversity outcomes. Research into the second area is strongly recommended because findings from this study indicate that business leaders more frequently undertake pro-environmental behaviours in their businesses that may not have direct biodiversity conservation outcomes. Further research will help to educate and empower business leaders to undertake pro-environmental behaviours that have direct impacts on conserving biodiversity.

Other research opportunities that would contribute and extend our understanding of connection to nature and pro-environmental behaviour in a business context could include: surveying a larger sample of New Zealand business leaders; conducting the same survey with business leaders from different countries; further research into understanding how other influencing factors affect business leaders when choosing to perform pro-environmental behaviours; and following different methods such as an observational study to assess how connection to nature translates into pro-environmental behaviours in practice, or a longitudinal study to determine how connection to nature and pro-environmental behaviours change over time. Knowledge gained through these studies will help increase theoretical knowledge and shape the role of businesses in realising connection to nature pro-environmental behaviours.

4.4 Conclusion

This thesis explored how New Zealand business leaders perceive their connection to nature in a business context, to determine how they currently, and may in the future, contribute positively to environmental outcomes. Key findings from this research include: a significant association between undertaking pro-environmental behaviours more frequently and a higher connection to nature; business leaders face various barriers such as limited time and resources, and changing behaviours when trying to do as much as they can for the environment; and business leaders have aspirations to undertake more pro-environmental behaviours, and for future business leaders to express environmental values when they start new businesses. It is hoped that findings from this research will provide insights into how business leaders might be further supported to express their connection to nature through

pro-environmental behaviours in their businesses, and to help decision makers make informed decisions on how to further engage businesses with nature.

Appendix 1: Connection to nature survey

Business characteristics
1. Do you currently hold a leadership role in a New Zealand business? (select one of these options—if 'no' is selected then the survey ends, if 'yes' is selected the survey continues)
   - Yes
   - No

2. What industry best describes your business? (select one of these options)
   - Agriculture, Forestry and Fishing
   - Mining
   - Manufacturing
   - Electricity, Gas, Water and Waste Services
   - Construction
   - Wholesale Trade
   - Retail Trade and Accommodation
   - Transport, Postal and Warehousing
   - Information Media and Telecommunications
   - Financial and Insurance Services
   - Rental, Hiring and Real Estate Services
   - Professional, Scientific, Technical, Administrative and Support Services
   - Public Administration and Safety
   - Education and Training
   - Health Care and Social Assistance
   - Arts, Recreation and Other Services
   - Other (please mention)

3. What is the postcode for where your business is predominantly located? (type postcode)

4. Please estimate how many employees your business has (select one of these options)
   - 1 – 5
   - 6 – 19
   - 20 – 49
   - 50 – 99
   - 100 +

5. How long has your business been operating for? (select one of these options)
   - Less than 1 year
   - 1 – 5 years
   - 6 – 10 years
   - More than 10 years

6. How is your business structured? (select one of these options)
   - Sole trader
   - Company
   - Partnership
   - Other, please detail

7. Is your business a part of a business network? (select one of these options)
   - No
   - Yes, please list

8. Does your business have any accreditation or certificates related to protecting the environment? (select one of these options)
   - No
   - Yes, please list

Nature relatedness questions
The following questions are about you as an individual and your relationship with the environment.

1. Please indicate how strongly you agree or disagree with the following statements.

	Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly
My connection to nature and the environment is a part of my spirituality	○	○	○	○	○
My relationship to nature is an important part of who I am	○	○	○	○	○
I feel very connected to all living things and the earth	○	○	○	○	○
I am not separate from nature, but a part of nature	○	○	○	○	○
I always think about how my actions affect the environment	○	○	○	○	○
I am very aware of environmental issues	○	○	○	○	○
I think a lot about the suffering of animals	○	○	○	○	○
Even in the middle of the city, I notice nature around me	○	○	○	○	○
My feelings about nature do not affect how I live my life	○	○	○	○	○

2. Please indicate how strongly you agree or disagree with the following statements.

	Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly
Humans have the right to use natural resources any way we want	○	○	○	○	○
Conservation is unnecessary because nature is strong enough to recover from any human impact	○	○	○	○	○
Animals, birds and plants have fewer rights than humans	○	○	○	○	○
Some species are just meant to die out or become extinct	○	○	○	○	○
Nothing I do will change problems in other places on the planet	○	○	○	○	○
The state of nonhuman species is an indicator of the future for humans	○	○	○	○	○

3. Please indicate how strongly you agree or disagree with the following statements.

	Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly
The thought of being deep in the bush, away from civilization, is frightening	○	○	○	○	○
Conservation is unnecessary because nature is strong enough to recover from any human impact	○	○	○	○	○
My ideal vacation spot would be a remote, wilderness area	○	○	○	○	○
I enjoy being outdoors, even in unpleasant weather	○	○	○	○	○
I don't often go out in nature	○	○	○	○	○
I take notice of wildlife wherever I am	○	○	○	○	○

Pro environmental behaviours

The following questions are about your business and pro-environmental behaviours.

1. Below are pro-environmental behaviours. How often does your business undertake these actions to protect the environment?

	Never	Rarely	Occasionally	Often	Very often	Don't know
Conserving electricty	O	O	O	O	O	O
Purchasing sustainable products	O	O	O	O	O	O
Habitat enhancement	O	O	O	O	O	O
Donating to conservation groups	O	O	O	O	O	O
Contacting government agencies about environmental issues	O	O	O	O	O	O
Reading and watching material related to protecting the environment	O	O	O	O	O	O
Supporting green policies	O	O	O	O	O	O
Joining environmental groups	O	O	O	O	O	O
Growing native plants	O	O	O	O	O	O
Conserving water	O	O	O	O	O	O
Volunteering for conservation	O	O	O	O	O	O
Picking up litter	O	O	O	O	O	O
Composting	O	O	O	O	O	O
Recycling	O	O	O	O	O	O
Pest control	O	O	O	O	O	O
Having a green supply chain	O	O	O	O	O	O
Using public transport	O	O	O	O	O	O

2. List any other pro-environmental behaviours that your business undertakes.

3. To what extent do you think these barriers prevent your business from undertaking as much as you would like for the environment?

	Never	Rarely	Occasionally	Often	Very often	Don't know
Lack of interest	○	○	○	○	○	○
Lack of resources/ costs	○	○	○	○	○	○
Availability of time	○	○	○	○	○	○
Lack of information	○	○	○	○	○	○
Lack of encouragement	○	○	○	○	○	○
Lack of opportunity	○	○	○	○	○	○
Other, please specify	○	○	○	○	○	○

Individual characteristics

1. What age bracket do you belong to? (select one of these options)
   - less than 20 years
   - 20 - 24 years
   - 25 - 29 years
   - 30 - 34 years
   - 35 - 39 years
   - 40 - 44 years
   - 45 - 49 years
   - 50 - 54 years
   - 55 - 59 years
   - more than 60 years

2. What is your gender? (select one of these options)
   - Female
   - Male
   - Other
   - Prefer not to say

Further comments

1. As you reach the conclusion of the survey, do you have any further comments you would like to share about nature connection or pro-environmental behaviours?

Thank you and further participation

Thank you for taking the time to complete the survey.

If you are a business leader, I would like to invite you to participate in an individual interview to discuss your connection to nature and business's pro-environmental behaviours in more detail. The interview will take approximately one hour.

If you are interested in being contacted further, please provide your contact details through the following survey link.

Please provide your contact details here (linked to contact survey).

You will be asked to provide your name, email address and mobile number.

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