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Executive Summary

This report examines the mobility behaviours and preferences of generation Y New Zealanders. It presents empirical material collected through 51 qualitative interviews with members of generation Y (people born from 1980 onwards). The interviews took place during 2014 with 18 – 35 year olds in Auckland, Dunedin and Balclutha, to represent both urban and rural geographic contexts. The interview participants included individuals without a driver’s licence (n=16), with a learner’s permit (n=14), with a restricted licence (n=5), and with a full licence (n=16). The interviews covered a range of topics including; motivations and barriers to licencing, factors that could replicate or reduce reliance on private car transport, information communication technologies (ICTs) and travel substitution, modal choice, and perceptions of transport modes. The objective of this research was to investigate the factors that determine generation Y’s mobility practices and preferences.

The research was stimulated by the recognition that, in many parts of the industrialised world, generation Y are travelling in different ways to earlier generations, moving away from private car dependency norms, and using active, public and virtual modes to achieve their mobility needs. The outcomes of stabilising or declining licencing, car ownership rates and vehicle kilometres travelled (VKT) has potentially major implications for industry and governments. So far these changes are evident in many, but not all, developed and developing countries. In New Zealand, travel data appear to show a slight decline in licencing and vehicle kilometres travelled for generation Y, however there is a large regional variation. While there is still a lack of clarity relating to New Zealand’s generation Y mobility trends, the result of changing driver licencing rules amongst other things, the effects of changing social norms relating to car dependency, and the consequences for investment in infrastructure, make this an important issue on which to increase understanding.

The research reveals disparities between younger and older generation Y in their norms relating to learning to drive, and the different factors that motivate learning to drive at different life stages. For younger generation Y, parental encouragement and financial support, social norms and a perceived need associated with social and sporting activities, all encouraged learning to drive as early as possible. However, for older generation Y, access to
a vehicle, needing a licence for employment or employability, and social expectations were all dominant motivations. Interestingly, participation in sporting and social activities works as both a motivation and a barrier to learning to drive, the former in order to be able to drive independently to practices and relieve the parental chauffeuring burden, and the latter because of time constraints and alternative priorities.

Why do generation Y learn to drive?

- Traditional conceptualisations and realisations of freedom and autonomy are evident within generation Y, and can promote learning to drive for some people. These traditional norms perceive learning to drive as a rite of passage, and for these people, additional motivations for driving were less clear.
- The age at which an individual learns to drive can result in different motivations for driving. For example, independence can have different meanings for a 16 year old than for a 30 year old, therefore the perceived needs for a licence can differ.
- Expectations and social pressures relating to traditional learn to drive (LTD) norms appear to continue throughout age groups and were evidenced for older participants as well.
- The functional competency of driving appears to be a highly valued skill and reciprocity of driving responsibility appears to be an important motivation for learning to drive for some people.
- Family support through access to a vehicle, lessons and finances plus moral support appear to be quite significant determinants of learning to drive.
- Key events can motivate learning to drive, particularly for older generation Y. These events could be a change in circumstances increasing the perceived need to drive such as pregnancy, a period of unemployment providing the time needed to LTD, or moving house changing the availability of alternative modes and increasing the need for a licence.
- Access to facilities is an important determinant of learning to drive, and therefore home location is key to whether generation Y LTD at a young age.

What are the barriers to learning to drive for generation Y?

- Learning to drive is a highly communal, family event, which appears to demand the support - moral, temporal and financial - of family members. Barriers to learning to drive
appear to be associated with a lack of support and a perceived inability to negotiate the LTD process independently.

- Learning to drive appears to be a lower priority for non-driving generation Y, and competes with a wide range of other activities for time and finance, this includes social and sporting activities as well as overseas travel and education.
- Reasons for non-driving are diverse, and relate to whether non-driving is perceived to be temporary (short term), temporary (long term) or permanent.
- While some generation Y appear to be delaying learning to drive due to educational responsibilities, time commitments and reduced income, others who planned to LTD are making long term decisions not to drive due to more deep-seated values.
- The perceived necessity to LTD is reduced by proximity to school, work, friends, and access to facilities. Therefore access is more important than a crude urban-rural dichotomy in perceived driving needs.
- Remaining in education can result in reduced motivation to LTD, particularly as this often requires living in an urban centre where mobility needs can be accomplished through active transport. Moreover, reduced income during studies contributes to reduced LTD norms.
- Fear, nerves and anxiousness related to learning to drive was identified as an important barrier to driving for some people, however it is likely that this will be overcome with age and experience.
- Norms relating to illegal driving practices can reduce the perceived need to engage with the formal and legal driving process, it can reduce motivation to LTD and also to progress through the stages of the graduated learner’s scheme (i.e. staying on learner’s or restricted licence for a long time, and driving beyond the licence conditions).

What factors replicate car dependence for generation Y?

- Traditional conceptualisation and norms relating independence and freedom with private car travel were evident in this research and replicate car dependence for generation Y.
- Perceptions of the necessity of private car travel to facilitate lifestyles and provide access to places and opportunities, and a perceived reduction in the quality of this lifestyle without a private vehicle both replicate car dependency norms for generation Y and contribute to the perceived need to drive and own a car.
Emotional attachment to the car beyond the functional purpose of travel was identified by this research, and identifies entrenched and embedded norm which replicate car dependence through intrinsic values and self-identity.

**What factors reduce car dependence for generation Y?**

- Factors reducing car dependency include a modern reading of independence, freedom and autonomy. Generation Y appears to value freedom from car-related costs, which are perceived to be erratic and escalating, over the traditional notions of freedom associated with car-based travel.
- The financial costs of car-based travel appear to be reducing car dependency due to changing priorities and new realities. The rising price of first time homes, and large deposits required for mortgages are forcing some generation Y to reconsider expenditures. There is increasing awareness of car-related costs, and relative costs compared to alternative modes. Moreover, international travel is a priority for some generation Y, resulting in less car dependency and increased uptake of alternative modes.
- Norms relating to shared mobility and collaboration emerged from this research and fit within the new sharing economy and collaborative consumption. Generation Y are using social networks to achieve mobility needs collaboratively, thus reducing the dependence on a private vehicle.
- Awareness of the environmental impacts of transport modes appears to be motivating alternative ways of travelling. Generation Y appears to discern between types of car-travel, identifying the wastefulness of sole occupier commuting. Preferences for sustainable transport modes were found with some generation Y.
- Norms reducing car-dependence for generation Y may be temporary and related to a specific goal, such as home ownership or overseas travel, or can be long term due to values including environmental consciousness.

**Internet use, virtual mobility and travel substitution**

- While this research has found, unsurprisingly, that the Internet is important for generation Y, and used in a variety of different ways, the notion of substituting physical mobility by virtual communications was not well supported by the participants.
Generation Y appear to be conscious of issues related to Internet use and communication, and articulated a number of important features of face to face communications including, activities, facial expressions and body language, and depth of communication, which could not be replicated virtually.

The Internet is integral to communication, used for daily short communications, staying in touch with more geographically distanced friends and for facilitating physical mobilities and social events.

Modal choice and perceptions of transport modes

- Generation Y represent a diverse, and often contradictory range of perceptions of transport modes.
- Transport mode choice is determined by a complex process including perceived availability of transport modes, trip purpose, and topography and weather.
- The private car is perceived to be both expensive and cheap, and an important part of the transport mix for specific purposes (e.g. long distance travel), and people (e.g. elderly or infirm).
- Different views of taxis were also articulated by Generation Y, whereby a taxi can be a car substitute for non-drivers, but also expensive and unnecessary. Perceptions of taxi saturation, and contributions to congestion were also highlighted.
- Walking is perceived to be a normal mode, but not always associated with transport. Generation Y who walk as a mode, identified a range of mental and physical health benefits.
- Cycling is positively viewed by cyclists but safety concerns were featured, the treatment of cyclists by car drivers was identified as a particular concern. Cycling is perceived to be an urban transport mode.
- Bus travel, like car transport, is perceived to be both cheap and expensive. Poor service, congestion and unhelpful bus drivers were a particular issue for bus travel. Nevertheless, the bus provides an opportunity to relax in some circumstances.
- Trains are viewed positively by generation Y, despite being an urban transport mode, unavailable outside of Auckland and Wellington. Concerns relate to the provision of train stations in urban areas, and safety.
The diverse mobility cultures of generation Y

- Generation Y represent a heterogeneous spread of mobility cultures informed by a variety of material cultures, practices, norms and external contexts.
- The diversity of motivations for non-driving among generation Y can be understood as a range of mobility cultures which either replicate or reduce car-dependence.

Key conclusions from this research include:

- Environmental motivations alone may not be sufficient to incentivise modal shift, however when coupled with additional conditions, including cost and convenience, it could present an important contributing rationale. Moreover, environmental consciousness appears to influence modal choice and non-driving practices of licenced individual’s more than LTD behaviours.
- Non-driving can be either a permanent and temporary status. For some people, non-driving suits a particular point in time in order to achieve a specific purpose, such as financial savings for overseas travel, or a mortgage deposit. For others, however, non-driving is perceived to be a permanent status. This often relates to individuals with a driver’s licence who have rejected a car-reliant lifestyle, often for environmental or health reasons.
- Geographic situation and access to active and public transport infrastructure appear to be significant determinants of driving behaviours, particularly for peri-urban and rural participants. For some participants, home locations will be determined by public transport routes, or the capacity to use active transport to access work, study or recreational locations. Thus some of generation Y will be more active in their desire to reduce car-dependency, whereas others will passively reject car-dependency due to a specific set of circumstances. Moving home could present an opportunity to address modal choice and transport options. Increasingly generation Y will purchase homes and chose rental properties based on proximity to transport infrastructure, which could increase home values and desirability and encourage more active and public transport modes to be used.
- There appear to be relatively similar drivers and barriers at different stages of the graduated learner’s scheme, and these seem to differ by age. For younger participants, parental involvement through encouragement, financial assistance and vehicle access
provided a key motivation to LTD; this was less so for older participants. Older participants tended to have greater autonomy in home locations and therefore felt less constrained by their home location. This meant that home location was a more important motivation for learning to drive for younger participants, or those who learnt to drive before leaving the family home.

- The financial cost of car ownership disincentivised driving and learning to drive for many participants. For some participants who articulated needing a driver’s licence to find employment, there was less connection between having a driver’s licence (e.g. for functional competency) and vehicle ownership.
- While there are rural/urban norms, and these relate to specific cities and towns, there are also highly localised and specific norms. These more local scale norms appear to be important in determining LTD behaviours.

The report concludes by suggesting future research directions that could further develop understandings of generation Y’s mobility practices.
# Table of Contents

1. Introduction .................................................................................................................. 1

2. Literature Review ......................................................................................................... 2
   2.1 The ‘Peak Car’ Phenomenon .................................................................................. 2
   2.2 Generation Y Mobilities: International Context .................................................. 3
   2.3 Generation Y Mobilities in New Zealand .............................................................. 5
   2.4 Learning to Drive and Non-Driving Behaviours .................................................. 7
   2.5 Sustainable Mobilities .......................................................................................... 8
   2.6 Learning to Drive: The Graduated Learners Scheme .......................................... 10

3. Methodology and Methods ............................................................................................ 12
   3.1 Geographic Context .............................................................................................. 12
   3.2 Participant Recruitment ....................................................................................... 14
   3.3 Analytical Method ............................................................................................... 16

4. Findings: Motivations and Barriers to Learning to Drive ........................................... 19
   4.1 Why do Generation Y learn to drive? .................................................................... 19
      4.1.1 Traditional LTD Norms: A Rite of Passage .................................................. 24
      4.1.2 Peer Pressure ............................................................................................... 25
      4.1.3 The Role of Family ...................................................................................... 26
      4.1.4 Practices, Activities and Employment .......................................................... 27
      4.1.5 Traditions of Freedom, Independence and Autonomy .................................. 28
      4.1.6 Access to Alternative Transport Modes ...................................................... 30
      4.1.7 Identification .................................................................................................. 30
      4.1.8 Commitments, Responsibilities and Life Stages .......................................... 31
      4.1.9 Summary ...................................................................................................... 32
4.2 What are the Barriers to Learning to Drive for Generation Y? ........................................ 33
  4.2.1 Friends and Emergent Social Group Norms .......................................................... 37
  4.2.2 Individual Perceptions of Learning to Drive ......................................................... 38
  4.2.3 Life Stages: Delaying Learning to Drive .............................................................. 40
  4.2.4 Changing Needs ..................................................................................................... 41
  4.2.5 Proximity and Urban Lifestyles .............................................................................. 41
  4.2.6 Further Education, Priorities and Finances ......................................................... 42
  4.2.7 Time Constraints, New Priorities and Responsibilities ........................................ 43
  4.2.8 Family, Parental Support and Vehicle Access ..................................................... 44
  4.2.9 Illegal Driving Practices and Sober Driving ......................................................... 46
  4.2.10 Summary .............................................................................................................. 47

5 Findings: Factors Replicating or Reducing Car Dependency for Generation Y .......... 49
  5.1 Factors Replicating Car Dependency for Generation Y ........................................... 50
     5.1.1 Individual: Expressions of Independence, Enjoyment and Necessity .............. 51
     5.1.2 Social: Norms and Activities ............................................................................. 53
     5.1.3 Employment: Perceived Needs, Safety and Employability ............................. 54
     5.1.4 Built Environment: Geographic Contexts and Transport Infrastructure .......... 55
     5.1.5 Summary .............................................................................................................. 56

  5.2 Factors Reducing Car Dependency for Generation Y ............................................. 57
     5.2.1 Economy: Financial Costs and New Priorities ................................................ 59
     5.2.2 Individual: New Meanings of Freedom and Autonomy .................................... 61
     5.2.3 Social: Shared Mobility ..................................................................................... 62
     5.2.4 Built Environment: Home Location, Infrastructure and the Transport System  62
     5.2.5 Environment: Concerns and Awareness ......................................................... 64
     5.2.6 Temporality ....................................................................................................... 67
9.2.4 Virtual Mobilities for Generation Y ................................................................. 105

10 Conclusions and Future Directions ........................................................................ 106

11 References ................................................................................................................. 109
Table of Figures

Figure 1 Number of Driver’s Licences by Licence Type and Age Group (2003-2013) ..............5
Figure 2 Time Series of Percentage of Age Group with a Full Driver’s Licence .....................6
Figure 3 Kilometres Travelled in Cars, Vans, Utes and SUVs per Driver per Day (1989-2014) 7
Figure 4 A Framework for Sustainable Mobility .................................................................9
Figure 5 Map Depicting the Geographical Range of Participants from Auckland ..................13
Figure 6 Map Depicting the Geographical Spread of Participants from Dunedin ..............13
Figure 7 Map Depicting the Geographical Spread of Participants from Rural New Zealand 14
Figure 8 Determinants of Modal Choice ............................................................................75
Figure 9 The Energy Cultures Framework ........................................................................96

Table of Tables

Table 1 Conditions Associated with the New Zealand Graduated Learner’s Scheme ........11
Table 2 Research Participant Overview .............................................................................15
Table 3 Characteristics of Generation Y Research Participants from Dunedin, Auckland and Rural New Zealand ..............................................................17
Table 4 Table of Factors which Encourage LTD Behaviours for Generation Y .............19
Table 5 Table of Factors which Present a Barrier to Learning to Drive .........................33
Table 6 Table of Factors That Could Reduce or Replicate Car Dependency for Generation Y .............................................................................................................49
Table 7 Summary Table of Factors That Replicate Car Dependency Trends for Generation Y .........................................................................................................................50
Table 8 Summary Table of Factors That Reduce the Car Dependency Trend for Generation Y .........................................................................................................................57
Table 9 Summary of Participant’s Perceptions of Private Car-Based Travel ..................78
Table 10 Summary of Participant’s Perceptions of Travel by Taxi ......................................80
Table 11 Summary of Participant’s Perceptions of Cycling as a Transport Mode .............82
Table 12 Summary of Participant’s Perceptions of Walking as a Transport Mode ..........85
Table 13 Summary of Participant’s Perceptions of Bus Travel ......................................89
Table 14 Summary of Participant’s Perceptions of Train Travel ....................................92
Table 15 A Culture of Collaboration ..............................................................................97
Table 16 An Urban Mobility Culture .............................................................................99
Table 17 A Culture of Family Responsibilities ................................................................100
Table 18 Revisiting the Factors which Replicate or Reduce Car Dependency ..........102
1 INTRODUCTION

There is a growing awareness that generation Y\(^1\), the youngest generation, are developing different expectations about travel than mid-to-late 20\(^{th}\) century generations. This has been evidenced by this generation’s reduced inclination to value and prioritise car-based travel. In a range of industrialised countries across the globe, there are reports of declining rates of licencing, car ownership and vehicle kilometres travelled (VKT) amongst generation Y. These changes have raised important questions around the future of transportation and travel, with implications for transportation policy, planning and funding, as well as for the automobile industry. Despite the quantitative evidence of these changing mobility practices, little is known about the reasons behind the so-called ‘generation Y mobility phenomenon’. This report provides a qualitative examination of generation Y’s mobility practices in the context of rural and urban Aotearoa New Zealand (New Zealand hereafter).

In New Zealand, travel data indicate a stabilisation and decline in licencing and vehicle kilometres travelled for generation Y, with large regional variability. There is still a lack of clarity relating to New Zealand’s generation Y mobility trends, the result of changing driver licencing rules amongst other things. However, the implications of changing social norms relating to car dependency, and the potential effects on investment in infrastructure, make this an important issue on which to increase understanding. This importance was further evidenced by a Delphi study run by the Energy Cultures research programme, in which global transport experts identified changing generation Y mobility behaviours to be a driver of change both globally and for New Zealand (Stephenson et al., 2014).

\(^{1}\) Also referred to as the ‘millennial generation’
2 LITERATURE REVIEW

This report builds upon a range of literatures examining not only generation Y’s mobility practices, but also wider discourses on ‘peak car’, car dependency, sustainable mobility and consumption. Consideration of this interwoven and multifaceted context helps us to frame explanations for the changing mobility practices of generation Y. A brief review of these literatures will now be presented.

2.1 The ‘Peak Car’ Phenomenon

Peak car is a manifestation of what Metz (2013) refers to as ‘the fourth era of travel’, characterised by stagnating average per capita daily travel and the need to better understand demographic influences on future travel behaviours. Prior to 2009, growth in car use, measured by vehicle kilometres travelled (VKT), was the norm. Continued growth in car use underpinned transportation policy and planning. However, this expectation of continued growth came to a halt in 2009 when a Brookings Institution report recognised what came to be called ‘Peak Car’; declines in car use across the world’s developed cities (Puentes and Tomer, 2009). The peak car thesis has been used to suggest the demise of car dependency in urban regions (Newman and Kenworthy, 2011). Peak car is of significant interest from business, policy and academic positions. One particularly important issue is that “most aggregate energy forecasts and many regional travel demand models are based on the core assumption that travel demand will continue to rise inline with income” (Millard-Ball and Schipper, 2010).

Research has examined possible causes of peak car use, Newman and Kenworthy (2011) propose six factors; 1. Exceeding the one hour average time budget for urban travel, also referred to as ‘the Marchetti wall’. 2. The revival and growth of public transport provisions in urban areas, 3. The reversal of urban sprawl, with urban population density a key multiplier on the use of active and public transport modes, 4. The rising average age of city dwellers, 5. The growth of a culture of urbanism, for both retired ‘empty nesters’ and young people, 6. Rising fuel prices. These factors are highly interconnected with clear interdependencies, but indicate the range of associated factors which could be contributing to declining automobile dependency.
The long-term projections for peak car have received some attention, as there are a range of implications relating to whether car travel will continue to grow in the future, whether it has peaked, or whether it is a plateau in demand (Lyons and Goodwin, 2014). Goodwin (2012) argues that while there is not yet enough evidence that car use has truly peaked and an established downward trend in car use will occur, there is even less evidence that the peak car phenomenon is a temporary interruption to the normal trend due to the global financial crisis (GFC) since the change to car use predates the GFC.

### 2.2 Generation Y Mobilities: International Context

Increasing attention has been paid to generation Y’s mobilities, particularly in light of transitions away from traditional mobility norms and practices. These changes include static or declining rates of licencing, vehicle kilometres travelled and car ownership for generation Y. These trends have been identified in a range of industrialised countries since the mid-2000s, and in some locations, emerged as early as the late 20th Century. In many industrialised countries, young people are less likely to learn to drive (LTD) than older populations, and those with a driver’s license are driving less than older populations (Delbosc and Currie, 2013, Kuhnimhof et al., 2011, Sivak and Schoettle, 2011b, Sivak and Schoettle, 2012, Sivak and Schoettle, 2011a). The decline in licensing amongst younger generations was first reported in the late 1990s in Sweden and Norway (Berg, 2001), however it wasn’t until 2010 that this research area received wider recognition. Particular interest in generation Y mobility practices resulted from the realisation that the decline in youth licensing was emerging in other regions including; Australia, North America, Japan and much of Europe (Delbosc and Currie, 2013).

Declining rates of generation Y gaining driver’s licences has caught the attention of industry, policymakers, and academics alike. Just like the broader issue of peak car, this could have a range of implications for car sales and ownership models, transport mode choice, tax revenues, infrastructure demands and much more. Moreover, as Generation Y has recently surpassed the baby boomer generation as the largest generation in Australia and the US, understanding the travel demands of Generation Y will become increasingly important in terms of forecasting demand and modal choice (Delbosc and Currie, 2013). Thus there is an imperative to understand why these trends occurred, and whether they are likely to continue in the long term.
Reports in the US have found evidence of lower VKT and licencing. One report indicated that younger generations are travelling fewer miles and making fewer journeys than previous generations at the same life stage (Blumenberg et al., 2012). In another, Sivak and Schoettle (2011a) reported that since 1983, there have been declines in the percentage of young people gaining a driver’s licence. When coupled with an increase in middle-age licensing, the largest group of drivers in the US has shifted from young to middle-age, increasing the average driver age. This trend has also been evidenced in the UK, where the proportion of adolescents and young adults with a driver’s license has been declining since about 1993 (Noble, 2005).

Yet while this downward trend has been identified in a range of developed countries, it is not consistent. In Europe, for example, the trend is mixed (Kuhnimhof et al., 2012). The most dramatic declines in youth licensing is evident in Scandinavia, whereas Spain and Switzerland have experienced modest increases in licencing levels (Delbosc and Currie, 2013). Sivak and Schoettle (2011a) found two distinct patterns of change; the first trend described a decrease in youth licensing, and an increase in older person licensing (Sweden, Norway, Great Britain, Canada, Japan, South Korea and German), while the second pattern saw an increase in licensing across all age groups (Finland, Israel, The Netherlands, Switzerland, Spain, Latvia and Poland). In Asia, whilst developing countries including India and China are experiencing increasing rates of car ownership and licensing demands associated with rising middle classes, Japan and South Korea are experiencing slight decreases in licensing for young adults (Sivak and Schoettle, 2012; Delbosc and Currie, 2013).

A 2005 report by the United Kingdom Department for Transport (2005) presented a range of reasons for not driving. In their study, they found that the main reason young people could not or were not learning to drive was due to cost; the cost of learning, insurance, car ownership and generally associated costs (petrol, maintenance etc.). The cost related barrier was found to decrease in importance with age. For respondents aged 17-20 years, friends and family being able to provide transport was another key reason for not driving. Of adolescents and young adults with driver’s licenses, a US based survey by KRC Research and Zip Car found that 45% of young people polled had been consciously reducing their personal driving time.

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2 Non-drivers were determined as those who didn’t hold any type of license (provisional or full), or who had a provisional license but were not actively learning to drive at the time of the survey.
and replacing this with alternative transport modes (Davis et al., 2012). Thus for some, the changes in mobility practices are conscious and considered.

## 2.3 Generation Y Mobilities in New Zealand

Data from New Zealand are indicating stabilisation and decline in licensing and VKT for the 18-35 age cohort. Figure 1 depicts the number of licences by licence type and age group; 15-19, 20-24, 25-29, 30-34, from 2003 to 2013. Changing licensing rules contribute to difficulty interpreting these data, with some declining within the 15-19 age group the result of increasing the minimum driving age to 16 years in 2011.

![Figure 1 Number of Driver’s Licences by Licence Type and Age Group (2003-2013)](image)

Figure 1 Number of Driver’s Licences by Licence Type and Age Group (2003-2013)

Figure 2 presents the percentage of each age group with a full driver’s licence. For the 15-24 year old age group, this has declined from just below 50% in the late 1990s, to 35% to the 2011-2014 time series. For the 25-34 age group, the percentage of people with a full drivers licence has declined from nearly 90% to below 80% in the same time period. At the same time, the 75+ age group has increased from 45% to over 70% of the age group with a full drivers licence. Increases in licencing are also evident in the 65-74 and 55-64 age groups.
Vehicle kilometres travelled (VKT) is depicted in Figure 3, and this indicates static VKT for the 15-24 age group since 1990 at approximately 20km per day. The 25-34 age group has seen a slight decline in VKT over the same period, with a peak of 30km per day in the late 1990s. Since the mid-2000s, there has been stabilisation in VKT across the age groups, which could be evidence of the peak car phenomenon.
2.4 Learning to Drive and Non-Driving Behaviours

Learning to drive is identified as key event for adolescents (Winston and Senserrick, 2006) and a functional mobility-based competency, which along with learning to walk and ride a bike, “form part of the fabric that constructs our everyday mobility” (Pooley et al., 2005: p.1). Since motor-vehicle crashes are the leading cause of death and injury for adolescents (Hedlund et al., 2003) and due to the established data on elevated crash risks for teenage drivers (Williams, 2003), there is a particular concentration of literature concerned with adolescents safety, risk factors and motor vehicle crashes (e.g. Miran & Kay, 2011) and interventions to reduce crashes related to youth driving behaviour (Shope, 2006). There has been less attention paid to the underlying motivations for LTD amongst adolescent cohorts.

A qualitative study of 11 – 18 year olds in the UK found that all their participants either intended to LTD, or to continue driving in the future (Line et al., 2010). Explanations included
perceptions of speed, cost savings, convenience and flexibility of car-based travel compared to alternative modes. Line et al (2010) also reported generally positive attitudes towards cars, and negative attitudes towards public and active transport modes. This was evidenced by perceptions of freedom associated with cars, and confinement associated with a public bus. Moreover, the study’s findings were consistent with earlier research with perceptions of LTD as a normal ‘rite of passage’ for adolescents. They did, however, report a reliance on parents and caregivers to bear the financial costs of LTD and a lack of awareness of the full costs of driving.

A study conducted in New Zealand, between 2006 and 2008 with 15 to 18 year olds at driving test centres, found that ‘freedom to go where you wish’, and ‘to drive to and from work’ were the most important reasons for getting a driver’s licence, with little difference between urban and rural participants (Begg et al., 2009a). When asked why they were getting their licence at that time, independence freedom and autonomy, as well as being ‘ready to drive’, and old enough were the most important reasons. Helping parents and attending sporting activities were also cited as reasons to LTD.

2.5 Sustainable Mobilities

The importance of the peak car phenomenon and generation Y’s mobility behaviours is related to the strong dependence on private vehicles for transport in developed countries (Delbosc and Currie, 2013). Due to its dependence on fossil fuels, road transport is a significant contributor to greenhouse gas emissions (Chapman, 2007), and one of few industrial sectors where emissions are increasing (World Business Council for Sustainable Development, 2001). By transport subsector, road transportation is the largest contributor to climate forcing (Fuglestvedt et al., 2008). Further, road transport accounts for 81% of total energy use by the transport sector (Chapman, 2007), with consequences for global climate change and oil resources.

Alongside the environmental impacts of the current auto-dependence of society, are the social inequalities embedded in these hegemonic transport practices and planning regimes, which can contribute to a range of social issues including exclusion of disadvantaged societal groups. Escalating car reliance has also been linked to declining physical activity levels, increasing rates of obesity and a range of additional health concerns (Hinde and Dixon, 2005). Indeed,
reports have indicated that the increasing proportion of overweight, obese and inactive Australian citizens is rising in parallel with increasing car reliance (Mason, 2000). In addition, the self-perpetuating cycle of auto-dominance leads to increased public spending on road development and town planning based on personal car ownership. This is explained by Sager (2006: p.472): “The more transport they [planners] plan for, the more society is designed in ways making people dependent on transport”. This is reported to be eroding the social fabric of community based lifestyles and further perpetuating the exclusion of some social groups.

The growing awareness of the need to replace the dominant, car-centric transport systems with more sustainable mobility options parallels with discourses of peak car. The sustainable mobility paradigm is an alternative to the dominant car dependent ‘automobility’ paradigm, and provides a lens through which to examine and strengthen the connections between land use, urban form and transport provision (Banister, 2008). In its simplest form, sustainable mobility calls for mobility systems to be environmentally, societally, and economically sustainable (Hopkins, 2014). In other words, a sustainable mobility system comes at the juncture of viability, liveability and fairness (Figure 4).

Figure 4 A Framework for Sustainable Mobility

![Figure 4 A Framework for Sustainable Mobility](source: Hopkins, 2014)
2.6 Learning to Drive: The Graduated Learners Scheme

A graduated learners programme, or graduated driver licensing (GDL) was introduced in New Zealand in 1987 as a policy intervention to address the high crash rate amongst younger drivers (Begg et al., 2009b). It restricts the times and situations at which a newly licenced driver can drive independently. Through the GDL programme, young drivers are restricted from participating in activities which are well-known to be high-risk, such as night time driving and driving with peers (Ferguson, 2003). By requiring an extended period of supervised driving, the GDL delays full licensing entitlements until young drivers are older and more experienced with the intention of making driving safer and reducing vehicular crashes. Nevertheless, research has shown a wide range of additional risk factors which are not incorporated into the GDL process (Ferguson, 2003).

There are time restrictions on progressing through the licences (Table 1); to apply for a learners licence the applicant must be over 16 years old, the learners must be held for a minimum of 6 months. The applicant must be 16.5 years old to undertake the restricted test. To progress to a full licence, applicants must be 18 years old, and have held the restricted licence for at least 18 months. Undertaking an advanced driving course can reduce this to 12 months and 17.5 years old. Drivers over 25 years old need only hold their restricted licence for 6 months, reduced to 3 months with an advanced driving course.
Table 1 Conditions Associated with the New Zealand Graduated Learner’s Scheme

<table>
<thead>
<tr>
<th>Licence</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learners</td>
<td>▪ You must not drive on your own. You must be accompanied by a supervisor at all times.</td>
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<tr>
<td></td>
<td>▪ When learning to drive a light motor vehicle you may carry passengers, provided your supervisor agrees.</td>
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<tr>
<td></td>
<td>▪ You must display learner (L) plates on the front and rear of the vehicle at all times when you’re driving.</td>
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<tr>
<td></td>
<td>▪ If you are learning to ride a moped, you do not need a supervisor. However, you do need an L plate on the rear of your moped, you must not carry any passengers and you must not ride between 10pm and 5am.</td>
</tr>
<tr>
<td>Restricted</td>
<td>▪ You can drive on your own between 5am and 10pm.</td>
</tr>
<tr>
<td></td>
<td>▪ If driving between 10pm and 5am, you must be accompanied by a supervisor.</td>
</tr>
<tr>
<td></td>
<td>▪ If you sit the restricted test in an automatic vehicle, a condition will be imposed on your licence limiting you to driving only automatic vehicles.</td>
</tr>
<tr>
<td></td>
<td>▪ You must not carry passengers unless you have a supervisor with you. The only passengers you can carry without a supervisor are:</td>
</tr>
<tr>
<td></td>
<td>• Your spouse or partner</td>
</tr>
<tr>
<td></td>
<td>• Your parent or guardian</td>
</tr>
<tr>
<td></td>
<td>• A child who lives with you and is under the care of you or your spouse or partner</td>
</tr>
<tr>
<td></td>
<td>• A relative who lives with you and who receives a social security benefit</td>
</tr>
<tr>
<td></td>
<td>• Someone you look after as their primary caregiver.</td>
</tr>
<tr>
<td>Full</td>
<td>▪ Full rights as a driver, no additional conditions.</td>
</tr>
</tbody>
</table>

Source: New Zealand Transport Authority
3 METHODOLOGY AND METHODS

A qualitative methodology was used for this research in order to elicit a broad depth and breadth of perceptions from a wide range of research participants. A qualitative approach provides an understanding of the range of views and motivations, whilst not attempting to be nationally representative. In other words, rather than accounting for ‘how many’, or ‘to what extent’ individuals feel or behave a certain way, qualitative research focuses on participants’ expression of why these feelings or behaviours exist and their context.

Semi-structured, face to face interviews were conducted with 18-35 year old New Zealand permanent residents or citizens. These interviews took place in Auckland, Dunedin and Balclutha, incorporating urban and rural perspectives on mobility. Rural participants were interviewed in Auckland, Dunedin and Balclutha, representing a wide geographic diversity across rural New Zealand (Figure 7).

3.1 Geographic Context

Diverse geographic contexts were a critical feature of this study’s research design in order to gather wide ranging perspectives from different geographic and socio-cultural settings. Urban, peri-urban and rural locations were sought to account for the very different mobility realities as they relate to the built environment, transportation infrastructure and access to education, employment and leisure. Participant recruitment related to the region in which each participant had spent their adolescence, particularly from 14-18 years old.

Auckland was selected as a research location as New Zealand’s largest and most populated urban area. Moreover, on-going transport and mobility-related issues, including urban sprawl, road congestion, and alternative mode provision and infrastructure, made Auckland a particularly relevant location. The geographical spread of Auckland participants is depicted in Figure 5. This map shows that while some participants live, and grew up, in central Auckland, others reside in more rural or remote locations on the periphery of the city. This geographic context is particularly relevant when considering the mobility experiences, norms and demands within the Auckland cohort of participants.
Dunedin was selected as a smaller New Zealand urban centre, characterised by varied topography and a high student population. Figure 6 shows the geographic positioning of the participant’s homes. While most research participants appear to live close to the central business district (CBD), there are many steep hills dividing the city. Two participants live further from the CBD, on the Otago Peninsula.

Rural New Zealand participants were sought to gain the perspectives of generation Y who grew up away from urban infrastructure and norms. While some participants still resided in rural New Zealand, others had moved to urban centres for education or employment. Rural
participants were interviewed in Auckland, Dunedin and Balclutha. Figure 7 depicts the areas from which this group, which geographically spans across New Zealand including both the North and South Islands. Interviews were still conducted face to face for this group, recruitment methods are presented in the next section.

Figure 7 Map Depicting the Geographical Spread of Participants from Rural New Zealand

3.2 Participant Recruitment

We employed a purposive recruitment method, targeting participants from the predetermined geographic locations and within the age range of generation Y. Participants were also sought to give as broad a spread of views as possible, and to represent a range of educational, socio-economic, housing, and employment statuses. An overview of the participant’s characteristics is presented in Table 2. Recruitment pathways included advertisements at colleges, polytechnics and universities, major employers, and community noticeboards, as well as newspaper articles and blog posts. A snowballing approach to sampling was also adopted following initial recruitment efforts, to address low recruitment particularly related to non-drivers and parents. A snowballing sampling method involves using research participants to identify further possible participants.

For rural participant recruitment, the methods listed above were complemented by advertisements at Telford Agricultural College in Balclutha, with a researcher spending a
period of time on site to conduct interviews with students. This college specifically caters for young adults, and provides farming-related skills and qualifications. Therefore most of the students have grown up in rural New Zealand and intend to stay within a rural lifestyle. These participants were sought to provide potentially different perspectives from the rural participants who had moved to an urban centre.

In total, 51 interviews were conducted with generation Y, across three geographical locations (n=17 per location). Selection criteria included:

- Aged 18-35 years old on the day of interview
- Grown up, especially 14-18 years, in one of the three locations
- At any stage of licencing, or without a licence.

Table 2 Research Participant Overview

<table>
<thead>
<tr>
<th>Category</th>
<th>Result</th>
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<tbody>
<tr>
<td>Total participants</td>
<td>N=51</td>
</tr>
<tr>
<td>Gender</td>
<td>47% male (n=24)</td>
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<tr>
<td>Highest completed education</td>
<td>High School 53%, Undergraduate degree 29%, Postgraduate 14%, College/ polytechnic 14%</td>
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<tr>
<td>Licencing</td>
<td>No licence 31%, full licence 31%, learner’s licence 28%, restricted licence 10%</td>
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<tr>
<td>Occupation</td>
<td>Full time student 38%, Full time employed 33%, Part time employed 13%, unemployed 9%, Part time student 7%</td>
</tr>
<tr>
<td>Home</td>
<td>Flattting 27%, Living with parents and/or family 23%, Residential college 22%, Renting with partner 10%, Owns own home 10%, Renting on own 8%</td>
</tr>
<tr>
<td>Overseas travel</td>
<td>86% have travelled overseas</td>
</tr>
<tr>
<td>Parental status</td>
<td>2% parents (N=1)</td>
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</table>

Individual participant details are presented in Table 3. This table also provides pseudonyms for the research participants which are used when presenting the findings of the research in section 4. Within the findings section, verbatim quotations arising from the interviews are
used as evidence. In presenting the quotations the following formula is used: [pseudonym, age, region, licence status].

### 3.3 Analytical Method

The 51 qualitative interviews were conducted by one researcher in Auckland, Dunedin and Balclutha between July and September 2014. The interviews lasted a mean time of 38 minutes\(^3\) and a range of 18-71 minutes. All interviews were digitally audio recorded. The audio files were professionally transcribed and uploaded to Nvivo10 qualitative analysis software. The transcripts were thematically coded both literally and interpretively by one researcher. This process involved exploring the participant’s responses for emergent themes and coding using the ‘coding in-text’ function, which allows for new codes to be developed throughout the analysis process. The analysis was structured around the motivations and barriers to gaining a driver’s licence, the factors replicating or reducing car dependency norms for generation Y, the use of ICT and social networking, and emergent, distinctive energy cultures arising from the interview text, three of which are presented in this report.

\(^3\) Dunedin mean: 44 minutes and a range of 26-64 minutes, Auckland mean: 37 minutes, and a range of 18-62 minutes, rural NZ mean: 34 minutes, and a range of 21-71 minutes.
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**Rural New Zealand**

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<td>M</td>
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<td>HS</td>
<td>Student FT</td>
<td>R</td>
<td>N</td>
<td>Residential college</td>
<td>Y</td>
</tr>
<tr>
<td>16</td>
<td>Declan</td>
<td>M</td>
<td>19</td>
<td>HS</td>
<td>Student FT</td>
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<td>Residential college</td>
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<tr>
<td>17</td>
<td>Stella</td>
<td>F</td>
<td>19</td>
<td>HS</td>
<td>Student FT</td>
<td>F</td>
<td>N</td>
<td>Residential college</td>
<td>Y</td>
</tr>
</tbody>
</table>
4 FINDINGS: MOTIVATIONS AND BARRIERS TO LEARNING TO DRIVE

Learning to drive is a fundamental mobility based competency, whether this learning occurs formally and legally, through the procurement of a drivers licence, or informally and illegally through friends and family, with no licencing. However, LTD appears to have more opaque meanings than its practical application alone. Data on licencing have indicated a declining in licencing for generation Y\(^4\). Participants of this study were asked questions related to the LTD process. For non-drivers, participants were asked why they hadn't previously attained a driver's licence, and what might motivate them to do so. For those with a licence, the motivations for undertaking the licencing process were explored.

4.1 Why do Generation Y learn to drive?

The analysis identified a wide variety factors which encourage LTD behaviours and thereby motivated licencing. These were then categorised into 10 key themes and related sub-themes. The most regularly occurring themes and subthemes are highlighted in red text. However, due to the qualitative approach used in this research, this is indicative of potential influence, not statistically based. In order of frequency, the subthemes are; freedom & flexibility, parental encouragement norms, autonomy, employment, work requirements, home location, social groups and responsibilities, family responsibilities, LTD as a rite of passage, and participation in sports and activities. The themes listed in Table 4 are used to guide the presentation of the research findings.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>Change of personal circumstance</td>
<td>This could include illness or injury, a new job, moving to a new city, or having children.</td>
</tr>
<tr>
<td></td>
<td>Time</td>
<td>The time theme relates to external changes which create a motivation to LTD or progress through the stages of licencing at a faster pace.</td>
</tr>
</tbody>
</table>

\(^4\) Proportion of the generation with a licence as a percentage of the whole generation.
<table>
<thead>
<tr>
<th>Expiry of Learners or Restricted licence</th>
<th>The nearing expiration of a learners permit or restricted licence was both a perceived hypothetical and actual motivation for progressing through the stages of licencing.</th>
</tr>
</thead>
</table>

### Parents

<table>
<thead>
<tr>
<th>Parental encouragement</th>
<th>The parental encouragement sub-theme focuses on norms whereby learning to drive is perceived (by parents, caregivers and/or family members) to be important and therefore encouraged.</th>
</tr>
</thead>
</table>

| Parental driving lessons | The provision of driving lessons was another factor motivating LTD behaviours. |
| Parents paying for LTD | Another theme arose related to parental financial support for driving lessons and the LTD process. |
| Financial support from family | Broader financial support including providing a vehicle, and the related costs including petrol, warrant of fitness and insurance. |

### Material culture

| Car ownership | The car ownership sub-theme interrelates with parental support, but is not contingent on parental provision, but includes other ways through which the research participants might own a vehicle. |
| Car access | Access to a vehicle relates to the capacity to practice driving skills on a regular basis and thereby progress through the graduated learner scheme. |

### Norms

<p>| Perceived need to LTD | This sub-theme describes participant perceptions of a ‘need’ to drive for different reasons. |
| Perceived value | A perceived positive value attached to learning to drive and having a drivers licence is reflected in this sub-theme. |</p>
<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived usefulness</td>
<td>Similarly, the perceived usefulness of learning to drive and licencing is reflected in this sub-theme.</td>
</tr>
<tr>
<td>Responsibility</td>
<td>The responsibility of driving, as a grown up and mature thing to do, was seen to be an important factor for developing life skills.</td>
</tr>
<tr>
<td>Cultural norms</td>
<td>Cultural norms represent the range of perceptions upheld by different cultural contexts, particularly where the hegemonic status of car dependency is replicated. These cultural norms can enforce LTD behaviours.</td>
</tr>
<tr>
<td>Wanting to own a car</td>
<td>A desire to own a car also motivated LTD behaviours.</td>
</tr>
<tr>
<td>Perceived value of vehicle ownership</td>
<td>Vehicle ownership and the associated perceptions of value and necessity as a motivation for learning to drive are explored in this sub-theme.</td>
</tr>
<tr>
<td>Norm of ‘liking cars’</td>
<td>Having grown up around a car culture, or norms of enjoying car-based transport acts as a motivation for learning to drive.</td>
</tr>
<tr>
<td>Speed of car transport</td>
<td>Norms prioritising the speed and timeliness of car-based transport are explored in this sub-theme.</td>
</tr>
<tr>
<td>Perceived necessity in an emergency</td>
<td>The importance of learning to drive as a functional competency as a necessity</td>
</tr>
<tr>
<td>Responsibilities</td>
<td>The responsibilities theme relates to a range of situations where an individual might need a driver’s licence in order to undertake practices of responsibility.</td>
</tr>
<tr>
<td>Social groups and responsibilities</td>
<td>Responsibility for attending or leading social and/or sporting groups was seen to enfore a need to drive in order to access and attend the practices.</td>
</tr>
<tr>
<td>Family responsibilities</td>
<td>Family responsibilities including parental chores and undertaking roles within the family unit.</td>
</tr>
<tr>
<td>Dependents</td>
<td>Having children was perceived to be an important motivation for learning to drive by some participants. Non-drivers identified having children as being a life changing scenario which might enforce LTD norms.</td>
</tr>
<tr>
<td>Individual</td>
<td>The ‘individual’ theme incorporates personal norms, aspirations and perceptions of learning to drive which might enforce licencing.</td>
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</tr>
<tr>
<td>Freedom &amp; flexibility</td>
<td>Freedom and flexibility are values often linked to the car dependency discourse. While these sub-themes also relate to the replication of car dependency, they can work to enforce LTD behaviours, due to the perceptions of freedom. Freedom relates to both freedom from parents for younger participants, and freedom from timetabling and flexibility to travel at will.</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Autonomy, again, is a common theme in the car dependency discourse. Autonomy is linked to perceived independence for drivers. Self-sufficiency and independence from timetabling or reliance on others are at the core of this sub-theme.</td>
</tr>
<tr>
<td>Identification</td>
<td>The need for, and norms around identification for 18+ was another important sub-theme. This relates to the need for ID to enter pubs and bars at 18 years old, and the perceived value of having a driver’s license rather than passport or 18+ card as ID.</td>
</tr>
<tr>
<td>Social</td>
<td>The social theme explores the range of external pressures and norms enforcing learning to drive practices.</td>
</tr>
<tr>
<td>LTD as a rite of passage</td>
<td>Learning to drive as a rite of passage is an established and long-held social norm relating to learning to drive. This sub-theme considers external perceptions of learning to drive as a fundamental and important rite of passage event for young adults.</td>
</tr>
<tr>
<td>Peer pressure</td>
<td>Peer pressure from friends but also family members is presented in this subtheme, with evidence of social norms and pressure from social groups encouraging traditional practices.</td>
</tr>
<tr>
<td>Age</td>
<td>The sub theme of ‘age’ was developed through participant’s perceptions that by a certain age they ‘should have their licence now’. Therefore there was a perception of expectation.</td>
</tr>
<tr>
<td>To be able to drive legally</td>
<td>This legality sub-theme was developed through illegal driving practices, whereby participants had...</td>
</tr>
</tbody>
</table>
functional competency of driving, but without a licence. For some participants, being able to drive legally was a motivation for starting the ‘LTD’, or testing process.

To have a licence  
Simply to ‘have a licence’ was identified as a subtheme for those who could not depict a deeper motivation beyond the perceived utility of licencing.

**Geography & natural environment**  
Geography and the natural environment theme covered proximity of school, shops, and friends, as well as topography as a barrier to some alternative modes, and weather.

**Home location**  
Home location was identified as an important sub-theme for determining LTD behaviours. This relates to the proximity of home locations to the needs of the participant, and therefore a need to be free and/or independent from parents/ family members.

**Work location**  
Similarly to home location, the proximity and demands of the work location acted to enforce LTD behaviours for some participants.

**Topography**  
Topography of the land contributed to perceptions of distance and opportunities for alternative transport modes. Areas perceived to be especially hilly were used as a motivation for learning to drive.

**Weather**  
Likewise, perceptions of weather also dominated LTD behaviours for some participants.

**Practices**  
The practices theme covers the range of activities and social practices that might contribute to LTD behaviours.

**Employment**  
Employment includes the requirements of potential and actual employers, job seeking for unemployed participants and job-specific driving skills.

**Participation in sports & activities**  
This sub-theme covers participation in activities that may have required autonomous mobility and access to remote or hard-to-reach activities.
To access areas beyond those available by active transport and public transport modes was a sub-theme, due to the motivation to explore.

The ‘access to alternative modes’ theme explores the actual or perceived availability of public or active transport modes.

Perceptions of public transport relates to how participants understand the availability of alternative modes in their daily lives and geographic context.

The provision subtheme covers the actual public and active transport availability for the research participants.

4.1.1 Traditional LTD Norms: A Rite of Passage

From this research, it became clear that for some people, traditional car dependency norms endure, and for these people, learning to drive is still perceived to be a ‘rite of passage’. Learning to drive once reaching the age at which one can do so, was perceived to be a fundamental social norm. These participants could often not explain additional motivations for learning to drive, beyond the fact that their peers were also doing so, therefore learning to drive was “the normal thing”. In rural and urban regions alike, there appear to be established norms of licencing:

“I am going to say the culture. It was just normal to get your licence when you were 15. I don’t know how to describe why; it is just that I did it because everyone else is doing it and my parents said that I should do it, that kind of thing” (Cora, 24, Rural, Restricted licence)

“I think that was important yeah. I think also just because of the area that I lived in the kind of culture was, you know, kind of a milestone of growing up was getting your driver’s licence and that sort of thing” (Isaac, 25, Auckland, Full licence)

This suggests that the entrenched normality of learning to drive as a feature of a car dependent mobility system continues for some members of generation Y. This norm does not appear to be specific to an urban or rural context.
The perception of a rite of passage into adulthood was related to the responsibility associated with driving. Consequently, the processes of learning to drive along with car ownership were thought to be stepping stones towards evidence of being a responsible adult;

“Kind of having a sense of responsibility that I didn’t think we had much of at that point. You know you’re at school so you’re getting told what to do and I think I had a part time job but yeah. So it was, yeah it was just a bit of sense kind of identity or something like that” (Emily, 28, Dunedin, Full licence)

4.1.2 Peer Pressure

The participants provided evidence of peer pressure for young people to achieve their licence and enforced LTD behaviours. This motivated learning to drive for some participants as the social norms promoted this behaviour. Some participants, as evidenced below, stated that they “should” have their licence, thus creating a perceived need to LTD and this could override individual perceived needs or desires to drive.

“I felt [I should have my licence] mainly just for social reasons, like your friends all have it so I should have it too… I felt like I wasn’t as good as them if I didn’t have it” (Olivia, 21, Dunedin, Learner’s licence)

“Yeah people talked about it, about going to get their licence. It’s pretty important once you become of age. To go and get your licence, it’s just what you do” (Andrew, 21, Rural, No licence)

Social pressures also related to age, with some participants gaining their licences because they felt that they ‘should’ have their licences by a particular age or life stage.

“Well it was purely because I was like “oh my god I’m getting so old I have to get my licence”… this is getting weird now [laugh]. It wasn’t really the need to have a licence it was more just the fact that it’s kind of something you feel like you really should do and I hadn’t got round to doing it so I thought I should. No better reason than that” (Hailey, 34, Dunedin, Full licence)

Thus for Hailey, learning to drive was not motivated by a functional need to drive for a particular purpose, but rather a perception that she “should” drive which could be enforced by traditional car-centric norms and values.
4.1.3 The Role of Family

Parents, care givers and family members were perceived to provide a particularly important motivation for learning to drive. Parental support could come in the form of vocal encouragement, financial support, and parental driving lessons. Many participants noted that their primary reason for learning to drive when they did was parental encouragement. For some, parents highlighted that having a licence would be useful;

“I was just kind of going along with what my parents were suggesting and my mum was like, “You should get your licence early, it will be useful”. So you know we had cars there that were easy to access. It was easy for me to get driving lessons from my parents so yeah I got my learners really early. Got my restricted like eighteen months later and then my whole licence when I was eighteen” (Isaac, 25, Auckland, Full licence)

Reasons for parental encouragement include the reduced necessity for parental chauffeuring;

“I think I did it because everyone else was doing it and my mum was saying hurry up and drive so I don’t have to drive you everywhere” (Sophie, 30, Auckland, Learner’s licence)

The same theme was identified by Noah who went on to state that by having a licence, their parents could stop worrying about them, presumably in terms of being required to provide transport for their child.

“I think I just got it because my parents wanted me to get it so that they could get me a car and not worry about me anymore” (Noah, 21, Dunedin, Learner’s licence)

Additionally, parents appear to support learning to drive so that their child can help with household responsibilities including providing transport for younger siblings and shopping.

“My parents actually pushed me to getting on that quite quickly because I had a younger brother and they were sick of carting the both of us around so they wanted me as the oldest one to get my licence as soon as possible so I could do the carting around and take my brother places as well so that was a big advantage to them to have me learn to drive. I wasn’t too fussed on it but it meant that they encouraged me, they therefore paid for a lot of the lessons because they wanted me to do these sort of driving chores” (Tipene, 30, Auckland, Full licence)
Payment of the costs related to learning to drive was important for some participants, as cost could have otherwise proven to be a barrier to learning to drive. Many parents of those with licences appear to have paid for lessons, tests and often provided a first vehicle or vehicle access. Access to or ownership of a vehicle was important for the research participants and this was often perceived to be linked to parental support and relationships. For example, for one participant without any licence, being provided with a vehicle was seen to motivate LTD behaviours;

“One of my friends lived in South Auckland and her parents bought her a car so of course she was right into driving” (Nora, 32, Auckland, No licence)

For another participant without a licence, her parents have incentivised learning to drive by offering her a vehicle when she gets her licence:

“Yeah [parents have encouraged learning to drive]…like they said that if I have my licence, they’ll actually give me their car and they’ll get them another one” (Sara, 19, Auckland, No licence).

4.1.4 Practices, Activities and Employment

Practices including employment and employability, sports and activities, and adventures or exploring, were all perceived to encourage learning to drive. In relation to family influences, having a licence at a young age can reduce the burden on family members to provide transport, and offers more independence to young people. Some participants identified particular careers which demand driving, and therefore create a necessity to LTD;

“I really need it because I do public health and a lot of that is pretty much you need to travel and I don’t understand why I haven’t got it yet because I desperately need it. Because pretty much every job is like “you need your licence, like you need your full licence” (Sophia, 24, Dunedin, Learner’s licence)

Yet for others, while driving is not part of the job, there is still an expectation of needing to drive in order to gain employment.

“I found with applying for jobs and things because you know you have to apply for jobs online these days, and they normally had a requirement sheet about what you want, need, what they
thought you might need to get this job. And a few of them said they require you to have at least a restricted licence. I was like “Oh ok, I’ve never noticed that before”, because I thought you just turned up to work and that was what you did” (Aiden, 19, Dunedin, No licence)

In these contexts, perceived value, need and usefulness of having a driver’s licence were highly cited by the participants.

“It was just easy and it was just I guess I could see it was useful in a utilitarian sense to have” (Isaac, 25, Auckland, Full licence)

Sporting commitments were also a motivator for learning to drive and car ownership. For those who gained their licence at a younger age, participation in sports and cultural activities were a strong motivation. This either made it easier to attend competitions and training sessions, or was encouraged by parents to reduce the parental chauffeuring load.

“Basically like me and my brother did a lot of sports growing up, so travelling to and from those was necessary and it was a lot easier to travel in a car because when I was younger we used to train to all the events in the South Island and then I think the service shut down a bit, so we bussed everywhere. It is just easier having a vehicle” (Lucas, 25, Dunedin, Full licence)

“My learners I think I got when I was sixteen as soon as I could and then I didn’t get my restricted for maybe a couple of years. But it was mainly to kind of ease the burden of Mum and Dad taking me to sports practices and stuff like that. When I had my own vehicle and stuff it was just much easier for me to get places by myself” (Emily, 28, Dunedin, Full licence)

“Probably also being independent. So don’t have to rely on my parents to come and pick me up from things. I used to be a swimmer, a competitive swimmer. So I’d be able to take myself to training and things like that as well probably yeah” (Mia, 22, Dunedin, Full licence)

4.1.5 Traditions of Freedom, Independence and Autonomy

Traditional perceptions of freedom and autonomy were highlighted as key motivations for learning to drive. Freedom was perceived in terms of space from parents, freedom from public transport scheduling or reliance on other people, and freedom to travel and be spontaneous. These differed somewhat dependent on age, with younger participants and those still at home
discussing freedom from family to be most important, whereas for older participants, the lure of adventure and trips with friends was perceived to be particularly important.

“Yeah well there was a few times obviously like 13, 14 when you’re a teenager and just want to drive away. Just ditch the parents” (Tiho, 20, Rural, No licence)

Independence was perceived to be important for both younger and older generation Y, but was achieved in different ways. For example, one rural participant identified the importance of independence growing up in rural New Zealand.

“So I think I just wanted to get my licence and I wanted some freedom. It was just perceived freedom, like I was still going to school. And I was still going exactly the same way and it still took 15 minutes but I just thought by having a licence and being able to drive it was, I was more independent because being in a rural place there is big distances and it takes ages to go anywhere” (Cora, 24, Rural, Restricted licence)

Freedom or independence from relying on other people to achieve mobility needs included dependence on friends and social networks as well as family and public transport. The necessity of relying on others to achieve mobility was a motivation for licencing. Reliance on friends and family was perceived to be the only way to be able to continue with personal activities without a personal licence;

“If I didn’t have a licence? I’d have to rely on other people a lot, yeah. Otherwise no, if I couldn’t rely on anyone, I wouldn’t be able to do anything I want to do” (Ian, 18, Rural, Restricted licence)

This suggests that car-based mobility is required to be able to continue regular activities. However, dependence on other people for travel was negatively viewed by some participants. This was attributed, in some cases, to feeling ‘like a burden’, or ‘sponging off friends’ (Andrew, 21, Rural, No licence) for asking for rides from family and friends.

“Yeah I reckon it probably would make you feel I don’t know, like feel like maybe sometimes if you ask too many times for a ride or something like you’d feel like a wee bit of a burden, like you don’t want to be the annoying person that’s always asking for a ride or can’t come somewhere unless someone comes and picks them up and that sort of thing” (Mia, 22, Dunedin, Full licence)
“I would like to get my licence because it is annoying and like I feel guilty, bad and you know, it like limits my freedom to decide when I want to do things and, and all that. And like you know I would like to help them out sometimes as well” (Sophia, 24, Dunedin, Learner’s licence)

The notion of reciprocity in driving was strongly held by participants, who often wanted to be able to help out, and drive their friends when required. Moreover, reliance on friends and relatives to accomplish transport requirements was not perceived to be a long term solution to non-driving.

“People drove a lot and I felt as if well, you know, it’s actually really nice to be driven around but I probably can’t rely on this forever” (Gavin, 31, Rural, No licence)

4.1.6 Access to Alternative Transport Modes

The lack of opportunity to use public transport modes, and therefore inability to achieve mobility demands without personal car ownership and licencing was also seen to be a motivation for gaining a personal driver’s licence.

“Some of the reason for that [getting licence early] was because we lived a little bit out of town, we actually lived in Wickford at that time and so there’s a wee walk to the nearest shops, half an hour’s walk kind of thing and school was 7kms away…” (Tipene, 30, Auckland, Full licence)

Geographical issues including home location, work location and topography appear to inform LTD behaviours, particularly if one of these changes over time. For example, a new job or a new home can provide the stimulus to encourage generation Y to LTD, if there has not been a need to do so at an earlier date. However, home location did prove to be a motivation for learning to drive at a younger age for those who perceived themselves to be geographically distanced from school or social and sporting activities.

The interviews suggest little difference in this issue between urban and rural locations, with greater connection to the participant’s relative access to facilities. For example, participants from Auckland still perceived themselves to be ‘remote’ if they were not living in the urban centre. They also noted a distinction between themselves and their more urban peers, for whom access was perceived to be easier.

4.1.7 Identification
An additional reason for wanting a licence was related to identification. By 18 years old, participants commented that they would need identification to go to bars and nightclubs, and it would be a source of embarrassment if they didn’t have a driver’s licence at this point. In addition, taking a passport or 18+ Card was perceived to be inferior to having a driver’s licence in some circumstances and reinforced norms related to age and licencing (“I should have a licence by now”).

“I wanted to get like an eighteen plus card. It was sort of like I wanted to have a card, so I could do all the things eighteen year olds could do. That was the motivation and I thought that before I was eighteen I should have my learners” (Olivia, 21, Dunedin, Learner’s licence)

This relates to peer-pressure, where non-drivers are identified by using a non-drivers licence style of ID, which could be a source of embarrassment.

“There is a bit of peer pressure now though if they don’t have like a form of ID because we all want to go out clubbing together and if they don’t have one, or using a passport with a baby photo on is just kind of ‘Get your licence! Come on get your licence’” (Dominic, 19, Rural, Learner’s licence)

4.1.8 Commitments, Responsibilities and Life Stages

The responsibilities theme relates to family responsibilities, social and sporting responsibilities and dependents. Each of these sub-themes motivates licencing at various life stages. For example, those who achieved their learner’s permit early stated sporting commitments as one reason why gaining their licence was important and necessary. Family responsibilities such as caring for younger siblings or aging grandparents was another motivation for gaining a driver’s licence, with participants stating a need to contribute to the family and help out. Finally participants perceived having children as requiring a licence and the capacity to drive.

For participants who did not LTD at a young age, having time to LTD (e.g. unemployment), or a perceived future need to LTD (e.g. becoming a parent), were motivations. Change of circumstances could include a new job, moving cities, having children, buying a home or a period of unemployment. These circumstances were seen to provide an incentive or justification for achieving licensing. In particular, future family commitments; marriage and
children, was seen to provide a significant driver for learning to drive amongst older participants.

“I guess I still haven’t decided [whether to LTD], I mean there may come a point, I’ve got a few friends who are sort of in a similar situation to me and then finding out they’re pregnant has been kind of like ‘Oh I might need to drive my kids around’, it might come in handy so yeah, it’s not a ‘never’, but it’s just ‘not for now’” (Lily, 31, Dunedin, No licence)

4.1.9 Summary

- Traditional conceptualisations and realisations of freedom and autonomy are evident within generation Y, and can promote learning to drive for some people. These traditional norms perceive learning to drive as a rite of passage, and for these people, additional motivations for driving were less clear.
- The age at which an individual learns to drive can result in different motivations for driving. For example, independence can have different meanings for a 16 year old than for a 30 year old, therefore the perceived needs for a licence can differ.
- Expectations and social pressures relating to traditional LTD norms appear to continue throughout age groups and were evidenced for older participants as well.
- The functional competency of driving appears to be a highly valued skill and reciprocity of driving responsibility appears to be an important motivation for learning to drive for some people.
- Family support through access to a vehicle, lessons and finances plus moral support appear to be quite significant determinants of learning to drive.
- Key events can motivate learning to drive, particularly for older generation Y. These events could be a change in circumstances increasing the perceived need to drive such as pregnancy, a period of unemployment providing the time needed to LTD, or moving house changing the availability of alternative modes and increasing the need for a licence.
- Access to facilities is an important determinant of learning to drive, and therefore home location is key to whether generation Y LTD at a young age.
4.2 What are the Barriers to Learning to Drive for Generation Y?

There were a range of references to barriers to learning to drive arising from the interview transcripts. From these, themes and subthemes emerged which identified key factors which appear to present the clearest barriers to learning to drive for generation Y. These include; financial cost, home location, lack of necessity or incentive, apathy or laziness, lack of confidence, social group norms, lack of time and being a student. Table 5 shows all of the emergent themes and sub-themes along with a description of the theme. The most regularly occurring themes and subthemes are highlighted in red text. The themes will be used to structure the empirical evidence.

Barriers to learning to drive are those factors which appear to reject the car-centric mobility system. These factors arise from new practices, cultures, access and lifestyles.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>The cost theme relates to the range of financial barriers to learning to drive, including driving lessons, driving tests and car ownership.</td>
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<tr>
<td>Time</td>
<td>The availability of time to LTD is another key theme. This theme explores priorities, and access to lessons.</td>
<td></td>
</tr>
<tr>
<td>Students (higher education)</td>
<td>Being a student was a key theme through the research, this related to the time and attention required to LTD, and therefore links to the ‘time’ theme.</td>
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</tr>
<tr>
<td>Rules at school: boarders or foreign students</td>
<td>A sub theme related to being a student is the rules and regulations for boarders or foreign students. These rules can determine whether and when students can LTD, and have a vehicle on school property.</td>
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</tr>
<tr>
<td>Environmental impacts</td>
<td>Understandings and perceptions of the environmental impacts of driving are another theme which could be reducing LTD behaviour for generation Y. This related to the ‘wastefulness’, emissions, and pollution associated with car-based travel.</td>
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</table>
Parents and/or caregivers were discussed as barriers to learning to drive, through their behaviours, norms and values. These mostly related to chauffeuring practices, a lack of parental support and parental discouragement.

Parental Chauffeuring
Parental chauffeuring practices were identified as a particular feature discouraging LTD by reducing the need to drive and reducing the priority.

Lack of parental support
A lack of parental support, in terms of actual support through driving lessons, financial support, provision of a vehicle (either access or ownership).

Parental discouragement
Parental discouragement (rather than a lack of support), related to parental perceptions of safety.

LTD process
The very process of learning to drive was a discouragement to learning to drive for some participants, this relates to perceptions of stress, and the graduated learners scheme.

Disliking driving lessons
Issues around the driving lessons, the process of learning to drive, and driving instructors were another barrier identified by the research participants, and are included in this sub-theme.

Driving test
The driving tests for each stage of the graduated learners scheme; learners (theory test), restricted (practical test), full licence (practical test), and the perceptions of these requirements as a barrier to driving are included in this sub-theme. This includes perceived difficulty, cost and access.

Lack of information around LTD process
Information relating to learning to drive process, including stages, testing centres, costs and requirements for each test, was also identified as presenting a barrier to learning to drive by increasing the time and cognitive load required to become engaged with the LTD process.
<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical location</td>
<td>The physical location theme considers the geographic situation in which the participant grew up, and the role of the natural and built environment in supporting or rejecting LTD norms, or whether the norms existed at all in their context.</td>
</tr>
<tr>
<td>Home location</td>
<td>The location of the participant’s home appears to be a particularly relevant determinant of LTD behaviours, particularly related to access to school, shops, recreational facilities and friend’s homes.</td>
</tr>
<tr>
<td>Urban living</td>
<td>Directly related to home location but more generally focused on urban lifestyles, the role of having grown up in an urbanised environment is captured in this subtheme.</td>
</tr>
<tr>
<td>Proximity</td>
<td>Proximity to school, work, friends, and leisure activities can reduce the perceived need to drive as key daily locations can be accessed by active transport modes.</td>
</tr>
<tr>
<td>Material culture</td>
<td>The material culture theme is used to discuss the physical items that can act as a barrier to learning to drive.</td>
</tr>
<tr>
<td>Access to a vehicle</td>
<td>A vehicle in which to practice driving arose as a barrier to learning to drive for some people, due to the inability to gain the skills necessary to progress through the licensing process.</td>
</tr>
<tr>
<td>Parking concerns/</td>
<td>While not directly within the agency of the individual, concerns around parking infrastructure and time required to find car parks was identified as a barrier to driving, and therefore also a barrier to investing in learning to drive.</td>
</tr>
<tr>
<td>issues</td>
<td></td>
</tr>
<tr>
<td>Norms</td>
<td>The norms theme accounts for the expectations and aspirations related to mobility for different people in different contexts, norms are largely shared within a particular social group.</td>
</tr>
<tr>
<td>Social group norms</td>
<td>Social group norms accounts for the in-group behaviours and norms guiding learning to drive.</td>
</tr>
</tbody>
</table>
as a socially acceptable or unacceptable thing to do. These norms relate to the activities that may have substituted learning to drive.

Not wanting a car  
Norms and aspirations around car ownership were also seen to provide a barrier to learning to drive. Participants without aspirations for car ownership were less likely to want to LTD due to the lack of necessity. Moreover the time and financial investment required to get a driver’s licence was not perceived in these circumstances to be warranted.

Practices  
Practices relate to the activities that generation Y do in order to gain mobility and access people and places.

Happy using public transport  
The utility of public transport, and its perceived capacity to fulfil one’s mobility demands was identified as a barrier to learning to drive.

Happy using active transport  
Similarly, where mobility demands could be accommodated through active transport modes, and were perceived to be adequately fulfilled, a barrier to learning to drive was created. This relates to the physical location theme.

Individual  
The individual theme accounts for a wide range of intrinsic barriers to learning to drive for generation Y, whilst some may be attributable to social norms and peer behaviour, they were perceived by the participants to be individual in nature.

Lack of necessity or incentive  
A personally perceived lack of necessity, or a lack of incentive to drive, or own a car, operates as a barrier to learning to drive. Without a perceived need, there would need to be external factors motivating the individual.

Apathy/ laziness  
Apathy towards the ‘LTD’ process, car ownership and car dependency in general can result in restricting LTD behaviours, as can a perceived laziness. As a result, driving is not prioritised and can be delayed.
<table>
<thead>
<tr>
<th>Subtheme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lack of confidence</strong></td>
<td>A lack of confidence to drive was another highly cited reason for not driving. In this circumstance, if the participant does not feel able to drive they will not prioritise it, and even avoid opportunities to learn, thereby delaying the process.</td>
</tr>
<tr>
<td><strong>No reason to get a licence</strong></td>
<td>Perceptions of not needing, or not having a reason to gain a licence is linked to other sub-themes including urban living and home location. In some circumstances, if individuals cannot comprehend a clear rationale for learning to drive, it will not be prioritised.</td>
</tr>
<tr>
<td><strong>Illegal driving practices</strong></td>
<td>Illegal driving practices such as driving without a licence, or beyond the restrictions can provide another barrier to learning to drive, as the functional competency has already been achieved, thereby reducing the perceived need to undertake the formal licensing process.</td>
</tr>
<tr>
<td><strong>Lack of available practice time</strong></td>
<td>This subtheme relates to the Students (Higher Education) theme, but is broader in scope, with barriers to learning to drive relating to other activities which were prioritised over learning to drive. Thus while activities can motivate learning to drive for some, it can also provide a barrier due to time commitments.</td>
</tr>
<tr>
<td><strong>Not wanting to be a sober driver</strong></td>
<td>The necessity to be a ‘sober driver’ was identified as decreasing the attractiveness of learning to drive. Whilst a non-driver, the individuals cannot be called upon to provide this service, this might be for reciprocal agreement amongst driving friends, or as a service for family members.</td>
</tr>
<tr>
<td><strong>Lack of encouragement</strong></td>
<td>While a sub-theme related to parental encouragement exists, a wider lack of encouragement was reported which associates with peer groups and social norms, as well as intrinsic needs for extrinsic motivation to LTD. In this context, there is not sufficient desire to LTD.</td>
</tr>
</tbody>
</table>

### 4.2.1 Friends and Emergent Social Group Norms
Social group norms were seen to discourage learning to drive at a young age, with some social groups prioritising other activities and practices and therefore overriding learning to drive practices. Likewise, negative perceptions of car ownership established norms which reject car dependency and therefore disincentivise learning to drive.

“I think I was moving in different circles where a lot more of the social activity was becoming electronic and not “hey, let’s go and do burnouts on a road” (William, 34, Auckland, Full licence)

Social dynamics also resulted in some of the social group attaining a licence early and providing transport for the non-drivers. Thus while for some participants learning to drive was motivated by wanting freedom from reliance on others, other participants suggested that collaborative or shared mobility enabled by travelling with friends and sharing rides appears to reduce the necessity for car ownership, and therefore, licencing.

“Especially since I had a friend that could take me around anywhere anyway, it became less and less of a priority” (Julia, 18, Rural, Learner’s licence)

“Yeah, honestly it was just because all of my mates all got it at 15 because you could then and I had family and friends who all had a car and their licence so I didn’t really need one” (Tiho, 20, Rural, No licence)

“My friends both got them sort of as soon as they could and yeah just straight into it. That, that might also be another reason I sort of held up, because I had someone [to drive me]. It got further down the [priority] line because I had someone that could drive me places” (Caden, 18, Auckland, Full licence)

This suggests that social groups can shape priorities which may favour or reject traditional LTD behaviours. Moreover it highlights the use of shared mobility to achieve travel needs.

4.2.2 Individual Perceptions of Learning to Drive

Individual factors which contribute to non-driving include a lack of necessity or incentive, apathy around learning to drive, and a lack of confidence. The lack of need was linked to proximity to school, friends, and activities, during the teenage years. For example, Jack
describes the lack of necessity to drive through his adolescence, and how this has contributed
to not driving still at 23 years old;

“I guess originally it started because I just didn’t get one like it wasn’t a thing I needed when
my high school friends were getting it. I mean I went to Otago Boys and I lived basically ten
minutes’ walk away. Every friend I had was close to me and I wasn’t really interested in getting
a car as like a status symbol or anything like that so I just didn’t get my licence basically because
it made no sense to get my licence if I didn’t have a car. So it started like that, I just didn’t need
to get a licence. I didn’t get one at a young age. Then as I grew up, again I never really needed
a licence. We used to live… really close to town. I had no friends who were out of town and no
reason to go a long distance regularly. So I never needed it. So it almost became a habit not
having a licence, I just got used to getting places without one” (Jack, 23, Dunedin, No licence)

While a lack of perceived need to drive was one important individual deterrent to learning to
drive, there were other factors, including a lack of confidence which participants attributed to
non-driving. A fear of learning to drive contributed to some participants delaying learning to
drive, or not learning to drive at all.

“I was terrified of it. I did not want to drive a car I just thought it was a really scary thing. It
was like this coming of age that I didn’t want to happen and I just avoided it and avoided it
until I was 24. Good avoidance!” (Ella, 29, Dunedin, Learner’s licence)

Similarly, the responsibility associated with driving a vehicle was perceived to be a factor
which disincentivised learning to drive.

“I kind of just like thought it was a very large responsibility and that I was far too immature to
be like driving a tonne of metal around. I just couldn’t comprehend it for myself and I had a
lot of friends who were like learning to drive and being in the car with them was just terrifying
and it just wasn’t my thing” (Amelia, 21, Dunedin, No licence)

The lack of confidence, fear and responsibility of driving contributed to reduced prioritisation
of learning to drive for some un-licensed participants. This manifest not only through
delaying tests and licensing, but also getting lessons from family members, who were the
dominant source of lessons for most participants of this research. Consequently, participants
spoke of delays in learning to drive and slow progression through the graduated stages.
“Definitely my nervousness and my lack of prioritising it. If I’d just been like, “Hey can I drive?” There’s a bit of practice with someone in the front seat, instead of just being in the back seat not saying anything, then that probably would’ve been a big thing. That’s how my friend got her full licence so fast because she drove everywhere with her mum in the passenger’s seat; to and from school and everything like that” (Julia, 18, Rural, Learner’s licence)

4.2.3 Life Stages: Delaying Learning to Drive

Different life stages appear to have different discourses related to car ownership and learning to drive. A student period, for example, appears to be associated with low income and perceptions of a different focus. Therefore for particular stages, a vehicle and by association a driver’s licence, might not be perceived to be a high priority. This is articulated by Hailey, who delayed learning to drive until her late twenties, and explained that since she couldn’t afford a car prior to that point, she had not prioritised learning to drive.

“[Not having a licence] didn’t really bother me because I didn’t want a car at that stage of my life. I felt no need to have a car… I didn’t want a car, couldn’t afford a car and so I there was no impetus to getting my licence” (Hailey, 34, Dunedin, Full licence)

Thus Hailey provides a detailed account of the perceived need for a licence through different life stages, and how this resulted in different priorities which did not replicate car dependency. A younger participant concurred with Hailey and argued that while he did not have a current need to drive, he envisaged a scenario where this could change in the future;

“Nothing’s really stopped me from getting a licence, it’s just, I don’t know, people say I’m lazy and I think I am as well. But I just haven’t felt the need, the need to get it, the need to get a licence. So I haven’t. But I know that I’m going to have to because you know when I get a job and stuff like that, moving out of Dunedin. I’ll need to get around” (Andrew, 21, Rural, No licence)

Consequently, there appear to be some non-drivers for whom this status is related to life stage and prioritisation. For this group, it is likely that they will LTD at a later stage, once the need arises, and the opportunity to own a car presents itself.
4.2.4 Changing Needs

While some participants have delayed learning to drive, others discussed how they had intended to LTD, but changes over time had stopped this pathway. As with motivations to learning to drive, behavioural intentions associated with learning to drive were reported to change over time too, with non-driving often not a planned situation, but rather something that evolved over time with changing needs and requirements.

“I just always I assumed I would get it [a learner’s permit] and then I would learn how to drive and then I would get my restricted and then I would get my full. But somewhere along the restricted to full part I stopped caring about driving” (Cora, 24, Rural, Restricted licence)

Thus Cora ‘stopped caring about driving’ and no longer drives on her restricted licence and does not intend to progress to a full licence. Chloe also spoke of intending to LTD, but not prioritising it enough to start the process.

“I mean I kind of thought about it like ‘Oh maybe I should do something like actually go get a licence’, but I don’t know, somehow just never, never got around to it” (Chloe, 35, Dunedin, No licence)

4.2.5 Proximity and Urban Lifestyles

Living in an urban environment was perceived to be a barrier to learning to drive, however this appears to be characterised by access to facilities, closeness of friends, and access to an efficient public transport network, all of which can be achieved in relatively low density regions.

“So I lived like more in the country so like literally you had to drive like, you couldn’t get anywhere. My sister had her licence and stuff. So I got my learner’s then and I did start learning to drive but then we moved to the big smoke... So I could like walk to school and like walk around and I just like didn’t have the motivation” (Sophia, 24, Dunedin, Learner’s licence)

Similar to Jack’s earlier sentiment, Sophia didn’t perceive a need to drive once she moved from a rural to more urbanised home location.
Similarly, Sophie discusses having her mobility needs satisfied by active and public transport modes in Auckland and this therefore decreased the need to LTD and own a private vehicle.

“I didn’t feel enough need to emancipate myself to keep going with it [learning to drive], I was quite happy just living in the city and walking around, taking the bus and doing the things I needed to do so I suppose I didn’t pursue it for those reasons” (Sophie, 30, Auckland, Learner’s licence)

Moreover, perceived or expected futures can dictate whether or not learning to drive is prioritised at a young age. For example, this participant expected to be living in a large urban environment where a driver’s licence would not be required, and therefore never pursued a licence;

“I just kind of put it off and put it off and I think I had romantic notions when I was young that like, ‘Oh. I’m going to go like live in New York or something and no-one needs to drive there’…” (Lily, 31, Dunedin, No licence)

4.2.6 Further Education, Priorities and Finances

Studying factored into many other themes relating to barriers to learning to drive. Geographically, universities and polytechnics tended to be located in urban centres where car ownership and driving is often not perceived to be required or there is increased access to public transport and active transport. In terms of finances, students have less income and therefore less capacity to LTD. Time was perceived to be a factor since students are focusing on their courses and therefore have less time to study for driving tests or to take classes. Moreover, access to a vehicle was also more restricted for students who moved away from home, and therefore could not access a family vehicle.

“Coming to Dunedin, I lived so close to campus I just walked everywhere. So then I guess it just fell down the priority list because all my transport needs were already meet by either bussing or walking. That was the transition. Just other things were more important and I didn’t need to, I didn’t have to drive” (Cora, 24, Rural, Restricted licence)

Learning to drive was perceived to be a ‘distraction’ from other priorities, namely studying;
“It’s just a bit of a pain. It’s a lot of time and work just to get yourself started and it’s just when you’re at school and when you’re at college or whatever. It’s just distracting yourself from prioritising your qualifications and things” (Aiden, 19, Dunedin, No licence)

The perceived financial costs associated with learning to drive provided a barrier for some participants. Participants who raised the issue of cost took a broader view on cost not limited to the licencing process alone, but further into car ownership, insurance, petrol, registration, and Warrant of Fitness.

“I would say the cost because as well as going through the whole system and all the tests, if you fail you’ve got to do it again and then there’s having your own car and like the petrol and things which when you’re a student, can cost a bit [laughs]” (Tiho, 20, Rural, No licence)

“Just still no great incentive to [LTD] because if I get one, I’ll probably have to get a car to get one, and it’s just taking a reduction now. Less money coming in and more money going out. And if I haven’t had a car for those 8 years, I don’t need one now” (Max, 27, Rural, Restricted licence)

“I don’t like the idea of having to pay a whole bunch for a car, find parking, the hassle of it. I mean I live close to my work; I live close to everywhere I need to go. I think if I was forced into a situation where I had to drive to get to work each day or something, then I might look at it [learning to drive] but yeah” (Lily, 31, Dunedin, No licence)

“I just think that I don’t have a job that requires me to have a car and it’s expensive and you know maintaining a car and things like that it’s just something that I don’t think I’ll be able to afford on what I earn at the moment” (Aiden, 19, Dunedin, No licence)

4.2.7 Time Constraints, New Priorities and Responsibilities

Time constraints appear to limit the capacity of generation Y to LTD. This was perceived in terms of time to arrange driving lessons with family members and to prepare for tests. While participation in sporting events was identified in the previous section as motivating learning to drive for some participants, it was also raised as a barrier to learning to drive due to a lack of time to learn.
“Fitting in a time to actually get it, well like go down to this thing and actually get it because I mean cutting out of school or cutting out of lunchtime activities because I was quite involved, there was like orchestra and other sort of stuff like that” (Dominic, 19, Rural, Learner’s licence)

“You’ve got to make sure you book it [a driving test] in between assessments and stuff and I just haven’t done that yet. And sort of the money but not really the money, it’s just more finding time to do things because like we have class and then I’ve got to go my dogs for like an hour after class so it’s just finding the time to do stuff” (Ian, 18, Rural, Restricted licence)

Therefore different priorities related to social practices deterred LTD behaviours for some participants and provide evidence of the reduced priority of learning to drive.

“Most of my time I just didn’t have time to learn how to drive, it wasn’t really one of my priorities. Like I was just focusing on either school or social events or sports and whatever so I was kept busy with those and then when it came to the holidays to learn how to drive, I was just like, ‘Nah, I want to hang out with my friends’ (laughs)” (Julia, 18, Rural, Learner’s licence)

Thus with study, work and extracurricular activities, it could be argued that generation Y are overwhelmed with commitments of which learning to drive is just one.

4.2.8 Family, Parental Support and Vehicle Access

A perceived lack of parental support for driving, particularly financial support to get through the LTD process and to have vehicle access were also perceived to be barriers to learning to drive. One participant spoke of the norms around parents gifting vehicles to their children. In her family this wasn’t the case, and this was perceived to be a barrier to learning to drive.

“I always knew that if I was going to get a car, I’d have to save and buy it myself or I’d have to organise it myself so it wasn’t going to be given to me as such so I suppose that was a barrier. When I was still living at home, I only had a part time job for 10 hours a week so I wasn’t going to be able to save to buy a car from that. So I suppose I didn’t have a kick-start from home. I know that sounds a little bit spoilt but a lot of teenagers do have a second hand car given to them by a family or family member or something like that” (Sophie, 30, Auckland, Learner’s licence)
A licence was perceived by some to be unnecessary without a vehicle, which for many non-drivers for whom family did not provide vehicle access, was not a possibility;

“Like if I was to have a licence, then I would need some sort of car and like I couldn’t buy myself a car and like I wasn’t, I didn’t have a job, I had no way of like paying for petrol, registration and stuff so it would’ve just been money that I could’ve been spending on other things” (Matt, 21, Dunedin, Learner’s licence)

Participants considered the cost of car ownership to be prohibitive to LTD, without financial support of family members. The relative cost of car ownership compared to alternative modes (active and public), was perceived to be too great by one participant;

“I suppose the things putting me off going for my restricted are the money I would need to pay for the lessons… and then I’d have to buy a car. So I would rather use cheap convenient PT” (Sophie, 30, Auckland, Learner’s licence)

Not having access to a vehicle limited progress or incentives to LTD, and this was often perceived to be linked to parental encouragement. For those who left their home to attend further education, access to a vehicle was perceived to be a significant barrier to progression through the graduated learner’s scheme.

For others, it related to driving lessons, where parental encouragement might have increased the pace at which learning to drive took place, and appeared to place the responsibility on their parents;

“If they had really pushed me, like saying “Have you gone for practice today?” “Have you gone for practice today?” “Do you want to now?” Then I think I would’ve been a bit more confident in driving” (Julia, 18, Rural, Learner’s licence)

Negotiating driving lessons with a family member was perceived to be difficult in some contexts, particularly where multiple siblings were learning to drive at the same time. This was reported to lead to missed opportunities and delayed learning to drive, by which time social and family pressures had subsided and the perceived need to drive may have reduced.

“It was sort of lacking on practical side, because I have an older sister and she was getting her restricted at the time so dad was taking her out for drives and she had a car and my mum and
Parents and family members disincentivised learning to drive through actions including parental chauffeuring – contributing to perceptions of a lack of need to LTD, through a lack of parental encouragement, and through active discouragement. For example, participants spoke of not needing to LTD due to the helpfulness of their parents when they needed to go further than walking distance:

“I’m pretty happy [with not driving] like Dunedin’s not very big so it’s not really that hard to get around. I don’t really feel like I ever need for a car or anything but then quite often if I do need a ride for something like my parents are, not all the time, but quite often they’re happy to help me out. They’re really, really helpful” (Matt, 21, Dunedin, Learner’s licence)

Another participant agreed, stating that she’d chosen homes to allow walking access and would then call upon her family if longer distances were required. A combination of access to facilities and parental willingness to drive their children around appear to provide a scenario where learning to drive is not incentivised;

Participant: “I’ve always lived within walking distance of everywhere pretty much” Interviewer: “So access has never really been an issue for you?” Participant: “Yeah, yeah I think so and I always have very nice parents so if I needed to go further afield, they’d always drop me somewhere” (Lily, 31, Dunedin, No licence)

Another participant spoke of social norms within his friendship group which did not incentivise learning to drive; this was viewed to be associated with parent’s willingness to chauffer:

Interviewer: “So why do you think none of your friends learnt to drive?” Participant: “We were always really lax. We didn’t really feel like we needed to have licences. We all have parents that if need be could take us around somewhere” (Hami, 20, Rural, Learner’s licence)

4.2.9 Illegal Driving Practices and Sober Driving
Legality featured in this research, with some participants admitting to driving without licences or beyond the terms of their licence. This contributed to some issues in terms of going through the LTD process, since the participants felt they already possessed the relevant competencies;

“I felt like I didn’t need a licence because you know, I already know how to drive, I don’t need like a paper to tell me” (Dylan, 20, Auckland, No licence)

Participants on restricted licences reported driving with passengers, and this resulted in a perceived lack of need to progress through to a full licence, with their mobility needs satisfied with a restricted licence.

“I was a wee bit naughty on my restricted, when it came to passengers [laugh]” (Stella, 19, Rural, Full licence)

Benefits to non-driving were perceived by some participants to be related to the ‘sober driver’. Without their licence they were unable to provide this service for friends and family.

Interviewer: “Why didn’t you want to get your licence?” Participant: “So I didn’t have to sober-drive my mum and dad” (Lauren, 18, Rural, No licence)

4.2.10 Summary

- Learning to drive is a highly communal, family event, which appears to demand the support - moral, temporal and financial - of family members. Barriers to learning to drive appear to be associated with a lack of support and a perceived inability to negotiate the LTD process independently.
- Learning to drive appears to be a lower priority for non-driving generation Y, and competes with a wide range of other activities for time and finance, this includes social and sporting activities as well as overseas travel and education.
- Reasons for non-driving are diverse, and relate to whether non-driving is perceived to be temporary (short term), temporary (long term) or permanent.
- While some generation Y appear to be delaying learning to drive due to educational responsibilities, time commitments and reduced income, others who planned to LTD are making long term decisions not to drive due to more deep-seated values.
• The perceived necessity to LTD is reduced by proximity to school, work, friends, and access to facilities. Therefore access is more important than a crude urban-rural dichotomy in perceived driving needs.

• Remaining in education can result in reduced motivation to LTD, particularly as this often requires living in an urban centre where mobility needs can be accomplished through active transport. Moreover, reduced income during studies contributes to reduced LTD norms.

• Fear, nerves and anxiousness related to learning to drive was identified as an important barrier to driving for some people, however it is likely that this will be overcome with age and experience.

• Norms relating to illegal driving practices can reduce the perceived need to engage with the formal and legal driving process, it can reduce motivation to LTD and also to progress through the stages of the graduated learner’s scheme (i.e. staying on learner’s or restricted licence for a long time, and driving beyond the licence conditions).
5 FINDINGS: FACTORS REPLICATING OR REDUCING CAR DEPENDENCY FOR GENERATION Y

In our 2014 Journal of Transport Geographies article, we outlined a series of factors which our review of literature suggests may be shaping the replication and/or reduction in car dependency for generation Y (Table 6). In this sense, car dependency moves beyond the functional competency of learning to drive, and into considerations of car-based mobility more broadly defined. In that article we proposed that a range of individual, social, built environment, environmental concerns, economic, legal/policy, and technological factors could exist which could reinforce automobile dependence, or could move generation Y away from car-based transportation. Significantly, we suggested that some factors could both replicate and reduce car dependency dependent on specific individual contexts.

Table 6 Table of Factors That Could Reduce or Replicate Car Dependency for Generation Y

<table>
<thead>
<tr>
<th>Explanatory category</th>
<th>Reduce car dependency</th>
<th>Replicate car dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual factors</td>
<td>Freedom and autonomy; psychosocial autonomy and prestige.</td>
<td>Benefits of protection, autonomy and prestige.</td>
</tr>
<tr>
<td>Social factors</td>
<td>Willingness to use alternative transport modes.</td>
<td>Driving as a ‘rite of passage’; cars as a status symbol; the role of friends, parents and partners.</td>
</tr>
<tr>
<td>Built environment factors</td>
<td>Public and active transport infrastructure; transport alternatives.</td>
<td></td>
</tr>
<tr>
<td>Environmental concern factors</td>
<td>Rising awareness of environmental impacts associated with transport.</td>
<td></td>
</tr>
<tr>
<td>Economic factors</td>
<td>Disproportionate impacts of the global financial crisis affecting the income and employment of generation Y; increasing cost of first home purchases, learning to drive and car ownership; increasing number of young people in tertiary education.</td>
<td></td>
</tr>
</tbody>
</table>
Legal/ policy factors  
Emergence of a graduated learners scheme and theory tests increasing the difficulty and effort associated with gaining a licence.

Technological factors  
Impact of Information Communication Technologies (ICT); Internet and social networking.

Source: Hopkins & Stephenson (2014)

5.1 Factors Replicating Car Dependency for Generation Y

A system of car dependence, or ‘automobility’ implies a system which both allows the opportunity to drive, whilst also enforcing the need to drive. From the analysis of the empirical material, the validity of the claims made in the Journal of Transport Geographies (Table 6) are empirically tested. In respect to replicating car dependency, a range of references were identified; social norms and activities, internal expressions of independence, enjoyment and necessity, geographic contexts, the built environment and transport infrastructure, and employment. These factors contribute to the perpetuation of auto-dependence, a summary of the emergent themes is presented in Table 7.

Table 7 Summary Table of Factors That Replicate Car Dependency Trends for Generation Y

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>Perceptions of independence and autonomy related to car dependency contribute to the replication of car dependency, with participants associating freedom with private car ownership and travel. This was reported in the study through a perceived need to drive in order to maintain current lifestyles. Moreover, general enjoyment of car-travel, and beyond-mobility representation of car travel contribute to the replication of car dependency and the retention of its hegemonic status.</td>
</tr>
<tr>
<td>Social</td>
<td>Social factors replicating car dependency relate to the motivations to LTD, particularly family and peer encouragement, which was widely reported in this study. This contributes to norms of car dependency and link driving and car ownership with adulthood, responsibility and status.</td>
</tr>
</tbody>
</table>
Access to public transport is limited in certain geographic contexts, particularly rural regions. Therefore there can be a prevailing norm related to the replication of car dependency due to the lack of a viable alternative. In order to achieve the mobility demands of some individuals, transport infrastructure dictates the necessity to use private car travel.

Licensing and car use demands of employers, or access to rural locations for employment, can replicate car dependency. Participants provided evidence of employers demanding licencing, or employment requiring car based travel. This could, therefore, result in increased sole occupant commuter vehicles and decrease the use of active or public transport modes.

5.1.1 Individual: Expressions of Independence, Enjoyment and Necessity

Traditional conceptualisations of independence, freedom and autonomy were all identified as motivations to LTD, and likewise, these norms can also serve to replicate car dependency. For example, independence was identified as being a trait of people with vehicles and therefore was an aspiration for a learner driver.

“A lot of people always talk about how independent you feel when you’ve got a car. So I’d like to have that” (Noah, 21, Dunedin, Learner’s licence)

Freedom to travel without the scheduling constraints and at more convenient times than those of public transport were also perceived to be important factors replicating a culture of car dependency;

“It’s just the freedom of being able to travel when I can and it’s the time as well because it takes about an hour from Takanini to Britomart which is about a 30k distance. It shouldn’t take that long by public transport and I know it doesn’t in other countries. So it’s a time and safety thing.” (Scarlett, 29, Auckland, Full licence)

Enjoyment of driving was also listed as a factor contributing to increased driving behaviours, and this again moves car-dependence beyond the utilitarian meanings of functional use and towards implicit and nuanced values.
“I never really sort of wanted to like drive until I was able to, until I got my full I was like, ‘Oh this is actually quite cool, I kind of enjoy this a little bit’…” (Caden, 18, Auckland, Full licence)

Car dependency also allowed for flexibility in daily scheduling and multitasking on trips. For example, Zoe wanted to be able to drive to work, so that she would be able to do personal tasks during her lunch break and make productive use of time. These practices could serve to replicate car dependency norms, particularly where they encourage single occupant driving.

“When I’ve finished paying my student loan off I’d like to get a University car park and then I’ll be driving to work again. Just for the extra flexibility. You know I can go out and do a full load of groceries in my lunch break” (Zoe, 25, Dunedin, Full licence).

It is well established that private vehicles have a more-than-function importance to their owners in some circumstances. This was also identified in the present research, where multiple meanings were attached to vehicles which went beyond their physical practicality. This can replicate car dependency by increasing reliance and perceived need for private vehicle ownership and travel.

“Well it’s not just a mode of transport. It’s a storage area and it’s an escape vehicle. I maybe a little insane in that I’ve got an escape plan from earthquakes and tsunamis and all that stuff in our car. So all we have to do is get all of the family members you know two and four legged to the car and we’re good. So its things like that. It’s being prepared. It’s arriving somewhere and someone says “Oh anyone got a pen?” “Anyone got a headlamp? “Anyone got, you know a tarpaulin?” “Yep got that” [Laughs]” (Zoe, 25, Dunedin, Full licence)

Moreover, this can be associated with family norms. Family norms and social identity linking car travel with freedom can work to replicate car dependency. This ‘car culture’ is entrenched in norms and values that prioritise the private car over other modes, but also has deep-seated meanings beyond physical travel.

“Just being free, I guess. It’s a passion. And the other’s being brought up with cars, and different kind of cars” (Joseph, 18, Rural, Full licence)
5.1.2 Social: Norms and Activities

Perceived need to drive despite not wanting to drive can be argued to be replicating the system of car dependency. Indeed it is a particular feature of the ‘automobility paradigm’ – a system which both allows the opportunity to drive whilst also enforcing the need to drive. This perceived need to drive whilst not wanting to drive was articulated by participants. In particular, this was related to car ownership, which despite being perceived as expensive, was also thought to be a ‘necessary evil’.

“I don’t want to buy a car and I don’t want to have a car but if I have to then that’s what I’ll have to do… I think I’ve always sort of been like that in high school too, I never wanted to have a car, but I sort of felt like I had to, especially in Dunedin” (Olivia, 21, Dunedin, Learner’s licence)

The need to drive is enforced by a range of factors including employability and employer demands, and social norms. These factors are closely tied to those motivating LTD behaviours (4.5.1). The role of employment and employability is further expanded in section 5.1.3.

Social practices were perceived by some participants to be reliant on car travel. For example, Zoe argues that her car provides her with the ability to do more activities and thereby ‘gives her more of a life’, which enforces the perceived need to have a private vehicle.

“I guess it lets us do more stuff than we would be able to if we were restricted to walking or cycling or the bus. So basically it kind of gives us more of a life. That’s kind of how I would see it” (Zoe, 25, Dunedin, Full licence)

Activities can enforce car dependency by providing access to a rural or ‘out of the way’ location, for example skiing, motocross, hunting and tramping were all perceived to require car access, and without a car these activities were perceived to be harder to participate in.

“I bought my snowboard down at the start of the year and now I think it’s going to be a bit of a waste of time because I don’t have my car down here so I just took it home and I haven’t been snowboarding yet this year” (Leo, 19, Rural, Restricted licence)
While not a priority, a non-driver did identify a range of activities that he would like to do, and which demand private vehicle travel and could thereby promote norms of car dependency.

“It would be nice to road-trip through Central Otago and the South Island, over the West Coast, just adventuring. And there’s just stuff on the side of the road, like people throw stuff away. I’m a tinker, so I could take it home and pull it apart, sell it on, or firewood, or just general practical things like that. There those incentives, yeah I think it could be nice to have a vehicle and you could go and pick something up” (Max, 27, Rural, Restricted licence)

Norms relating to the enjoyment of car travel were articulated by participants, and these could be deep-seated values related to car dependency norms.

Participant: “Just driving where they’re driving, like just go for a ride because I like to go for rides” Interviewer: “Why do you like going for rides?” Participant: “I don’t know. I just like being in the car and I always liked being in the car.” (Alice, 18, Auckland, No licence)

5.1.3 Employment: Perceived Needs, Safety and Employability

As with learning to drive, employment and employability were perceived to replicate car dependency due to demands for licenced employees, and the work commute. For one participant, driving and car ownership allows him to study and work in two geographically distanced places, therefore it enables him to participate in both, and afford to study.

“I have to drive there, like from home and to Telford each weekend and stuff like that and otherwise my parents were to pick me up, and otherwise I’d be a 7 day student. I can come home and work on the farm and at my part time job at the start of the year we’re milking which was quite handy because I go up on the Friday night and milk and stuff like that through the weekend and so getting money” (Declan, 19, Rural, Full licence)

Perceived safety around using active or public transport modes also enforced a culture of car dependency for some participants, particularly those for whom working hours are not standard.

“Just because of the time and also I work quite late sometimes or I’m required to and haven’t really been able to do that so it’s a little bit difficult for me to perform my job because if I finish
late, there’s no way I’ll want to catch the train after 9pm even on a weekday in Auckland, I just don’t feel safe” (Scarlett, 29, Auckland, Full licence)

Many non-licence holders or those with a learner’s licence spoke of needing a licence to find employment. Within the participant sample, 9% are unemployed, with others working in temporary or part time positions whilst looking for permanent employment. Many of these participants considered learning to drive and car ownership to be a fundamental requirement for finding employment. For example, Olivia considers her inability to drive and associated lack of car ownership to be a major barrier to her employability;

“If I could drive] probably I would have got a job. I probably would have been able to apply for more jobs and go to more interviews, maybe if they won’t employ me that reason [not being able to drive] at the moment. I feel like the whole living out of town and the transport thing is an issue. Maybe if I had those things ticked the issues might have been different and I’d be able to work on them to get a job. I might have had a job already by now if I had a car” (Olivia, 21, Dunedin, Learner’s licence)

Thus, for Olivia, not driving was perceived to be a major barrier to employment. While she is able to access the city centre by bus, employers frequently responded negatively to this, and often required a driver’s licence for employment. As the quote above shows, Olivia perceives not driving to have limited her opportunities, but without a job she struggles financially to get a licence.

5.1.4 Built Environment: Geographic Contexts and Transport Infrastructure

The built environment and transport infrastructure including provision of public transport were perceived to be significant in replicating car dependency. Perceptions of the frequency and effectiveness of bus or train transport as a viable alternative to private car transport indicated that cost and infrequency reinforced auto-dominance for some people, particularly as it relates to work commuting. In Dunedin in particular, there were quite diverse perspectives on the availability of parking. Participants driving to the city centre were generally happy with parking provisions and perceived Dunedin to be a ‘car city’ whereas those who drove closer to the hospital or University tended to express negative perceptions on parking availability and frustration with car travel.
Living in rural regions, be that more rural areas around Auckland and Dunedin, or rural New Zealand, was seen to enhance car dependency and replicate the associated needs for car-based travel. This is related to a lack of alternative transport modes, and reliance on parents or family members. Moreover, with age, social events gradually move away from the home or school environment thereby increasing car dependency to participate.

“It was the only way that I could kind of get out and have my own social life and the freedom of that because being stuck in the countryside, I was reliant on my parents and picking me up and dropping me off places if I wanted without having my own car” (Tipene, 30, Auckland, Full licence)

This was replicated by rural participants, for whom employment, especially farm-based work, demanded private transport and would therefore replicate a culture of car dependency;

“Being so rural it’s kind of hard. I don’t know whether you come up with a bus system or something but if there was something like that I’d probably take it. It’s kind of hard being quite out there [rural] and in the future I’d probably most likely be up the high country somewhere so travelling by myself in a vehicle is probably the only way to go really” (Stella, 19, Rural, Full licence)

5.1.5 Summary

- Traditional conceptualisation and norms relating independence and freedom with private car travel were evident in this research and replicate car dependence for generation Y.
- Perceptions of the necessity of private car travel to facilitate lifestyles and provide access to places and opportunities, and a perceived reduction in the quality of this lifestyle without a private vehicle both replicate car dependency norms for generation Y and contribute to the perceived need to drive and own a car.
- Emotional attachment to the car beyond the functional purpose of travel was identified by this research, and identifies entrenched and embedded norm which replicate car dependence through intrinsic values and self-identity.
5.2 Factors Reducing Car Dependency for Generation Y

While traditional norms and values might be replicating car dependency for generation Y, this research also found a wide range of factors which are reducing car dependency preferences for generation Y, including; changes to financial priorities, new sources of freedom and independence, home locations and lifestyles, and environmental concerns. A summary of the emergent themes is presented in Table 8.

Table 8 Summary Table of Factors That Reduce the Car Dependency Trend for Generation Y

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>The economy theme accounts for a range of financial and economic issues which reduce the capacity of generation Y to participate in car dependency. This theme relates to rising house prices, changing economic priorities, and perceptions of alternative modes (public or active transport) as being more financially appealing.</td>
</tr>
<tr>
<td>Individual</td>
<td>Individual factors related to identity and sources of freedom, independence and autonomy are all related to reduce car dependency for generation Y. Freedom from the financial constraints of car ownership, uncertainty related to parking, and perceived autonomy gained by using an efficient public transport system, or self-reliance of active transport all contribute to perceptions of alternative mobilities, often multi-modal.</td>
</tr>
<tr>
<td>Social</td>
<td>Social themes relate to parental chauffeuring behaviours, social norms of environmental concern or particular mobility practices, and social influences. If parental and social norms are not encouraging car dependency, alternative mobilities can become the norm, which may in turn contribute to long term disssention from car dependency.</td>
</tr>
<tr>
<td>Environmental</td>
<td>Environmental concern and awareness of transport’s impact on the natural environment are additional factors which could reduce car dependency. Perceptions of car-travel as wasteful, resource dependent, and carbon emission heavy can contribute to norms rejecting car dependency in favour of more environmentally sustainable transport modes.</td>
</tr>
<tr>
<td>Build environment &amp; infrastructure</td>
<td>Access to and availability of alternative transport modes can also result in reduced car dependency norms. For some participants, living close to transport hubs was a key priority and barriers to using active and public transport related to access to quality infrastructure. This was particularly relevant for walking and cycling, where the built environment and perceptions of safety could prevent uptake.</td>
</tr>
<tr>
<td>Overseas travel</td>
<td>Norms relating to overseas travel emerged as a theme which could reduce car dependency due to new priorities and interests which might reduce the incentive for car ownership. Investment in material goods may be less appealing for some generation Y, particularly those who desire overseas travel and experiences. For these people, norms of dematerialisation might be prevalent, as are cost-saving behaviours.</td>
</tr>
<tr>
<td>Education</td>
<td>The role of higher education, and continued education in reducing car dependency relates to the geographic location of the educational establishment – frequently in urban regions, as well as priorities and financial capabilities. For the research participants, education appears to be prioritised over learning to drive, and if higher education is undertaken away from home, access to a vehicle to learn, or costs associated with owning a vehicle contribute to the uptake of active or public transport modes.</td>
</tr>
<tr>
<td>ICT &amp; travel substitution</td>
<td>ICT appears to be of significant importance to most of the research participants, further details are presented in section 6. ICT can reduce trips for some purposes, with food and clothes shopping facilitated in some circumstances by the Internet, thus reducing the perceived need to use or own a car. There was little evidence of other types of substitution, such as reduced visitation of friends. The research participants still appear to require face to face meetings, using ICT to facilitate planning and organisation.</td>
</tr>
<tr>
<td>Attractiveness of alternative modes</td>
<td>Perceived attractiveness of public and active transport modes appears to be relevant to the reduction in car dependency. If mobility demands can be accomplished through these modes, in a satisfactory way, then the perceived need to drive is reduced. Therefore access to</td>
</tr>
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active and public transport infrastructure is of high importance to ensure mobility requirements are met. For some participants, home locations will be determined by public transport routes, or the capacity to use active transport to access work, study or recreational locations. Thus some of generation Y will be more active in their desire to reduce car dependency, whereas others will passively reject car dependency due to a specific set of circumstances.

| Temporality | Non-driver status is not a homogenous group of individuals, rather there are intricate sub-groups with very different motivations. There is a conspicuous temporal disparity between these groups. For some, non-driving is a permanent life feature and a conscious decision. For others, whilst still being a conscious decision, it is a more transient life stage, which may pass. Another group is less clearly identified as non-drivers, with a subconscious decision not to drive and this non-decision could result in rapidly changing mobility practices based on current circumstances, or could become permanent. |

5.2.1 Economy: Financial Costs and New Priorities

The financial costs associated with private car ownership were broadly understood by research participants and this often disincentivised car ownership for those with a licence as well as disincentivising learning to drive for those yet to do so. Prioritising alternative futures, including overseas travel relates to this theme, and was identified by some participants, including Emma, as a reason for not owning a vehicle. This contributes to a reduced focus on car dependency;

“My car was a very old Honda and basically just stopped getting a warrant, it couldn’t get a warrant. So I took it, sold it for scrap and then decided not to use my savings on getting a new car because I’m trying to save.” Interviewer: “What are you trying to save for?” Interviewee: “Travel. I figured let’s try living without a car because it does take up a lot of money and yeah it’s been going fine and I’m saving more” (Emma, 22, Dunedin, Full licence)

Therefore a range of priorities and needs, which may differ from traditional priorities, could result in a reassessment of mobility needs and practices. The unpredictability of costs associated with car ownership was perceived to be a barrier to car ownership, particularly for
those either saving to travel, to buy a home, or for another purpose. Priorities of homeownership and the increasing cost of first-time buyer homes and mortgage deposits have contributed to reduced car ownership for some people;

“Some of the reason I sold the car is because it meant that I could then afford to buy a house so that’s something I couldn’t have afforded with a car. Just even wiping out insurance and things like that from the car means I’ve got a lot more money than, well more than my friends with cars” (Tipene, 30, Auckland, Full licence)

Negative perceptions relating to car ownership were reported with non-drivers commenting that drivers are often not positive about car ownership due to the high associated costs;

“I mean lots of my friends don’t have cars and the ones that do like their cars just cost them a lot of money. So no-one I know is really very positive about driving because it’s just like a big pain in the arse really” (Amelia, 21, Dunedin, No licence)

The negative discourses relating to car ownership, led participants without a car or licence to express feelings of freedom from escalating car-related costs. Participants including Max discussed the variability of costs from which he is removed;

“Everyone at work is whingeing about their WOFs are due, and registration, and fuel going up. I pass the fuel station every day and I see it go up and down, and when it goes up considerably, I know there’s going to be a lot of whingeing that night. It just doesn’t affect me” (Max, 27, Rural, Restricted licence)

Non-driver or non-car owner status had a range of additional money saving benefits which were identified by the research participants, and these savings go beyond the car ownership costs, but also include the activities undertaken with a car. For example, money was also perceived to be saved by reduced spontaneity, local travel and discretionary spending.

“The fact that I don’t have a car means I’m not doing spontaneous trips to little places, meaning that I can save more money. So if I didn’t have savings goals then it would be annoying that I can’t go out to the Peninsula, go to the beach to go for a swim or something just whatever I want to do immediately. So right now it’s actually working out really well because it’s cheap [Laughs]. That’s what I’m looking for” (Emma, 22, Dunedin, Full licence)
5.2.2 Individual: New Meanings of Freedom and Autonomy

While traditional notions of freedom, flexibility and autonomy all appear to be of significant importance to the participants as encouragement to LTD, it was also argued that independence can be gained without a private vehicle if the public transport network is regular and efficient. For example, Nora argues that independence is being able to go ‘wherever you want, whenever you want’, and this can be achieved without car ownership.

“Well you could have independence by living somewhere with decent public transport so you’re not tied to a very sparse timetable, you can pretty much plan on being able to go where you want to go when you want to go” (Nora, 32, Auckland, No licence).

Another participant, Caden, developed this thought by stating that the car is not the only way to be free and move around an urban space, and that improvements in public transport were making this more evident.

“I think being more urbanised and because public transport and stuff is improving like even though it’s still got a long way to go, I think we don’t necessarily associate the car with freedom anymore, like it’s not the only way to get free and move around” (Caden, 18, Auckland, Full licence)

Moreover, Michael argued that there is freedom in not needing to have a car, supporting the comment from Max (p.60), who noted freedom associated with not being tied to car related costs. Michael asserts that freedom in the 21st Century is not being tied to one transport mode, but having access to a range of modes and choosing the most suitable mode for the trip purpose.

“I think that there’s a lot of freedom in not needing to have to drive a car. Like there was an idea since the 50s that to be free and to be an individual you needed to drive a car. But for me, living in the 21st century, freedom is actually being able to catch public transport anywhere or being able to cycle anywhere and not being bound by one transport mode. So I mean driving at the moment is convenient if I’ve got a lot of stuff or if I need to pick up friends or something but in terms of getting places, I would prefer to take other transport or cycle or walk” (Michael, 18, Auckland, Learner’s licence)
5.2.3 Social: Shared Mobility

Shared mobility appears to be an important factor reducing car dependency norms for generation Y, and this has been evidenced through the barriers to learning to drive, with participants discussing the use of social networks, families and colleagues to achieve their mobility goals, rather than relying on independent automobile travel. While this approach does still utilise a motor vehicle in some circumstances, it reduces the propensity for sole user vehicles, particularly in commuting. This could provide evidence of a transition towards sharing and collaborative consumption. For example, parental chauffeuring appears to reduce not only the desire to LTD, but also the desire to drive with a licence. Many participants spoke of relying on parents to help with journeys to study, work or socialise; many of whom no longer live with their families.

Participant: “Monday to Friday going to work my parents go back and forth. They work at the University and I work on the one way street down near Spotlight. So most days get a ride with them, I mean they’re going to work, I’m going to work, go with them.” Interviewer: “And do you naturally leave around the same time?” Participant: “Well, I kind of just leave when they leave. Like my hours are pretty flexible so just go when they go. There’d be like a five minute inconvenience at most” (Jack, 23, Dunedin, No licence)

Participants without a car or driver’s licence did, however, speak of using a range of connections to move through their urban and rural locations.

5.2.4 Built Environment: Home Location, Infrastructure and the Transport System

The built environment and home location appear to have a significant impact on car dependency, and the perceived need to drive and own a vehicle. Participants were able to reflect on their social groups, and individuals who might not need a car or have reliance on the system of car dependency due to the close proximity of their home to work, study and social locations.

“A couple of my friends don’t have licences. That’s probably more their personality and they don’t see themselves having a car. They’re sort of like how I was, you sort of want to think that you can travel everywhere on a bus or the train. But some of them live very close to the
Nevertheless, the use of private vehicles was perceived to be determined by the local built environment and transport infrastructure provision. It was argued that this therefore enforced the hegemonic position of car dependency, with resultant negative impacts on neighbourhoods.

“This is my theory. Having a car has sort of broken down that close community, like the local butcher and the local dairy and local everything. Being able to get outside of the local area has broken that down and also broken down the interpersonal relationships that come with it. I don’t think we are, like the person that knows the neighbour and person beside them too. I don’t. I occasionally say “hi” to my neighbour but not all the time” (Caden, 18, Auckland, Full licence)

Reduced car dependency could also be the result of a failing car dependency system; this was articulated by a participant in Auckland who argued that the perception and the reality of car transport are not aligned. Saturated road transport infrastructure contributes to a less appealing transport reality and a need to explore alternative transport modes.

“I think I’m just kind of sick of cars in general, like even though I had quite a nice car, it’s just that the idea of driving… I think driving a car is like a broken promise to a car advertisement that you know, ‘It’s going to be super sweet and easy’ and instead all you’re doing is paying lots of money to sit in traffic and get really annoyed” (William, 34, Auckland, Full licence)

One clear example of a crack in the car dependency system related to parking, due to the stress associated with locating a parking space. While this stopped some from driving and enticed alternative modes, other participants responded by paying for reserved parking;

“I think the main thing with it is the uncertainty, like if I had a university park which I do intend to get at some point in the future it would be fine, because you could come down and you would know that that certain park is free. I was coming down the one way to drive down Dundas Street looking for a park. I would drive along Castle Street looking for a park. If there were no parks I’d go up Howe Street and go round the block again and it’s that hassle and that stress” (Zoe, 25, Dunedin, Full licence)
Nevertheless, changes to work parking provisions led one participant to start cycle-commuting, and eventually to the sale of his car;

“It [starting cycling] was almost by accident; when I got a job that parking wasn’t free it made me think what other methods I could do to actually get to work without paying all the parking permits. Cycling racks were freely available so I gave it a try and ended up only driving to work a couple of days a week and it’s slowly kind of gradually crept up on that. Then eventually I sold my car because I was finding I was only using it once a fortnight or so” (Tipene, 30, Auckland, Full licence)

This could provide evidence of the importance of mobility infrastructure, particularly free parking and cycle racks, in determining commuter modal choice.

While transport infrastructure was reported to be important for the replication or reduction of car dependency, this study also found that non-drivers were strategic in designing lifestyles and living in areas that could still provide mobility access. Therefore the necessity to live somewhere with good transport connections was identified as particularly important for non-drivers and non-car owners. Through this process, the need to drive was also diminished, reducing car dependency norms.

“It’s a different lifestyle. You have to choose. There are sacrifices you have to make. You have to choose. Particularly if you don’t want to make huge mobility sacrifices, you have to live in an area where there’s good alternative transport mode access” (Isaac, 25, Auckland, Full licence)

“I’ve just kind of shaped it so that I live in places in Dunedin that are close to everything so I don’t need to drive” (Lily, 31, Dunedin, No licence)

5.2.5 Environment: Concerns and Awareness

Environmental concerns and impacts from driving were acknowledged and factored into driving intentions for some participants. Environmental awareness was often coupled with other factors such as cost, time and a lack of necessity. Driving and car ownership was perceived to be “wasteful” and “environmentally unfriendly” but this was mostly associated with the way in which the car was used, thus human misappropriation – commuting – one
person per vehicle – short, local journeys – were all identified as unnecessary and therefore detracting from the image of car based travel. While environmental concerns and the environmental sustainability of car dependency were discussed by some participants, it did not appear to be a main factor contributing to modal choice. Nevertheless, when combined with other conditions, such as a new home location with public transport accessibility, the ability to make an environmentally sustainable transport choice was preferred;

“I like not owning a car. I basically intend to never own a car if I can avoid it.” Interviewer: “So what do you like about not owning a car?” Participant: “Well, I like that I don’t have to worry about its ongoing costs and it seems like the environmental impact is high and if I can avoid it then I should” (Liam, 20, Dunedin, Learner’s licence)

The participants also critiqued the way vehicles were used, questioning behaviour as opposed to vehicles;

“Ideally I would want to be able to get to everywhere I wanted to by public transport, just because it’s kind of stupid just for me to have a car that I just use by myself [Laughs].” Interviewer: “So why do you think it’s stupid?” Participant: “I don’t know, one person in a car, using heaps of petrol.” (Emma, 22, Dunedin, Full licence)

Another participant reiterated the sole car occupant norms and argued that while for some it might be entrenched, it might be easy for others to modify this behaviour

“Apart from the fact that driving is stressful and environmentally unfriendly, …there’s just no need for all those people to be driving themselves, one person per car to work every day I think it’s such an easy, well I mean it’s not an easy thing to change for lots of people, but it’s an easy thing for me to do so I should keep in living that way” (Ella, 29, Dunedin, Learner’s licence)

The preference for more sustainable modes of transport was highlighted.

“While I was living in [Auckland Suburb] I had started riding a bike into work a few times a week and stuff and then I moved back into the city again. I was like no I want to get rid of the car because I don’t like polluting and you know I don’t want to have to pay for parking in the city. I prefer to use this more sustainable mode of transport if I can” (Isaac, 25, Auckland, Full licence)
For participants relying on active transport modes and living in close proximity to their usual destinations, driving a vehicle was perceived to be ‘overkill’ and “making easy, easier”.

“Well basically, the way I see transport now I can easily get anywhere I want to go. And getting a car would make that easier but it’s basically, it’s making easy easier. It would be pointless, you know? It would be like ‘Oh instead of walking for fifteen minutes I can drive for two… I’ll get in a massive hunk of metal and burn petrol while I drive down the hill and have to find a parking space’. It seems like overkill maybe? Yeah, that would be a way to describe it” (Jack, 23, Dunedin, No licence)

Whilst acknowledging the environmental impacts of car travel, participants also highlighted the attractiveness of the other transport modes;

“Obviously driving is carbon emission heavy and if it is actually a short distance, you don’t need to drive. And the bus is super convenient and you don’t have to worry about parking and stuff, you just get off the bus and walk to your class” (Cora, 24, Rural, Restricted licence)

Moreover, perceptions of public transport modes were also important in terms of disincentivising learning to drive. If mobility demands are satisfied through active or public transport modes, and perceptions of these modes are favourable, there appears to be less requirement to LTD, and therefore unless there is another motivation (such as parental encouragement, social norms etc.) then these generation Y participants are less likely to gain their driver’s licence.

“Yeah maybe if like I was moving to a place where public transport was very good, and cheap and I probably would, it would less, less important to me about getting a car” (Andrew, 21, Rural, No licence)

Some participants saw the benefits of private car-based travel, but were also aware of the related carbon emissions. Consequently, some had considered the potential of electric vehicles as a solution. They argued that an electric vehicle could answer the same private mobility demands with a lower carbon footprint.

“You can see how people would have cars. I think maybe something like a car, maybe electric, or something you know. Something where it wasn’t emitting as badly as other things or something that you know is more sustainable” (Gavin, 31, Rural, No licence)
5.2.6 Temporality

From this study, non-driver status and the reduction of car dependency norms was found to be a temporary or permanent decision, or indecision. Therefore not all non-drivers intend for it to be a long term status, but rather something that suits their current context. For others, however, non-driving is imbedded in their values, and a non-negotiable, long term decision. Moreover, it could also be interrelated with other life decisions, such as overseas travel;

“I would definitely own a car if I was staying. I’m not anti-car. It’s almost an experiment I suppose. I wanted to see if I could survive in Auckland without a car, one of the most car dominated cities in the world. And of course, cars depreciate so much in value I didn’t really want to buy one and have to sell it a year later for a lower price. So yeah a lot of my decisions have been revolving around that [travel] definitely” (Oliver, 22, Auckland, Full licence)

5.2.7 Summary

- Factors reducing car dependency include a modern reading of independence, freedom and autonomy. Generation Y appears to value freedom from car-related costs, which are perceived to be erratic and escalating, over the traditional notions of freedom associated with car-based travel.

- The financial costs of car-based travel appear to be reducing car dependency due to changing priorities and new realities. The rising price of first time homes, and large deposits required for mortgages are forcing some generation Y to reconsider expenditures. There is increasing awareness of car-related costs, and relative costs compared to alternative modes. Moreover, international travel is a priority for some generation Y, resulting in less car dependency and increased uptake of alternative modes.

- Norms relating to shared mobility and collaboration emerged from this research and fit within the new sharing economy and collaborative consumption. Generation Y are using social networks to achieve mobility needs collaboratively, thus reducing the dependence on a private vehicle.

- Awareness of the environmental impacts of transport modes appears to be motivating alternative ways of travelling. Generation Y appears to discern between types of car-travel, identifying the wastefulness of sole occupier commuting. Preferences for sustainable transport modes were found with some generation Y.
Norms reducing car-dependence for generation Y may be temporary and related to a specific goal, such as home ownership or overseas travel, or can be long term due to values including environmental consciousness.
6 FINDINGS: THE USE OF ICT AND TRAVEL SUBSTITUTION

Previous research on the phenomenon of changing generation Y mobilities has highlighted the potential role of information communication technology (ICT) to substitute for travel for this ‘digital native’ generation, as well as supporting public transport use. In this research, notions of ‘travel substitution’ and ‘virtual mobilities’ are used to explore how ICT might be used by generation Y with potential implications for physical mobility practices. It should be noted that participants did not explicitly use ICT to explain non-driving practices, and were not prompted in that context. However, there was a specific line of questioning within the interview about ICT and Internet use, the findings of which are presented in this section.

6.1 The Role of Information Communication Technologies for Generation Y

6.1.1 Using the Internet

The participants were asked how important the Internet is to their lives. The majority of participants indicated high importance and strong values attached to the Internet as a means to achieve social and work responsibilities. For example, Sophia argued that mobile Internet was linked to convenience of direct contact, anytime anywhere.

“I guess like really important. You can’t imagine a world without now. It’s just like a part of everything. The convenience of life you know having your phone. You know when you run out of data and it’s just like the worst thing ever and you can’t check your emails and because I was going to email to be like, “oh I’m running late” and like I couldn’t do that…” (Sophia, 24, Dunedin, Learner’s licence)

Selina stated that the Internet is a critical component of her lifestyle aiding educational and social aspects.

“I think the Internet is really important, I rely on my laptop a lot yeah having that Internet, I use it every single day, it’s a big part of education and socialising, accessing information as well, I think it’s really crucial to what I do and how I live my life” (Selina, 21, Auckland, No licence)
However, not all perceptions of Internet use were positive. Lucas finds his heavy reliance on the Internet to be both good and bad, and identified procrastination as a particularly wasteful side of Internet usage.

“Very probably too important, unfortunately. I rely on them heavily; to do my job, to procrastinate. Good and bad” (Lucas, 25, Dunedin, Full licence)

There appears to be a relationship between the geographical distances of an individual’s social network and Internet use. For participants with a geographically dispersed social network, the Internet appears to be of greater importance. For those with friends and family closely situated, the Internet was reported to be less significant, as other technologies including text messages and phone calls are be used in that context.

“A lot of the time it isn’t too important for me to have any Wi-Fi or mobile data to keep in touch with people because a lot of the people that I try to keep in touch with I would just see at work anyway or at home and I can text people if I have to” (Noah, 21, Dunedin, Learner’s licence)

“The ability to basically talk to anyone I want at any time on the Internet no matter where they are with no problems at no cost other than an Internet connection. Definitely I see as very important. Yeah my life would be very, very, very different if I couldn’t you know like internationally communicate with people. I’d have a different friend set or I might not have gone overseas. I mean everything about me would be completely different” (Jack, 23, Dunedin, No licence)

6.1.2 Virtual Mobilities: Travel Substitution

Participants were asked whether they could see a time when they would choose to speak with friends over the Internet rather than to see them in person. This line of questioning relates to the proposition that generation Y communicate more readily via ICT and this is thereby reducing their reliance on car dependency. While many participants described a very important place for ICT communication, they still often preferred face-to-face contact, and saw distinct roles for conversations via the Internet, and those conducted face to face.
Nora, for example, stated that the Internet might reduce the frequency with which she visits her friends, but could not replace physical contact entirely. This is due to the importance of activities collectively enjoyed, which cannot be replicated virtually.

“I could see seeing people physically less often but I couldn’t see giving it up altogether. It’s just nicer, you give people hugs and group conversations are better in person. And relaxing together in front of a movie is a lot more fun to do in person than both on your separate laptops” (Nora, 32, Auckland, No licence)

Virtual communications do not provide a complete emotional connection in the same way a physical communication can, and therefore it is perceived to be a less satisfactory way to communicate.

“You can’t see someone’s emotions and read their face and stuff like that. You get a slimmed down portrayal of someone’s life when you’re reading online and they’ll tell you what they want you to hear whereas in person you can actually see people and understand them better I find” (Tipene, 30, Auckland, Full licence)

Scenarios where ICT is particularly useful includes during busy periods of work or study demands. However, rather than travel substitution, this action is additional communication, likely to substitute telephone calls rather than physical mobility.

“I find that I talk to people over the Internet a lot more when I’m busy working or study just because I don’t really have that social time to meet them or spend time. My best friend works a lot and is quite busy at law school so I talk to her over Facebook and over the Internet a lot just because it’s like a really easy way to catch up” (Selina, 21, Auckland, No licence)

Another participant identified the value of text based conversations for people who might find face to face communications difficult.

“I’m one of those people that sort of takes ages to sort of formulate what they’re thinking, try to find the right words. I’m a lot more articulate when I can write stuff out and look at it. Basically I think I can communicate a lot more clearly that way. It’s a good thing for me” (Lucy, 26, Auckland, Restricted licence)
The replacement of physical social life with virtual communications and mobilities was trialled by one participant. He reported that it was a less fulfilling type of communication and reverted back to physical communications facilitated by the Internet.

“I did try that [only virtual communications] for a while kind of I guess because Facebook is very good at having that all-encompassing ‘Here’s the news feed and here’s everything in your life’. And I actually found that I wasn’t enjoying that as much as face meeting. So effectively, yes I can imagine doing it because I’ve been there and then realised after a while that I wasn’t enjoying it as much as the actual in-person social aspects. So I cut down on the reading of status updates and things like that on social media and moved towards organising in-person events and enjoying time with people in person and catching up like that” (Tipene, 30, Auckland, Full licence)

Social networking via the Internet was seen to be an important facilitation tool. In particular, Facebook is perceived to be a useful way to organise social events.

“They [ICT] are really important for the organisational side of things. Like Facebook these days has have made it much easier to organise events with people. Especially with the friends I met over in the UK, the Internet has made it very easy to keep in touch with them whereas without the Internet, that would actually be very hard I think especially with the time difference, calling them is almost impossible” (Tipene, 30, Auckland, Full licence)

Therefore there was a general trend of preferring physical meetings, whilst using ICT to facilitate and support traditional friendships. Thus the Internet was perceived to be valuable for different types of communication but was generally thought to be unable to replicate a ‘real’ environment.

“I’m kind of still a traditionalist in the way that I prefer like actual conversations for catching up with friends, I’ll use things like Facebook and texting to organise to meet up with people or to Skype them but I won’t like have a deep and meaningful conversation via text or via Facebook because there are still the subtleties that you can’t get across and typing is slower than speaking and there’s still barriers to communication in those things so yeah they’re kind of, for me they are incredibly important in my life but still a means to an end (Michael, 18, Auckland, Learner’s licence)
Human connection was identified as critically important, and missing from Internet-based communications.

“I guess human connection thing, I mean as good as the Internet is for keeping in touch and being able to do those practical things, it probably can’t replace the interaction that you get when you see someone in person I think it’s definitely nicer to see someone in person. I have some friends that are overseas so I would rather see them in person than talk to them by Skype if I had the choice” (Scarlett, 29, Auckland, Full licence)

Indeed, participants recognised that the non-verbal communications which are a central feature of physical interactions could not be reproduced in an online communication.

“Speaking face to face I prefer to see the other person’s physical reaction and I take a lot of the visual cues to communicate. I’m also quite a touchy feely type of a person so I prefer to go out and hug and cuddle and snuggle up even if it’s just a friendship-type of relationship. That’s something that I find lacking in a virtual setting. When I do things like Skype or seeing someone ‘face to face’ via virtual setting I still really chat and touch my screen” (Mila, 27, Auckland, Learner’s licence)

6.1.3 Summary

- While this research has found, unsurprisingly, that the Internet is important for generation Y, and used in a variety of different ways, the notion of substituting physical mobility by virtual communications was not well supported by the participants.
- Generation Y appear to be conscious of issues related to Internet use and communication, and articulated a number of important features of face to face communications including, activities, facial expressions and body language, and depth of communication, which could not be replicated virtually.
- The Internet is integral to communication, used for daily short communications, staying in touch with more geographically distanced friends and for facilitating physical mobilities and social events.
7 FINDINGS: MODAL CHOICE AND PERCEPTIONS OF TRANSPORT MODES

Participants were asked to consider a range of dominant transport modes; car, bike, walking, bus, train, and taxi, to suggest the type of person who might use that mode as their main form of transport and to give their perceptions of each mode as a way to travel. Participants were also asked to discuss the ways through which they make modal choice decisions, and the factors they take into account when deciding how to travel. These findings illuminate current perspectives on different modes, and whether participants identify with particular modes, which could determine usage.

7.1 Modal Choice and Perceptions of Transport Modes

7.1.1 Factors Determining Modal Choice

A range of factors were identified as determining modal choice for the research participants. Initially, it appears that perceived transport mode options and actual modal choice options are not necessarily alike. This could be the result of imperceptible barriers to particular modes, such as a lack of information. Nevertheless, the perceived transport mode options are those that could be utilised by the individual. Wide ranging considerations may then affect how modal choice is determined. Figure 8 outlines the range of considerations which emerged from the present research.
<table>
<thead>
<tr>
<th>Actual options</th>
<th>Perceived options</th>
<th>Considerations</th>
<th>Modal choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving own car</td>
<td>Driving own car</td>
<td>Social norms</td>
<td>Driving own car</td>
</tr>
<tr>
<td>Ride from friend</td>
<td></td>
<td>Cultural norms</td>
<td>Ride from friend</td>
</tr>
<tr>
<td>Taxi</td>
<td></td>
<td>Individual preferences</td>
<td>Taxi</td>
</tr>
<tr>
<td>Bus</td>
<td></td>
<td>Weather</td>
<td>Bus</td>
</tr>
<tr>
<td>Multi-modal</td>
<td></td>
<td>Environmental concern and relative carbon emissions</td>
<td>Multi-modal</td>
</tr>
<tr>
<td>Cycling</td>
<td></td>
<td>Purpose of trip, for example:</td>
<td>Cycling</td>
</tr>
<tr>
<td>Walking</td>
<td>Walking</td>
<td>Perceptions of health/exercise</td>
<td>Walking</td>
</tr>
<tr>
<td>Not travel (travel substitute)</td>
<td></td>
<td>Destination, for example:</td>
<td>Not travel (travel substitution)</td>
</tr>
<tr>
<td>Delay travel</td>
<td>Facilities at destination</td>
<td></td>
<td>Delay travel</td>
</tr>
</tbody>
</table>

**LOCATION A**

**LOCATION B**
Cora identified environmental concerns that can contribute to modal choice decisions. Therefore by considering the carbon emissions of a particular transport mode, she feels able to make the most environmentally sustainable decision to achieve her mobility goals. She highlights the complexity for longer-distance, intercity travel. However, the relative emissions of the available modes are still used to make the modal choice decision.

“It takes so much energy to move a car somewhere and it just seems excessive. I think cycling and walking is exactly what I need. It gives me what I need and as much energy as I need to get to a place. Definitely that is something I think about all the time, ‘how many carbon emissions will my travel incur?’ Like going on a bus to like Christchurch, I think, ‘Oh is this best’. It is obviously better than flying and then there is no other options because trains are not electrified or anything” (Cora, 24, Rural, Restricted licence)

Cultural norms are a significant determinant of modal choice, however these norms are place embedded and do not appear to reflect the mobility practices of foreign-born New Zealand residents within New Zealand. It was acknowledged that for family and friends in their home country, their current mobilites may be perceived to be unusual.

“They will find it weird that I didn’t drive, just because everybody does, you kind of have to and also I think maybe culturally like if you take public transport, only poor people do that, you know like if you can afford a car [laughs] and you take public transport, like there is that kind of perception” (Chloe, 35, Dunedin, No licence)

A non-driving participant identified the need for people without a vehicle to be more creative in considering their modal choice. This, he perceived, to be different to car drivers, for whom using their vehicle was the default choice, which prevented them from considering the full range of modes available to them to achieve their mobility needs.

“If you don’t have a vehicle and you want to get somewhere you have to consider the other options… For the most part if you don’t have a car, you’ll kind of think like “what is the best way to get here?” And often the best way is very easy and it could be like walking, taking the bus or a friend is going. Whereas if you have a car I feel, I don’t know if I can say this with extreme confidence since I don’t have a car, so I don’t know how people with a car think, but I
feel like people have a car don’t even consider, they just get in the car and go there” (Jack, 23, Dunedin, No licence)

Thus modal choice differs by licencing status, cultural and social norms, access to alternative modes and many other factors. It is a complex and intricate cognitive process, which needs to be better understood, particularly for generation Y.

7.1.2 Car-Based Travel

For the purpose of this research, car-based travel refers to all travel which takes place within an automobile; self-driven or driven by others, including taxi.

7.1.2.1 Private Car

Participants were asked to consider the role of the private vehicle for everyday travel. A summary of their responses is presented in Table 9. We found quite diverse perspectives on private vehicle travel. In particular, while the car was perceived to be convenient and good for long journeys, it was also associated with traffic and congestion, and was viewed negatively in terms of short inner city journeys. There was considerable contestation related to the cost of private cars, with it being defined as both cheap and expensive. For many, car travel was perceived to be a necessary evil, which was useful in specific contexts, and thus it was the circumstances in which the vehicle was used that created the positive or negative perceptions.
Table 9 Summary of Participant’s Perceptions of Private Car-Based Travel

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
<th>Neutral/ comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenient</td>
<td>Expensive</td>
<td>Normalised</td>
</tr>
<tr>
<td>Freedom</td>
<td>Parking issues</td>
<td>Necessary evil</td>
</tr>
<tr>
<td>Good for long trips</td>
<td>Environmental concerns</td>
<td>Differs by geographic location</td>
</tr>
<tr>
<td>Fast</td>
<td>Commuter travel</td>
<td>Mainstream</td>
</tr>
<tr>
<td>Cheap</td>
<td>Overused</td>
<td></td>
</tr>
<tr>
<td>Easiest mode</td>
<td>Selfish</td>
<td></td>
</tr>
<tr>
<td>Independence</td>
<td>Traffic and congestion</td>
<td></td>
</tr>
<tr>
<td>Safe</td>
<td>Lazy people</td>
<td></td>
</tr>
<tr>
<td>Spontaneous</td>
<td>Lock in</td>
<td></td>
</tr>
<tr>
<td>Efficient</td>
<td>Safety concerns</td>
<td></td>
</tr>
<tr>
<td>Multi-purpose travel</td>
<td>Bad for intra-city</td>
<td></td>
</tr>
<tr>
<td>Can be less organised</td>
<td>Pollution</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inconsiderate of other modes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Guilty</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Judgement (on type of car)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Home location can enforce</td>
<td></td>
</tr>
<tr>
<td></td>
<td>car dependency</td>
<td></td>
</tr>
</tbody>
</table>

Some participants spoke of the different uses of a private vehicle, and differentiated between private vehicle use for urban mobilities, compared to long distance travel. Oliver, for example, identifies a mixed perception of cars, where daily commuting by private vehicle is not perceived to be necessary, but day trips outside of the city are perceived to be a positive action. Consequently, in terms of infrastructure provision, the intercity roading was argued to be important and requiring investment, whilst within cities other priorities should be assessed.

“*My perception on cars is mixed I’d say… I’m not positive about the way we use cars. So I’m not positive about travelling to work with a car. I’m not positive about everyone going in one direction at nine o’clock in the morning in a little capsule that takes up all this space. But you know I’m positive on going on a day trip up to Omaha or down to Tauranga or somewhere like that. I’m really positive about that. They’re an amazing invention. Certainly we need quality roading infrastructure over long distances but not within cities, it’s such a waste*” (Oliver, 22, Auckland, Full licence)

Participants were also asked to consider the type of person who normally drives a car. The existence of a ‘car culture’ within New Zealand was acknowledged by the research participants;
“I’d say most people would probably own a car especially in New Zealand. I think quite a few people own a car. So I’d say, I’d say everyone is using a car. I wouldn’t say there a direct sort of group of people that would use a car” (Mia, 22, Dunedin, Full licence)

Consequently, the most frequent response to who normally drives a car was, “everyone”.

“I guess like wealthier people, older people, but everyone really. I mean it, it seems like a fairly normal mode of transport to me. You could never really meet someone and look at them and be like that person doesn’t drive a car” (Jack, 23, Dunedin, No licence)

There appeared to be few demographic or other characteristics that participants could relate to car owners and drivers. One participant acknowledged that while ‘everyone’ drove a car, some did choose not to on account of environmental concerns;

“I think most people that I know [drive a car] unless they are choosing to not have a car so that they can live a more sustainable lifestyle who would be driving cars” (Emma, 22, Dunedin, Full licence)

Moreover, the necessity of private car travel for some communities or groups was identified as an important use of private vehicles.

“You know that there’s no public transport in their area, they’re not able bodied or something like that, they can’t walk so there can be good reasons for it but I probably would see people as slightly lazier as well, or valuing convenience over other factors maybe” (Lily, 31, Dunedin, No licence)

7.1.2.2 Taxi

As a neither public transport nor private transport, the taxi is an interesting part of the transport mix. Participants were asked to reflect on their perceptions of this mode, and a summary of their responses is presented in Table 10. Taxis were broadly considered to be expensive and to be used by four distinct groups; business people during the daytime, people who had been drinking alcohol in the evening, disabled or infirm people and wealthy people at all times. It was perceived to be an urban transport mode, and dependent on the rationales for non-driving, was perceived differently. For example, for participants concerned about the environmental impacts of transport modes, taxis were perceived to be excessive, and not
solving the prevailing transportation issues, instead adding to them by the large number of taxis idling their vehicles in the urban centres. However other non-drivers argued that since selling their vehicle, they could use taxis as a car substitute for particular circumstances.

Table 10 Summary of Participant’s Perceptions of Travel by Taxi

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
<th>Neutral/ comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenient</td>
<td>Expensive</td>
<td>Socialising/ drinking</td>
</tr>
<tr>
<td>Useful for time-sensitive travel</td>
<td>Power-dynamic between driver and passenger</td>
<td>Associated with urban (rather than rural) environment</td>
</tr>
<tr>
<td>Useful for people who are infirm or with disabilities</td>
<td>Unsafe</td>
<td></td>
</tr>
<tr>
<td>A safe way home</td>
<td>Intimidating</td>
<td></td>
</tr>
<tr>
<td>Car replacement for carless people</td>
<td>Too many taxis</td>
<td></td>
</tr>
<tr>
<td>Business travel</td>
<td>Don’t solve transport issues in urban environments</td>
<td></td>
</tr>
<tr>
<td>Necessary if public transport provision is poor</td>
<td>Dirty</td>
<td></td>
</tr>
<tr>
<td>Useful back-up mode, “just in case”, last resort</td>
<td>Waste of money</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lack of control</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Excessive</td>
<td></td>
</tr>
</tbody>
</table>

Depending on the motivations behind not having a car, taxis can be perceived to be a useful tool, or car replacement in some circumstances. This tends to be connected to those without a car for financial reasons, rather than environmental motivations. For participants concerned about the environmental impact of private motor vehicle travel, taxis are perceived to be quite wasteful, excessive and environmentally detrimental. Therefore, for those people, a taxi would not be the answer to any mobility issues to which they may be confronted.

“They’re really expensive, they’re usually not very good service, they don’t really solve any problems in terms of transport, in fact they, there’s probably too many taxis in terms of the market…” (William, 34, Auckland, Full licence)

In this quote, William identifies the saturation of taxis in urban centres. This was frequently identified by participants, some of whom referred to taxis’ idling in city centres as contributing to poor air quality.
For other non-driving participants, however, taxis were perceived to be a positive tool which allowed for flexibility of mobility planning, and a useful part of the transport mix. For example, Tipene uses taxis as a car replacement since selling his vehicle, and finds this to be an economical alternative to private car ownership that still allows for fast motorised transport to be used if required.

“I find them a really flexible tool that I can afford now because I don’t have the car and I actually find them cheaper than owning a car as long as you’re only using them infrequently. So they’re not for commuters but they’re for infrequent travel on an impromptu basis. They’re my car replacement effectively. Because when I sold my car, it worked out, for the cost of what I’m spending on the car, I could take a taxi to town and back every week. So as long as I’m not going more than once a week, I’m saving money” (Tipene, 30, Auckland, Full licence)

The people who use taxis as a mode of transport were broadly grouped into four categories; wealthy people, people who have been drinking and therefore should not, or cannot drive, business people, and disabled or infirm people.

“Well because I tend to only catch taxis at night I’m inclined to think that only drunk people catch taxis but I don’t really know and it’s not really a mode of transport that you can really become familiar with the other people who use it. I know there are people with disabilities who have to regularly catch taxis. My friend’s father’s legally blind so I don’t know if it’s subsidised or actually fully paid for but yeah he catches taxis a lot” (Liam, 20, Dunedin, Learner’s licence)

“I guess taxis are quite expensive. So I see like taking a taxi somewhere for the sake of taking a taxi somewhere like you think like “Oh I need to get here” and then if you’re first thought is “I’ll take a taxi” you’re a very affluent person.” (Jack, 23, Dunedin, No licence)

### 7.1.3 Active Transport

#### 7.1.3.1 Bicycle

Participants were asked to consider cycling as a transport mode, as opposed to cycling for fun or for exercise. A summary of the responses is provided below, in Table 11. Participants were asked to reflect upon the types of people who usually cycle. The main categories were; children, middle-aged men, environmentally-conscious people, ‘hipsters’, people who are
relatively fit and active, middle class, and living in an urban environment. It was not perceived to be a mainstream modal choice. Moreover, it was stated that more men than women cycle. Cycling was frequently reported as being similar to walking, another active transport mode, but faster, therefore removing time barriers related to walking. Cycling was perceived to offer freedom with the ability to travel long distances in relatively fast speeds, however it was also perceived to be a hassle, with barriers including poor infrastructure, bad driver behaviour towards cyclists, and exposure to weather and topography.

Table 11 Summary of Participant’s Perceptions of Cycling as a Transport Mode

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
<th>Neutral/ comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fastest mode of active transport</td>
<td>Unsafe</td>
<td>Neglected mode of transport</td>
</tr>
<tr>
<td>Fit – healthy</td>
<td>Weather</td>
<td>Walking often prioritised over cycling for investment</td>
</tr>
<tr>
<td>Fast</td>
<td>Poor driver behaviour</td>
<td>Urban activity</td>
</tr>
<tr>
<td>Cheap</td>
<td>Topography</td>
<td>Distinct cyclist identity or culture</td>
</tr>
<tr>
<td>Able to travel long distances</td>
<td>Hassle</td>
<td></td>
</tr>
<tr>
<td>Efficient</td>
<td>Lots of barriers</td>
<td></td>
</tr>
<tr>
<td>Offers freedom</td>
<td>Still demands consumption and ownership</td>
<td></td>
</tr>
<tr>
<td>Environmentally friendly</td>
<td>Cyclists not respected on roads</td>
<td></td>
</tr>
<tr>
<td>Physical activity</td>
<td>Poor cyclist behaviour</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Limited infrastructure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marginalised</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“War on cyclists”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disliked</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stigmatised</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unable to wear work clothes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frightening</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Traffic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Slower than car travel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Storage issues</td>
<td></td>
</tr>
</tbody>
</table>

This research found quite distinct perceptions around cycling and its use in New Zealand. For example, keen cyclists frequently commented that cycling was a fast and efficient mode of transport, Oliver, for example, argued that cycling should be the focus of urban transport infrastructure;
“My personal opinion is that cycling is the best way, the greatest [mode of] transport invented, I suppose because you know we’re not pumping carbon monoxide into the air we breathe and people can still get around quite long distances quite quickly and safely and they get some cardio exercises. I definitely feel like it should be the main focus of a city’s infrastructure” (Oliver, 22, Auckland, Full licence)

In comparison to other modes of transport, such as public transport, cycling was perceived to be low cost and providing a sense of freedom from scheduling and reliance on others;

“I never got around to getting my licence and so always relied on buses which are a lot of the time late. It was kind of frustrating me, having to wait for buses and pay. Cycling has saved me so much money. If I want to go to a friend, I don’t have to spend $4 each way on the bus, I can just go for free!” (Michael, 18, Auckland, Learner’s licence)

“I could do it like straight off… I could do it myself. I didn’t need someone else, I didn’t need a car, didn’t cost me anything. I mean a few dollars every now and then but yeah didn’t have to buy petrol” (Caden, 18, Auckland, Full licence)

However, for non-cyclists, it was perceived to be quite unsafe as a mode of transport, and due to safety concerns, it was thought to be unlikely to become a ‘default’ mode choice.

“I like cycling but probably wouldn’t feel very safe cycling here on the road or even the half a metre wide cycle way because you don’t really see cars respecting that much so unless it was physically divided like I’ve seen down on Beach Road, I probably wouldn’t really cycle” (Scarlett, 29, Auckland, Full licence)

Negative perceptions of cycling were frequently related to the poor infrastructure and provision for cyclists, forcing them to travel in unsafe situations, as well as the relationship between car drivers and cyclists. These attributes were perceived to disincentivise the uptake of cycling for non-cyclists.

“I think it’d actually be a bit dangerous because we have a lot of cases in Dunedin over the last few years with cyclist getting hit. Even as a driver sometime I get it quite almost nervous around cyclists because we don’t necessarily have the infrastructure to allow cyclists to cycle safely” (Hailey, 34, Dunedin, Full licence)
“I don’t know if I would ever cycle that much here because of the topography. But also our drivers aren’t very good with cyclists, just being aware of them, because there’s not that many. Like people will open their doors on them all the time. They’re doing all the cycle lanes and stuff at the moment. It needed to happen, there are too many people dying. It’s terrible.” (Emily, 28, Dunedin, Full licence)

Cyclists also commented on the infrastructure provision, and felt that in terms of active transport, walking was given preference over cycling in terms of investment. This could lead to perceptions of not being catered for by the transport agencies and result in unsafe travel behaviours.

“So often times you’ll see improvements made to pedestrian infrastructure. The green time for cars is shortened or whatever. Footpaths are wider and everything’s made nice for a pedestrian or for a car but it’s never done for cyclists” (Oliver, 22, Auckland, Full licence)

Cyclists were perceived to be ‘brave’ by some participants, for cycling on the roads with unfriendly motorists;

“The type of people that cycle, I really admire them, they’re really brave and I wish I could be one but not yet [laughs]” (Scarlett, 29, Auckland, Full licence)

“[Cycling is] risky because there are a lot of stories that cyclists have, every cyclist will have a story about being kind of bullied or harassed by a driver” (Gavin, 31, Rural, No licence)

While negative perception of the treatment of cyclists was frequently raised by participants, the behaviour of cyclists was also discussed, with concerns about some cyclist’s behaviours. This was particularly related to cyclists behaving as both pedestrians and vehicles and using this to their advantage without following the road rules.

“My personal experiences with cyclists aren’t that great because they tend to think of themselves both as a pedestrian but also a vehicle. So they would ride when the traffic sign says to the pedestrian can go which means that as a pedestrian I can’t see them, I can’t hear them but they’re going faster than the speed of walking” (Mila, 27, Auckland, Learner’s licence)
7.1.3.2 Walking

As with cycling, participants were asked to consider walking as a mode of transport as opposed to leisure walking. A summary of the participant’s responses is presented in Table 12. For many participants, perceiving walking as a mode of transport was difficult, as it was perceived to be something that everyone had to do, and therefore there wasn’t a distinct person who would walk as transport. Participants who walked spoke highly of the mental and physical space they achieved during their walk commute, which provided them with the opportunity to prepare for work or home. It was thought to be healthy, and a useful mode of transport. In contrast, however, it was also perceived to be slow. Physical appearance was another barrier to walking, with participants concerned about looking unkempt if they walked to work.

Table 12 Summary of Participant’s Perceptions of Walking as a Transport Mode

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
<th>Neutral/ Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise</td>
<td>Slow</td>
<td>Default mode – standard</td>
</tr>
<tr>
<td>Proximity – good for close</td>
<td>Weather (exposed to elements)</td>
<td>Walking culture or non-culture</td>
</tr>
<tr>
<td>Healthy, movement</td>
<td>Sweaty</td>
<td>Depends on environment – can be good or bad</td>
</tr>
<tr>
<td>Relaxing</td>
<td>Tiring</td>
<td>Need good shoes</td>
</tr>
<tr>
<td>Good for mental health</td>
<td>Infrastructure (roadings &amp; crossings)</td>
<td>Part of multi-modal travel</td>
</tr>
<tr>
<td>Convenient (no parking etc.)</td>
<td>Proximity – not good for long distances</td>
<td></td>
</tr>
<tr>
<td>Mental and physical space from others</td>
<td>Safety</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good for central areas &amp; urban spaces</td>
<td>Topography</td>
<td></td>
</tr>
<tr>
<td>Can enjoy the environment</td>
<td>Driver behaviour can be poor</td>
<td></td>
</tr>
<tr>
<td>Weekend mode of transport (more time)</td>
<td>Air pollution</td>
<td></td>
</tr>
<tr>
<td>Easy</td>
<td>Have to be intentional – not good with too many bags</td>
<td></td>
</tr>
<tr>
<td>Can explore area (take short cuts)</td>
<td>Need to be organised</td>
<td></td>
</tr>
<tr>
<td>Good if have time</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Participants who walked regularly spoke positively of their experiences and appeared to be happy with this mode for travel. Many reasons were used to explain this, for example Leo finds that walking can help aid relaxation following a day at work or study, due to fresh air and exercise;

“Walking is good fitness and if you’re having like a bad day, you could help yourself by breathing in just the fresh air and all that around you… like it makes my day better because I’ve burnt off heaps of steam or burnt off heaps of energy and it’s just like I’m relaxed again when I get home” (Leo, 19, Rural, Restricted licence)

Another participant spoke of the self-reliance associated with walking, which ensured that they would be on time for work or study, and not hindered by timetabling or delays. Lily also identifies the time between home and work which can be used to transition into work-mode or home-mode.

“I kind of like relying on myself. Like in terms of going to work like if you miss the bus in the morning, you’re going to be late or whatever. It’s relying on myself… and it’s kind of a chance to you know, to wake up and get into the day, sort of a nice casual 20 minute walk rather than suddenly I’m at work straight away” (Lily, 31, Dunedin, No licence)

Walking was perceived to be a positive mode as it removes the necessity to find a car park in the morning, and therefore eliminates stress.

“[I like] the quiet. Just being alone, and not having to find a [car] park. That’s probably the main thing. Yeah. Because especially being a student here when I did used to have a car that was horrendous and it’s actually eliminated a lot of stress… that was an annoying part about coming to Uni, finding a park. So now I don’t have to do that” (Emma, 22, Dunedin, Full licence)

Another participant spoke of losing weight as a result of regular walking as a commute to work, and the health benefits associated with daily exercise. This was perceived to be an important feature for many participants who used walking as a mode of transport.

“I would say the walking is good because like it does wake me up. I definitely struggle in the mornings so it’s quite nice. And in summer it’s great like you get to work and you feel like it is
exercise as well… and I did lose a bit of weight and I felt a bit better just because there’s every
day about an hour walking all up. So I liked that” (Sophia, 24, Dunedin, Learner’s licence)

For participants who drive to work but live within a walkable distance, barriers to walking were articulated. These included topography, weather, the inconvenience of walking, and the need to be more organised.

“I always thought maybe I could start walking to work. But then it’s kind of a dilemma of walking home like up the hill [Laughs]. And if I have things to do like during the day at lunchtime, I have to pop away and do something it’s just inconvenient [Laughs]” (Emily, 28, Dunedin, Full licence)

7.1.4 Public Transport

Public transport was perceived by the research participants to be a highly urbanised way to travel. Bus and train travel were identified as the dominant transport modes, with train inner city travel only available in Auckland and Wellington. Consequently, many of the Dunedin and rural participants had never used a train. For urban participants, norms relating to public transport travel were evident in most circumstances. Regardless of the mode of public transport, participants enjoyed the ability to ‘surrender control’ and relax on the way to and from work. It therefore provided a period of time to disconnect whilst moving between the home and work worlds.

“Public transport is surrendering control basically [Laughs]. It’s like ‘oh well if we crash then it’s not my fault’. If I get to work late, it’s not technically my fault” (Emma, 22, Dunedin, Full licence)

Nevertheless, the use of timetables and the demands to be organised when using public transport was identified by research participants. For example, Selina recognises that while she is confident in her use of public transport in Auckland, many of her friends would find it stressful and are therefore less likely to use public transport modes, instead relying on private vehicle travel.
“A lot of my friends wouldn’t think of it and find it quite stressful finding out timetables and being organised, being there on time but I don’t know, I’ve been doing it for so long, it’s not a hassle for me” (Selina, 21, Auckland, No licence)

7.1.4.1 Bus

Bus travel was identified as the dominant form of public transport available in New Zealand. A summary of the participant’s perceptions of bus travel is presented in Table 13. Participants identified quite different stereotypes of typical bus passengers, dependent on locations and services. It was frequently argued that only people without a car would use the bus, and it was likely to be for financial motivations. Thus travelling by bus is connected for some people with an inability to afford a personal vehicle. As reported with other transport modes, the bus was perceived to be both economical, and expensive. This could be the result of perceived relative cost between bus travel and alternative modes such as a private vehicle or taxi. Negative perceptions of bus travel included difficulty with information, unhelpful bus drivers, poor service, and unreliability.
Table 13 Summary of Participant’s Perceptions of Bus Travel

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economical – cheaper than car</td>
<td>Slow</td>
</tr>
<tr>
<td>Cheap</td>
<td>Confusing</td>
</tr>
<tr>
<td>Fills a need</td>
<td>Frustrating – late or caught in traffic</td>
</tr>
<tr>
<td>Better than car ownership</td>
<td>Expensive</td>
</tr>
<tr>
<td>Convenient for car-less people</td>
<td>Hard to find timetable information</td>
</tr>
<tr>
<td>Better for the environment</td>
<td>Less convenient than personal vehicle</td>
</tr>
<tr>
<td>Useful in some suburbs with a good service</td>
<td>Bus congestion in urban centres</td>
</tr>
<tr>
<td>Good for times with lots of bags</td>
<td>Fumes and air pollution</td>
</tr>
<tr>
<td>Encourages exercise – AT to bus stop</td>
<td>Inconvenient</td>
</tr>
<tr>
<td>Treat for people who usually walk</td>
<td>Unhelpful bus drivers</td>
</tr>
<tr>
<td>Sometimes convenient</td>
<td>Patchy service</td>
</tr>
<tr>
<td>Reliable at peak times</td>
<td>Service prioritises wealthy suburbs</td>
</tr>
<tr>
<td>Public service</td>
<td>Annoying</td>
</tr>
<tr>
<td>Efficient way to move people</td>
<td>Restrictive</td>
</tr>
<tr>
<td></td>
<td>Dirty</td>
</tr>
<tr>
<td></td>
<td>Needs separate bus lane</td>
</tr>
<tr>
<td></td>
<td>Indirect</td>
</tr>
<tr>
<td></td>
<td>Bad driving</td>
</tr>
<tr>
<td></td>
<td>Busy – cramped and stuffy</td>
</tr>
<tr>
<td></td>
<td>Unreliable – prepare for failure &amp; delays</td>
</tr>
<tr>
<td></td>
<td>Inconsistent</td>
</tr>
<tr>
<td></td>
<td>Not good for time pressured travel</td>
</tr>
<tr>
<td></td>
<td>Limits freedom</td>
</tr>
<tr>
<td></td>
<td>Daily cost similar to car</td>
</tr>
</tbody>
</table>

Significant barriers to using the bus were identified by the research participants, mostly this centred on access to a bus service, cost, and information about bus stops, routes and pricing. For example, Scarlett articulated a lack of convenience associated with bus transport due to a lack of information about using the bus system, consequently the bus was not perceived to be as convenient as the train;

“I don’t use the bus a lot… It’s hard to know where to get the information on how to catch buses. You do see buses around but it just doesn’t seem as convenient. You don’t exactly know where all the stops are and you don’t exactly know where it’s going unless you look it up prior. Sometimes bus drivers are helpful but then sometimes they’re not. It’s sort of as if you should know where you’re going before you get on the bus which doesn’t seem as convenient as a train”

(Scarlett, 29, Auckland, Full licence)
For another participant, however, the bus timetable was perceived to be valuable, as it could still allow for autonomous travel without relying on parents, family or friends, and also fitting with a schedule. Olivia finds that using the bus is more convenient that fitting with her family’s schedule.

“I find the bus is fine because it’s got a timetable and it’s set times and generally it can take me to close enough where I want to go. I think it’s harder working around someone else because it changes every day where they need to be and especially at home with two younger brothers and a sister” (Olivia, 21, Dunedin, Learner’s licence)

Another positive perception of bus transport came from Mila, who felt that her commute by bus provided time to relax. This sentiment is similar to that discussed by participants who walk-commute.

“I enjoy it [riding the bus]. Because my life is just so incredibly busy that’s probably the only time that I can just sit down and be myself, by myself and think and just relax if I feel like it. I have to admit I dread getting off the bus because I know that I actually have to go in and work and pretend to be someone” (Mila, 27, Auckland, Learner’s licence)

The people who use buses were perceived to be poorer, and without vehicles, except on some commuter specific routes. School children were also linked with bus transport, and those unable to drive.

“I think a lot of lower income people use the bus, I would say the exception would be the express buses to work. I think a lot of people who commute in use, say for example the Northern Express or the Express buses on the other main arterials. Hopefully the aim is to make it available to more people who would normally use cars” (Sophie, 30, Auckland, Learner’s licence)

“There’s a bit of a stigma I think around buses as well because you see like special needs people on the bus and say well buses are for people that can’t afford cars…” (William, 34, Auckland, Full licence)

However it was also thought that there are fewer stigmas attached to catching the bus in NZ than in other countries globally.
“I guess there are still like stigmas when taking the bus but maybe less so in New Zealand than in other places. I think in New Zealand like you see someone in Dunedin, getting on a bus, could be anyone, it could be your friend, it could be the CEO of your company. Maybe less likely, he or she would probably drive a car. But I mean a bus is just a pretty normal form of transport. I think more of using a bus is you get like to or from your home. But you would say more people would take the bus who don’t drive. I guess it’s like a form of transport for people who don’t have a car” (Jack, 23, Dunedin, No licence)

For some rural participants, there was a lack of clarity around bus provisions and costs, mostly due to not having used the bus system.

“Bus is for people who don’t have cars or I guess it would be almost cheaper than a car if you’re commuting to and from work? I’m not sure, I’ve never taken public transport, I don’t know how much it costs” (Hami, 20, Rural, Learner’s licence)

The perceived expense of the bus was location dependent, with varying costs across the country. For example, Olivia compared Dunedin to another urban centre where she attended college, and argued that Dunedin’s buses are significantly more expensive for similar journeys.

“It’s expensive. I find it expensive in Dunedin but in [urban centre] it was a lot cheaper and I had a discount with my student card and it was about a quarter difference I think. In Dunedin, yeah, it costs five dollars to get a twenty minute ride into town and a twenty minute ride in (urban centre) could be a dollar sixty. A ridiculous amount of difference” (Olivia, 21, Dunedin, Learner’s licence)

7.1.4.2 Train

Due to the unavailability of trains in Dunedin and rural New Zealand, most comments around trains arose from Auckland-based participants. Some Dunedin and rural participants commented with relation to train use overseas or in urban centres, and many made reference to tourist sightseeing trains, such as the Taieri Gorge. Nevertheless, across all three regions, there were very positive comments related to train travel, increasingly so for Dunedin and rural where using this mode was not an option. Trains were discussed as “the best mode of public transport” (Hailey, 34, Dunedin, Full licence) and “like a bus, but better” (Liam, 20,
Dunedin, Learner’s licence) and for long distances, that it would “be more fun than catching a plane” (Liam, 20, Dunedin, Learner’s licence). A summary of the participant’s perceptions of train travel is presented in Table 14.

Table 14 Summary of Participant’s Perceptions of Train Travel

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficient</td>
<td>NZ trains are not as good as overseas</td>
<td>Mostly for tourists and holidays</td>
</tr>
<tr>
<td>Fast</td>
<td>Neglected</td>
<td>Not relevant for anywhere other than Auckland &amp; Wellington</td>
</tr>
<tr>
<td>Direct</td>
<td>Slow</td>
<td></td>
</tr>
<tr>
<td>Productive travel time</td>
<td>Delays</td>
<td></td>
</tr>
<tr>
<td>Good land use</td>
<td>Irregular schedule</td>
<td></td>
</tr>
<tr>
<td>Allows multimodal (Can take bikes on)</td>
<td>Limited connectivity to other modes</td>
<td></td>
</tr>
<tr>
<td>Takes people off the roads</td>
<td>Busy</td>
<td></td>
</tr>
<tr>
<td>Good for CBD commute</td>
<td>Longer walk to train station (than to bus stop)</td>
<td></td>
</tr>
<tr>
<td>Quiet</td>
<td>Not good for socialising</td>
<td></td>
</tr>
<tr>
<td>Parking is not required</td>
<td>Reliable</td>
<td></td>
</tr>
<tr>
<td>“Trains are cool”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Trains are thought to be a valuable transport mode due to the functional time available during travel. Participants therefore perceived this mode to offer a more productive travel experience, particularly for work commuting.

“I don’t know why, [but] I like trains. I think it would be nice to be able to [take the train], because like the bus, you can’t really read on the bus or do much on the bus because especially the road that I live on, it’s really twisty and turny and I’d probably just feel sick. Whereas I think a train would offer being able to read and just do a few more things, while you travel” (Mia, 22, Dunedin, Full licence)

Jack concurs that trains can offer a more relaxing travel experience that alternative modes.

“I don’t know, it, it’s kind of just like, like a private and public space at the same time. Like you get to sit on a train, it’s very quiet, it’s taking you somewhere. I feel like when I’m on a
train it’s almost like when I’m walking, there’s no rush you’re just moving from one point to another point and you can like read a book or listen to music. You know being on a train is, is cool to me” (Jack, 23, Dunedin, No licence)

More so than other modes, the train was perceived to be on time and easy to use, however the limited availability of train stops, and their geographic positioning provided concern about safety for passengers.

“The train, I think is great, I love the train, I think trains are amazing. I love that they always seem to run on time for me, maybe like 5 minutes here or there out but with the times that I’m catching it, at least it’s pretty empty, it’s quiet and fast. Things I don’t like about it is the availability of different stops, like there aren’t that many train stations around. When I catch the train, most people are getting picked up because it’s not really in a suburban area, it’s more of an industrial area and it’s not really a safe place to walk to and from at night as well” (Selina, 21, Auckland, No licence)

The people who ride the train were broadly perceived to be business people in Auckland and Wellington, and specifically those who work in the central business district (CBD). Students who lived close to train stations were also thought to use the train network. Outside of Auckland and Wellington it was thought that only tourists would use the train system, particularly the sightseeing trains.

7.1.5 Summary

- Generation Y represent a diverse, and often contradictory range of perceptions of transport modes.
- Transport mode choice is determined by a complex process including perceived availability of transport modes, trip purpose, and topography and weather.
- The private car is perceived to be both expensive and cheap, and an important part of the transport mix for specific purposes (e.g. long distance travel), and people (e.g. elderly or infirm).
- Different views of taxis were also articulated by Generation Y, whereby a taxi can be a car substitute for non-drivers, but also expensive and unnecessary. Perceptions of taxi saturation, and contributions to congestion were also highlighted.
Walking is perceived to be a normal mode, but not always associated with transport. Generation Y who walk as a mode, identified a range of mental and physical health benefits.

Cycling is positively viewed by cyclists but safety concerns were featured, the treatment of cyclists by car drivers was identified as a particular concern. Cycling is perceived to be an urban transport mode.

Bus travel, like car transport, is perceived to be both cheap and expensive. Poor service, congestion and unhelpful bus drivers were a particular issue for bus travel. Nevertheless, the bus provides an opportunity to relax in some circumstances.

Trains are viewed positively by generation Y, despite being an urban transport mode, unavailable outside of Auckland and Wellington. Concerns relate to the provision of train stations in urban areas, and safety.
8 FINDINGS: THE MOBILITY CULTURES OF GENERATION Y

Through the analysis of the interview material, we examined the discrete energy cultures of individual research participants, based on their own individual socio-cultural, financial, and geographic contexts. The energy cultures’ of some individual participants are presented to depict how the Energy Cultures Framework can be used to conceptualise mobility behaviours of generation Y. Verbatim quotations are used to provide evidence of these distinctive and individual scale cultures, and to highlight the range of motivations and barriers, as well as diverse factors which determine how an individual will accomplish their mobility needs.

8.1 Energy Cultures Framework: Generation Y’s Heterogeneous Mobility Cultures

The Energy Cultures framework (Figure 9) is used to understand how energy behaviour is influenced by three core features; material culture (what people have), practices (what people do) and norms (what people think), as well as external influences beyond immediate control (Stephenson et al., 2010). Distinctive energy cultures arise from the interactions between these elements. In the context of the empirical research presented in this report, the Energy Cultures Framework is a useful way to examine the heterogeneous mobility cultures of generation Y, and the differing material cultures, practices and norms that support these cultures. In this section, three interesting cases will be presented to depict the heterogeneous range of mobility cultures which exist within New Zealand’s generation Y, these are; a culture of collaboration, an urban culture, and a culture of family responsibilities.
8.1.1 A Mobility Culture of Collaboration

Dematerialisation and collaborative consumption have been used to define generation Y’s behaviours, arguing that this younger generation are less motivated by having, and more by experiencing. An individual scale example of this is Jack, a 23 year old, non-driving, Dunedin participant. Jack’s mobility practices are defined by collaborating and achieving shared mobility goals with other people, walking, and saving money for overseas travel. He uses social media to communicate with friends within New Zealand and overseas friends he has met on his travels.

“(The Internet is) pretty much integral to my life in every way I would say... I don’t have a cell phone… Internet is all my entertainment [Laughs]. Literally I could not live without it. It would be preposterous for me to go day to day without having access to the Internet”

Jack does not fit within the traditional LTD pattern, and reported not having thought about getting a licence until it was suggested to him. Jack indicated no intention to gain his licence in the future.

“Honestly until people started like nagging me about not having a licence, I never even gave it thought. Like the idea of getting a licence never occurred to me. If someone mentioned it I’d be like “oh, oh no, I’m ok””
Table 15 presents some of the key features of Jack’s culture of collaboration. His material culture is characterised by ICT as a means of virtual mobility, and basic material items to facilitate walking. The use of GPS to be able to negotiate new locations was also identified as a feature of his mobility culture. Jack’s practices include self-sufficient walking and perceptions of time that prioritise slow movement over fast paced lifestyles.

“Well basically the way I see transport now, I can easily get anywhere I want to go. And getting a car would make that easier but it’s basically making easy easier. It would be pointless you know? It would be like oh instead of walking for fifteen minutes I can drive for two”

<table>
<thead>
<tr>
<th>Material Culture (Have)</th>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop &amp; Internet, Passport, Shoes, GPS</td>
<td>Ability to live with family, family home location</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Practices (Do)</th>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asking for rides, hitch hiking, walking, borrowing, working temporary jobs, overseas travel prioritised, slow paced lifestyle</td>
<td>Affordable overseas travel, availability of suitable work placements, middle class family</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Norms (Think)</th>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dematerialisation, environmental concern, contentment, freedom through walking, asking for help</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To move to further distances, Jack utilises social networks to find shared rides, or will hitch hike if necessary. As he has been working in temporary positions for over three years, Jack’s mobility needs are changeable and require negotiation. In contrast to the oft-stated need for a licence to gain employment, Jack has not faced this issue with employers. He talks about the ease at which he travelled around Otago for work, and the need to utilise the spare seats going between locations;

“Look at how many cars there are on every highway and every street that have a spare seat. There’s a spare seat in every single car... people laughed at me not having a car but I found absolutely no problem getting around because I basically just learned who commuted... every
day, every week, every weekend or just talked to people and see who’s going where. Be like “oh can you take, take me into Middlemarch? Oh you’re going to Dunedin, can you take me?” And then someone else would be coming back on Sunday night or Monday morning. So just ride sharing, finding who’s going where and going with them, which is really easy because there’s always someone with a car going somewhere.”

His eagerness to remain dematerialised includes not owning a bike, and therefore Jack relies solely on walking and shared rides to travel. He used environmental awareness and concern as contributory factors relating to his local mobility decisions. However, his dematerialisation appears to be closely connected to his desire to travel and for freedom from the constraints of ownership. Likewise, he appears to be happy with temporary employment to support his saving for overseas travel.

“I don’t really want a job at all. I’ve only worked temp jobs for the last three years. I guess I kind of scared of commitment in every sense of the word. I never hold a job more than three months and I never really want to. So yeah I just want to go overseas and then I’ll make it up from there”.

8.1.2 An Urban Mobility Culture

An urban mobility culture is evident for some participants living in urban centres and is characterised by living with parents or renting, using active or public transport modes and demanding multi-modal mobilities. In this context, the urban mobility culture is centred on non-drivers in the city. Table 16 outlines the material culture, practices and norms of these participants, and how they might contribute to an urban mobility culture.
Active and public transport norms were evident amongst a proportion of urban participants, and as a result, car ownership is not prioritised within this mobility culture.

“If I could cycle everywhere with say separated cycle ways and flat roads, I would cycle, just because it’s so easy and so convenient and it’s enjoyable. I would use public transport if it was convenient enough, I don’t particularly have a big desire to drive or have a car. If I could live without a car, I would” (Michael, 18, Auckland, Learner’s licence)

Mila articulated a distinctive urban mobility culture within her social network, which involves urban living, Internet access and public transport. She stated that within her friendship group, not driving was normal as none of her friends needed to drive. They chose to live in different suburbs across Auckland but close to public transport routes to ensure they could achieve their mobility demands through public transport.

“We can’t live without the Internet. We also can’t live without not being in central Auckland and not being able to access the cafes and places that we can meet up. So all of my friends are in central Auckland or thereabouts, they’re all on major bus routes. None of them actually has got a car or is using a car on a regular basis. So we all get around with public transport” (Mila, 27, Auckland, Learner’s licence)
The urban mobility culture appears to be structured with thought to mobility accessibility and access to key locations. As with Mila, Sophie spoke of living in suburbs with good public transport connections, and therefore avoiding the need to LTD or own a vehicle.

“I moved to the flat I told you about where we were right next to buses. We didn’t have cars, none of us did. I suppose then there was no incentive for me to continue with it [learning to drive] because I had a really good bus service” (Sophie, 30, Auckland, Learner’s licence)

8.1.3 A Mobility Culture of Family Responsibilities

A mobility culture driven by family responsibilities was articulated by some participants (Table 17). In this context, gaining a driver’s licence early was critical to helping parents and supporting the family unit by taking on responsibilities including chauffeuring younger siblings. Therefore, licensing was promoted by parents, and often financially supported, and there was an incentive to gaining a licence quickly.

An example of this is Stella, a rural participant, 19 years old, with a full driver’s licence. Stella’s family are dairy farmers, and she is the oldest child with several younger siblings.

<table>
<thead>
<tr>
<th>Material Culture</th>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiple vehicles, living on farm with family</strong></td>
<td>Petrol costs, education and employment opportunities near home</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Practices</th>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family responsibilities, helping parents with younger siblings, driving on the farm, rural hobbies</strong></td>
<td>Family size</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Norms</th>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supporting family, family business, rural ideals, intentions to stay in a rural area</strong></td>
<td>Family size</td>
<td></td>
</tr>
</tbody>
</table>
Stella noted that having four younger siblings, it was important that she could help her family out, especially during busy times on the farm. This responsibility is perceived to be very important to Stella, and the ability to contribute to the family was frequently identified.

“Being the oldest as well and having four younger siblings... when it comes to calving time... she [mum] was quite insistent on me getting my licence early enough, before the age changed... it’d be because it’s just Mum and Dad generally and us kids so if I can just do those wee jobs in Balclutha or just pick up the kids from somewhere it’ll just help them a lot”

This resulted in strong parental encouragement and support for learning to drive.

“It was not long just after I turned 15 [that I started to LTD]. And Mum was persistent she was like “you’ve got to get your licence!” So I was like, “OK Mum” [laugh]. So leading up to getting it I’d be reading the road code and Mum would take me out on the farm in our old work truck”

In order to help out, it was necessary for Stella to move through the stages of the graduated learner’s scheme as quickly as possible.

“Getting a full, it comes to the family because you have to get an exemption from what I can understand with a restricted for siblings, and I couldn’t get that [the exemption] so I tried to get my full as quick as quickly as possible so just to help out the family”

Therefore a culture of family responsibilities can result in quick progression through the graduated learners scheme and strong parental encouragement to LTD, likely including access to a vehicle and payment of the costs of learning to drive.

8.1.4 Summary

- Generation Y represent a heterogeneous spread of mobility cultures informed by a variety of material cultures, practices, norms and external contexts.
- The diversity of motivations for non-driving among generation Y can be understood as a range of mobility cultures which either replicate or reduce car-dependence.
9 DISCUSSION

9.1 Non-Drivers

Non-drivers can be defined as either individuals without a driver’s licence, or with a driver’s licence but, for a particular reason or set of reasons, is not driving. From this research it is clear that there are wide ranging reasons why an individual will not have a driver’s licence. For younger generation Y (18- early 20s), these factors relate to family encouragement, access to a vehicle, home location, social norms and financial factors. For older generation Y, family encouragement and support becomes less important, but access to a vehicle appears to become more important. Home and work locations are key determinants of LTD behaviour, as is the need to drive for employment and employability. While younger generation Y tended not to perceive non-driving as a permanent status, some older participants did view non-driving as a long term lifestyle choice. This is particularly related to those who had a driver’s licence, and had driven for a period of time, before choosing not to drive. Therefore while non-driving status can be a long term decision for some of generation Y, for others it is determined by short term events, such as saving for overseas travel or a mortgage deposit. It can also be enforced by transient employment or housing situations. For these members of generation Y, non-driving is associated with a particular life stage, which may then change over time.

9.2 Revisiting the Factors which Replicate or Reduce Car Dependency

In this section, using the empirical material collected through this research, we reconsider the factors which might replicate or reduce car dependency for generation Y. Table 18 details the way the explanatory factors fit within the interview material gathered for this research.

<table>
<thead>
<tr>
<th>Explanatory category</th>
<th>Reduce car dependency</th>
<th>Replicate car dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual factors</td>
<td>New conceptualisations of freedom which can be fulfilled through public and active transport modes. House location decisions factoring in access to key destinations by active and public transport modes.</td>
<td>Traditional conceptualisations of freedom reliant on private car travel.</td>
</tr>
<tr>
<td>Category</td>
<td>Factors</td>
<td>Impediments</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Social factors</strong></td>
<td>Social norms prioritising active transport modes as healthy and environmentally conscious choices, positive perceptions of public transport modes, consciousness of the relative financial costs of travel (by car compared to other modes). Social norms of urban living and reliance on public transport.</td>
<td>Learning to drive as a ‘rite of passage’ for teenagers, learning to drive as a necessary skill, cars as a status symbol, encouragement to LTD from friends, parents and partners.</td>
</tr>
<tr>
<td><strong>Built environment factors</strong></td>
<td>Easily accessible transport alternatives, transport hubs and multi-modal transport options. Housing close to urban centres and/or transport links, frequent and low cost public transport options, high quality active transport infrastructure.</td>
<td>Lack of access to transport alternatives, lack of public transport provision, poor active transport infrastructure.</td>
</tr>
<tr>
<td><strong>Environmental concern factors</strong></td>
<td>Environmental consciousness and concern are used to prioritise low-carbon transport modes, and awareness of the environmental impact of transport mode choice.</td>
<td>Unaware or unable to consider the environmental impacts of transport mode choice, this could include ‘tragedy of the commons’ perceptions.</td>
</tr>
<tr>
<td><strong>Economic factors</strong></td>
<td>Lack of disposable income to spend on car ownership or learning to drive, changing priorities related to discretionary spending (prioritising overseas travel etc.), rising cost of home ownership and saving for mortgage deposits, high rates of further education delaying regular income, perceptions of relative transport costs between transport modes.</td>
<td>Financial support from family to LTD or gift a vehicle, prioritising car dependency. Prioritisation of traditional choices, disinterest in overseas travel. Perceived need of private transport for employment or to increase employability.</td>
</tr>
<tr>
<td><strong>Legal/ policy factors</strong></td>
<td>Perceived difficulty, time commitment and hassle associated with learning to drive, illegal driving practices reducing the perceived need for licencing.</td>
<td>Perceived ease of learn to drive process, perceived low cost of licensing.</td>
</tr>
</tbody>
</table>
9.2.1 New Conceptualisation of Freedom

Concepts of freedom, autonomy and independence are intrinsically connected to discourses of mobility. This research has found both traditional conceptualisations of freedom tied into private car dominant norms, but also a new, emergent conceptualisation whereby freedom is achieved through freedom from the perceived financial burden of car ownership, or freedom through self-reliance (active transport), or access to multimodal transport options. Freedom also appears to have different meanings dependent on age, life stage and personal circumstances; freedom from family, freedom from transport timetabling, freedom from parking and congestion worries, freedom to reach wider geographical areas by public transport. This could suggest new norms related to mobilities, access, and freedom, related to new realities of the transport system.

9.2.2 Environmental Consciousness and Mobility Decisions

This research found some evidence of environmental consciousness influencing mobility decisions. In particular, this was evidenced by participants with full or restricted driver’s licences deciding not to drive for environmental reasons. There was less evidence of environmental awareness or concerns modifying transitional LTD norms.

Environment concerns as a motivation for non-driving appear to be more entrenched and long term than financial or situational explanations. In other words, people not driving for environmental reasons appear to be less likely to start to drive. Thus environmental awareness or concern related to the environmental impacts of transport mode choice do not appear to determine LTD behaviours as much as they influence modal choice and non-driving practices for those with a licence. It appears that environmental concerns can be highly influential in enforcing a modal transition towards active and public transport modes.
9.2.3 New and Changing Financial Priorities

Reports have suggested that declining rates of driver’s licencing and car ownership are strongly related to the impact of the global financial crisis (GFC). While this research finds evidence of financial rationales being important, we argue that it is more closely aligned to new and changing financial priorities for generation Y. This is related to the GFC insomuch as changing rules on financial lending has increased the difficulty of first time home ownership, resulting in changed practices for generation Y wanting to get onto the home ownership ladder. There are other priorities, however, which appear to be dictating how and where disposable income is spent. For example, many participants were at the time of the interview, saving for overseas travel and consequently had sold their car in order to save money. These priorities could result in temporary changes to mobility practices, such as the adoption of active and/or public transport modes, and then revert back to a car-focused mobility pattern once the goal (e.g. home ownership, overseas travel) has been achieved. It could, however, result in long term transitions depending on the socio-cultural and geographic circumstances. If using alternative transport modes becomes an entrenched identity, or if the shift is facilitated by active and public transport infrastructure, there could be a more permanent change.

9.2.4 Virtual Mobilities for Generation Y

Travel substitution and virtual mobilities have also been used to explain declining car use for generation Y. The thesis argues that generation Y are more disposed to communicating using the Internet, and this is therefore reducing their need to travel, reducing overall trips taken by generation Y. Furthermore, it states that changing priorities could lead generation Y to purchase a smart phone over a car. There is little evidence of this in the present research. The Internet is clearly very important to most research participants, for work, leisure and study purposes. However, in relation to social networking and travel substitution, there was a largely negative response. The research participants agreed that virtual communications were valuable for frequent dialogue with friends and family, particularly those living far away, yet virtual communications were not perceived to be substituting physical communications. Instead, virtual communications were perceived to facilitate physical mobility through organisation, scheduling and planning functions on programmes including Facebook.
10 CONCLUSIONS AND FUTURE DIRECTIONS

During 2014, 51 qualitative interviews were conducted with 18-35 year olds. These interviews explored the global trends of declining car use amongst generation Y and examined perceptions of learning to drive, car ownership and mobilities. Participants included both drivers (full licence, restricted licence) and non-drivers (learner’s licence, no licence, full licence but not driving). In this report, we have presented the findings of the interviews specifically focusing on motivations and barriers to learning to drive, the factors which replicate or reduce car dependency for generation Y, the use of ICT, and perceptions of different transport modes.

Key conclusions from this research include:

- Environmental motivations alone may not be sufficient to incentivise modal shift, however when coupled with additional conditions, including cost and convenience, it could present an important contributing rationale. Moreover, environmental consciousness appears to influence modal choice and non-driving practices of licenced individual’s more than LTD behaviours.

- Non-driving can be either a permanent and temporary status. For some people non-driving suits a particular point in time in order to achieve a specific purpose, such as financial savings for overseas travel, or a mortgage deposit. For others, however, non-driving is perceived to be a permanent status, and this often relates to individuals with a driver’s licence who have rejected a car-reliant lifestyle, often for environmental or health reasons.

- Geographic situation and access to active and public transport infrastructure appears to be a significant determinant of driving behaviours, particularly for peri-urban and rural participants. For some participants, home locations will be determined by public transport routes, or the capacity to use active transport to access work, study or recreational locations. Thus some of generation Y will be more active in their desire to reduce car-dependency, whereas others will passively reject car-dependency due to a specific set of circumstances. Moving home could present an opportunity to address modal choice and transport options. Increasingly, generation Y will purchase and rent homes based on
proximity to transport infrastructure, this could increase home values and desirability and encourage more active and public transport modes to be used.

- There appear to be relatively similar drivers and barriers at different stages of the graduated learner’s scheme, but these differ by age. For younger participants, parental involvement through encouragement, financial assistance and vehicle access provided a key motivation to LTD, this was less so for older participants. Older participants tended to have greater autonomy in home locations and therefore feel less constrained by their home location. Home location was a more important motivation for learning to drive for younger participants, or those who learnt to drive before leaving the family home.

- The financial cost of car ownership disincentivised driving and learning to drive for many participants. For some participants who articulated needing a driver’s licence to find employment, there was less perceived connection between having a driver’s licence and owning a vehicle.

- While there are rural/urban norms, and these relate to specific cities and towns, there are also highly localised and specific norms. These more local scale norms appear to be important in determining LTD behaviours.

Limitations of this research include the limited inclusion of the perspectives of generation Y with children. Recruiting from this particular sub-group proved to be difficult, despite efforts to engage with parenting groups and social groups. Future research could devise more specific strategies to recruit parents in order to broaden their voice within this research area. Another group of perspectives requiring further consideration are those of disabled generation Y, for whom mobility includes additional issues not discussed in this report. Future research could actively engage with these groups to gain a broader representation of the different contexts of generation Y in New Zealand.

Future research could develop and expand upon this work in several key ways to develop understandings of generation Y’s mobility practices.

- It could seek to quantify the qualitative motivations and perceptions which have emerged from this research, this could be achieved through a nationally representatively survey of generation Y.
• Further examination of the virtual mobilities of generation Y, online lives and online practices require greater consideration with implications for transport demand and access to services.

• This research found that employers often demand a driver’s licence even if the job does not require driving. Further consideration of why employers demand licencing and how this might disadvantage non-drivers is required, and could be a fruitful avenue of future research.
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