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Driving Cultures and Climate Change: Bodies, Space and Affluence.

Abstract

Climate change scientists have identified the private automobile as one of the most important sources of greenhouse gas emissions. Many civic environmentalists are advocating for alternative forms of transport to the private car in climate change mitigation policies, including walking, cycling and mass transit systems. Yet, many people in affluent societies appear wed to their cars. In this thesis a cultural geography approach is adopted to account for the resistance to changing modes of transport. The thesis adopts a performative framework to explore how particular understandings of climate change, sustainability and place are configured through driving practices. The interpretation offered draws on the concepts of 'a progressive sense of place', 'the spatial imperative of subjectivity' and 'the ecology of place'. The data analyses for this research are drawn from forty surveys, as well as a range of qualitative methods, including informal interviews, participant diaries, and 'drive talk' experiences with twelve participants from the affluent Sydney suburb of Burraner Bay. This analysis introduces the importance of embodied knowledge to discussion of climate change mitigation policies. Results illustrate that car mobility in this affluent suburb is not configured by economics – but rather life cycles, and the experiences of comfort, convenience and safety. Tempting drivers to abandon their cars for public transport will remain problematic unless closer consideration is given to how geographical knowledge is configured by driving.

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Affluence.**

Theresa Harada

**This thesis is presented as part of the requirements for the
award of the Honours Degree of a Bachelor of Science in the
School of Earth and Environmental Science
of the
University of Wollongong**

The information in this thesis is entirely the result of investigations conducted by the author, unless otherwise acknowledged, and has not been submitted in part, or otherwise, for any other degree or qualification.

Signed: _____

14th of October, 2009

ABSTRACT

Climate change scientists have identified the private automobile as one of the most important sources of greenhouse gas emissions. Many civic environmentalists are advocating for alternative forms of transport to the private car in climate change mitigation policies, including walking, cycling and mass transit systems. Yet, many people in affluent societies appear wed to their cars. In this thesis a cultural geography approach is adopted to account for the resistance to changing modes of transport. The thesis adopts a performative framework to explore how particular understandings of climate change, sustainability and place are configured through driving practices. The interpretation offered draws on the concepts of ‘a progressive sense of place’, ‘the spatial imperative of subjectivity’ and ‘the ecology of place’. The data analyses for this research are drawn from forty surveys, as well as a range of qualitative methods, including informal interviews, participant diaries, and ‘drive talk’ experiences with twelve participants from the affluent Sydney suburb of Burraneer Bay. This analysis introduces the importance of embodied knowledge to discussion of climate change mitigation policies. Results illustrate that car mobility in this affluent suburb is not configured by economics – but rather life cycles, and the experiences of comfort, convenience and safety. Tempting drivers to abandon their cars for public transport will remain problematic unless closer consideration is given to how geographical knowledge is configured by driving.

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Introduction and Structure of the Thesis

Chapter 1.

1.1 Introduction: smarter choices?

‘Make a smarter choice ... By choosing a greener vehicle; you can make a real difference.’

Department of Infrastructure, Transport, Regional Development and Local Government (2008).

The Australian Commonwealth Government’s webpage GreenVehicleGuide.gov.au is inviting all car consumers to make a ‘smarter choice’. A smarter choice to car purchasing is based on ratings of the various greenhouse gas and air pollution emissions of popular vehicles. At the same time, the airwaves of Sydney’s talk-back radio are alive with discussion of Sydney traffic chaos and road rage (see 2UE 954, Tim Webster 10 August 2009 Solution to Sydney’s Traffic Chaos). The types of vehicles driven and the implications of car mobility in Sydney is an urgent and timely topic of research. Why do people continue to drive in Sydney despite increased traffic congestion? What decisions are important when purchasing a car? What do drivers consider as ‘smart choices’ in their everyday driving practices? These types of questions in part helped frame the research objective and aims. Equally important in helping frame this project were three policy contexts outlined in the following section: the predictions of the Intergovernmental Panel on Climate Change; the climate change policies of the Australian Commonwealth Government; and the role of education in changing behaviours.

1.2 Policy contexts

Since 1997 international efforts to address the issues of reducing greenhouse gas (GHG) emissions have been co-ordinated by the Kyoto Protocol, the United Nations Framework Convention on Climate Change (UNFCCC 2009) and the Intergovernmental Panel on

Climate Change (IPCC). In 2007, The Intergovernmental Panel on Climate Change (IPCC 2007) outlined the likely effects of climate change. The IPCC's predictions are cause for great concern. By the year 2100 a predicted rise in the global mean surface temperature is likely to result in increases in sea-levels of between 19 and 59 cm and the increased occurrence of more intense climatic extremes (floods, drought, hurricanes, etc) (see IPCC 2007).

In Australia, the 2007 election of the Labor Rudd Government radically altered Commonwealth policies on climate change. An election promise to combat climate change was symbolically delivered when the Prime Minister Kevin Rudd signed the Kyoto Protocol, and appointed Penny Wong as the Climate Change Minister. In 2008, the Garnaut Climate Change Report warned that the range of options available for responding to climate change diminished with every passing year (2008, p288). In Australia, the Garnaut Report (2008) was very influential in framing the Commonwealth Government's response to climate change in terms of policies of adaptation and mitigation. As outlined in this report, much of the mitigation responsibility falls to the Government, while households are urged to adapt to less emission-dependent lifestyles. In 2008 the Department of Climate Change released a white paper on 'Carbon Pollution Reduction Scheme' which proposed to reduce emissions through the imposition of financial costs to industry. The aim of the scheme was to limit the amount of carbon emissions to between 5-15 percent below 2000 levels by the end of 2020 (DCC 2008). The Department of Climate Change predicted that this would result in a flow-on effect in the costs of electricity, gas, petrol and a range of other goods and services to consumers. Accordingly, climate mitigation through carbon trading would not only reshape production processes and costs – the increased prices of these products and services would impact on Australian households consumption practices (Garnaut 2008). The Government's proposed targets for the reduction of GHG emissions received a mixed response. Some called for more ambitious targets, others to abandon emission schemes altogether. In May 2009, the Government committed to reducing national emissions to 25 per cent below 2000 levels by 2020. Then later that same year, the Prime Minister Kevin Rudd, citing the Global Economic Crisis, postponed the implementation of the Carbon Emissions Trading Scheme until July 2011. Today, the Carbon Emission Trading Scheme remains embroiled in party politics and debates of 'jobs' versus the 'environment'.

Education of citizens is a further conventional and controversial policy response to addressing 'the environment'. The 'Australian Centre for Climate Change Adaptation'

advocates for the role of education. Funded by the Commonwealth, under the National Climate Change Adaptation Framework, the key role of the centre is, through multidisciplinary research, to provide reliable information to government, industry and the community (DCC 2009). At another level, the Federal Government has implemented the Australian Sustainable Schools Initiative. This policy encourages teaching of environmentally sustainable behaviours across school curricula. Further, the Commonwealth endorsed the \$13.9 million campaign titled: 'Think Climate, Think Change' (The Australian 2009). The aim of this campaign was to increase awareness of current environmental issues and generate 'positive' community attitudes and behaviours towards 'sustainability'.

However, Barnett (2007) and others argue that knowledge alone of the consequences of global warming is not enough to change individual behaviour. Similarly, McNaughton and Jacobs (1997) argued that in a study involving focus groups of 80 individuals in the United Kingdom, that persistent behavioural change rarely resulted from increased levels of awareness, concern and perceived responsibility. Again, this argument is clearly illustrated by trends in New South Wales. A survey conducted by The Department of Environment and Climate Change NSW (2006) revealed that, in comparison to 1994, people generally have more sophisticated environmental knowledge and stronger pro-environmental attitudes. Yet, as evidenced by the continuing rise in household energy consumption (ABS 2007), this knowledge has not translated into significant behavioural changes to reduce 'carbon footprints'. (Carbon footprints are the carbon dioxide emissions that are a direct effect of lifestyle and action. This includes travel and electricity in the home, but also includes the indirect impacts of diet, clothing and consumption choices). More specifically, in the United Kingdom, Ryley & Smyth (2001) found that in a study of 1,500 motorists, 89 per cent of his sample agreed that it would be very difficult to adjust to life without a car. These findings suggested the need to identify *why* people continue to drive, despite expressed concerns for the environment. Equally, it is important to acknowledge that driving practices and car ownership are not uniform across nations, towns, cities and suburbs. Driving practices are embedded within wider socio-economic and cultural contexts. Important differences exist not only between places, but also inter-generationally, and between why men and women drive (Rosenbloom 2006). The objective and aims of the thesis outlined in the following section arose from the central framing of the private car in questions about adapting household mobility to reduce GHG emissions.

1.3 Research Objective and Aims

The overall objective of this research project was to examine, in the context of policies of climate change adaptation, the driving cultures of household members in Burraneer Bay, an affluent Southern Sydney suburb. In the socio-economic context of Burraneer Bay, this thesis examines driving cultures to help identify possible resistances to abandoning the private car for public transport in efforts to reduce carbon emissions. This objective was underpinned by three aims.

First, the theoretical aim was to apply a performative framework to help rethink the relationships configured between cars, people and space. A performative lens emphasised driving as a cultural activity that helps constitute particular social geographies and understandings of the non-human world. A performative lens draws attention to how driving produces a particular way of knowing the world from the drivers' seat.

The second, and related methodological aim is to develop a mixed-method approach that provides insights into not only what drivers think about driving, the environment and climate change, but also how drivers produce a particular way of knowing through the regular routines and rituals of driving.

Third, the analytical aim is to draw on a performative conceptual framework to provide an interpretation of the driving cultures of the affluent suburb of Burraneer Bay.

1.4 Structure of the thesis

The thesis is structured into seven chapters. Chapter Two brings together research on driving cultures and climate change. The chapter begins by positioning the greenhouse gas emissions of cars as central to scientific discussion of climate change. The chapter then turns to the importance of relational thinking in reconceptualising the science and social science of climate change. The concepts of progressive sense of place, spatial imperative of subjectivity and performativity are then introduced. The implications for thinking about driving cultures and climate change through a performative framework are then outlined. The chapter concludes by drawing together these strands of thought within a conceptual framework.

Chapter Three turns to the question of methods. The chapter begins by providing an explanation of how the project began, questions of rigour and positionality. The project then turns to outline the research design. The project was conducted in two stages. The first stage used a survey to generate both descriptive statistics on car ownership, driving patterns, environmental attitudes and knowledge of climate change. Twelve participants were also recruited through the survey for the second stage. The second stage employed a range of qualitative methods over a three month period including semi-structured interviews, 'drive-talks' and solicited diaries. These provided a more 'in-depth' understanding of the participants and driving as way of knowing. 'Drive talks' provided intimate opportunities for participants to talk about themselves, their car and climate change. A diverse range of methods ensured that participants could express not only their thoughts about driving, roads, nature and climate change, but crucially how driving produced this knowledge. Analytical procedures which were employed in handling and interpreting the results are explained to enhance transparency and reliability.

The results are presented in three chapters. Chapter Four presents the results from the first stage of the project, the survey. Descriptive statistics compiled from these results confirmed previous socio-economic surveys, trends that suggest Burraneer Bay is a relatively affluent suburb with above average car usage and low public transport use. Overall the respondents demonstrated high levels of education, climate change knowledge and indicated a willingness to change their behaviour.

Chapter Five and Six are drawn from the empirical materials generated by the qualitative methods. Chapter Five examines how cultures of driving are integral to producing particular ways of knowing the self, Burraneer Bay and Sydney. The findings from this chapter highlight the importance of how driving is the performance of individual classed subjectivities, intergenerational rituals and social geographies.

Chapter Six examines driving in relation to the concept of performativity. The embodied knowledge of driving is discussed in two parts. The first part presents the argument that driving both territorialises and personalises the interior of the car as a private zone configured by the experiences of comfort and convenience. The implications for public transport are discussed in light of the car being configured as a seemingly seamless place of comfort, safety and convenience. The second part of the chapter examines the implications of how driving knowledge configures particular understandings of nature that

separates the human and non-human worlds. The implications for climate change adaptation are discussed when driving knowledge configures nature as something 'out there', a driving destination. Chapter Seven brings together the arguments and offers three policy implications and directions for future research.

Chapter 2. Literature Review and Conceptual Framework

The aim of this chapter is to illustrate how a cultural geography approach to driving practices can help reframe discussions of global climate change. The chapter draws together a diverse range of literature. In doing so, the chapter highlights the different approaches and gaps in the literature exploring transport, driving cultures and climate change. The chapter is divided into seven sections. The first positions the car as central to discussions of climate change. The second highlights the importance of relational thinking for changing the approach of some climate change scientists. The third outlines Doreen Massey's relational concept of a progressive sense of place. The fourth section turns to consider the relational concepts of hybridity that has begun to inform some geographies of climate change. Hybridity illustrated the importance of the various social relationships with various technologies that sustain more than human worlds. The fifth and more substantial section turns to the concept of performativity. Performativity encouraged geographers to consider the importance of place through the body, drawing attention to memory, emotions, and the senses. Central to a performative framework are ideas of 'automobility', 'embodiment' and the impossibility of separating car bodies from human bodies. The final section draws various threads of the literature review together by outlining the key concepts of a performative conceptual framework.

2.1 Positioning the Car within Climate Change Debates

Globally, motor vehicles are identified as one of the fastest growing contributors to carbon dioxide emissions (Chapman 2007). Featherstone *et al.* (2005) asserted that motor vehicles contribute thirty percent of world-wide carbon dioxide emissions, as well as contributing to urban smog and acid rain (Chapman 2007, Meyers & Kent 2002, IEA 2000, Australian Bureau of Transport and Regional Economics, 2000). Seventy four percent of these motor vehicles were private cars. In Australia, it is predicted that without reduction measures that the transport sector will be responsible for a rise of 38 percent in emissions from 1990 to 2010 (Australian Bureau of Transport and Regional Economics 2000). In 2020, emissions from passenger cars are projected to be 33 per cent higher than 1990 levels (DECC 2009).

In 1990 there were approximately 478 million cars worldwide, in 2000 the figure had grown to 560 million (Meyers & Kent 2002). Each year approximately 70 million new vehicles are manufactured worldwide; 52 million of these are passenger cars (OICA 2008). In Sydney, results from the *Household Transport Survey* indicated that car-travellers contributed most to the increase in demand on the transport infrastructure between 1991 and 2004 (HTS 2006). Each weekday morning peak period is comprised of about 196,000 motorised trips (37,000 car drivers) entering the Sydney Central Business District (Corpus 2007). Although the use of public transport over the past 10 years has increased slightly, in 2006, three-quarters (75%) of adults living in capital cities used a private motor vehicle as their main form of transport to travel to their usual place of work or study (ABS 2006).

Thinking sustainably about car transport is often confounded by economic and personal imperatives. The economic relationships of the car are in part underpinned by the fossil fuel economy (Chapman 2007). Indeed, petroleum was often regarded as the foundation of the global economy (Pimental 2008). For years, the energy sector was dedicated to profit over sustainability (Klupfel *et al.* 2003). Car manufacturers were neither concerned with fuel efficiency nor carbon emissions. However, this is no longer the case. The discourse of peak oil has also meant even the largest petroleum companies are investing into research of 'alternative energies'. For example British Petroleum (BP) now has corporate investments that include solar power, wind power and biofuels. Early in 2009, BP committed to provide solar power to the large retailer, Wal Mart in the United States of America, to provide zero carbon electricity. Since 2007, Rio Tinto Mining has been in partnership with BP in a jointly owned company, Hydrogen Energy, to develop decarbonised energy projects worldwide. Lead free and low sulfur fuels are now common among fuel companies. Gas-to-Liquid (GTL) and Biofuel-to-Liquid fuel are two major sources of investment for the Shell Company (Shell 2009). Another initiative by Caltex targets the use of hydrogen as a means to lower the carbon dioxide output from car use, investing in an infrastructure based on a hydrogen economy. Equally, climate change discourses have forced car manufacturers to reconsider hybrid technologies, Smart Cars, fuel efficiency and carbon emissions. General Motors now has a range of eight hybrid cars that combine petrol and electric engines and provide technology designed to improve the fuel efficiency of the car and lessen GHG emissions. The next section turns to briefly explore the changes in approaches to climate change science.

2.2 Relational thinking: changing approaches to climate change science

There is a huge amount of research that examines the science of climate change (Carson 1964; Graham 1970; Ehrlich *et al.* 1970; Ehrlich 1974; Ehrlich & Ehrlich 1990; Ross 1991; Roberts 1998; Von Storch & Floser 1999; Lenzen 1997 ; Meyers & Kent 2002; Weart 2003; Lynas 2004; Roberts 2004; Speth 2004; Flannery 2005; Young *et al.* 2006; Barnett 2007; Chapman 2007; Hermans & Dimaggio 2007; Smil 2008; Stern 2008; Leichenko and Solecki 2008). Lehrer (2008) reports more physical scientists accept humans are in part responsible for climate change. The science of climate change is still highly contested but there is a more general consensus of this work that global warming is a process already underway. Some environmental scientists Young *et al.* (2006) acknowledge that biophysical systems required to be conceptualised as interacting within social and economic systems. Physical scientists conventionally relied on thinking underpinned by nature/culture binaries. However, biologists Liu *et al.* (2007) and Liu *et al.* (2003) pointed towards the impossibility of separating ‘households’ from ‘natural systems’. Climate change scientists are not alone in reconceptualizing the world in relational terms, rather than comprised of discrete entities (Anderson 2005; Waitt & al 2009, Rose 1999). The next section explores how relational thinking has influenced geographical concepts, beginning with scale and place.

2.3 Understanding the global as bounded social relationships: a progressive sense of place

According to Massey (2004, 2005) the global is a relational concept. According to Massey (1994) places are not, and perhaps never were, tightly bounded regions or locales, inhabited by homogenous groups and communities anchored in tradition. Instead, lives are infused in and through places within international networks of supply and production, whether we realize it or not. She suggested individuals experience a stretching out of social relations, a progressive sense of place, maintained by the regular and irregular movement of people, things, food, money, goods and service in and out of places. Massey (2001) asserted that space is socially constituted and that it is the relationships between places, and not merely characteristics of place, which matter. In a similar vein, place is understood as mobility and flow in everyday practice rather than fixed, homogenous and bounded (Thrift 2004; Sheller & Urry 2006; Amin & Thrift 2004). Massey’s progressive

sense of place is crucial to thinking about the ways in which driving cars may help constitute particular geographical scales. Potter and Starr (2009) assert policy responses to climate change demand thinking that can embrace the dynamic, fluid attributes of place. The next section briefly outlines how unbounded, fluid ideas of space are integral to the concepts of hybridity (Whatmore 2006; Hobson 2006).

2.4 Hybrid geographies of climate change

The work by Hobson (2006, 2008) and Shove (2003) illustrated the implications of so called hybrid geographies of climate change. Drawing on the ideas of Bruno La Tour (1996) and Donna Haraway (1991), hybrid geographies conceptualize places as forged through networks of connections between humans, plants, animals and things. For example, Hobson (2006) examined the socio-technological networks sustaining the everyday practices towards sustainable technologies including ‘bins, bulbs and showerheads’. Hobson’s work is pivotal to illustrating how everyday practices provide a crucial entry point for examining household ‘sustainability’. In the same way Shove & Southerton (2000) tracked the socio-historical path of everyday appliances. They illustrated how the uptake of freezer technology has spawned supporting industries and raised expectations of ‘convenience’. These industries, in this case supermarkets and the frozen food industry, not only perpetuate a dependence on the freezer but also modify household activities, such as shopping and food preparation. Shrove highlighted the way that processes of normalization and adaptation are dependant on negotiation and renegotiation of social identification, desires and beliefs and expectations. Crucially, she and others have pointed to how work, domestic and leisure spaces are transformed by changing ideas of bodily comfort, courtesy, cleanliness, convenience, productivity and self expression (Shove 2005; Hitchings and Lee 2008).

In turn normative expectations of bodily comfort have important implications on individual carbon emissions. For example, Cooper (1998) pointed out that in the early 1900’s the norm in many European societies was for children to study outdoors in the fresh air. This practice was underpinned by beliefs in the outdoors being considered both more comfortable and healthier. Another example is Hitchings and Lee (2008) work on air conditioning in Singapore. Here air conditioning is now considered to be a basic necessity rather than a luxury item. Similarly, Chappells and Shove (2005) reflected on the increasing reliance on air-conditioning in the United Kingdom. This reliance on air conditioning is a result of social expectation based on taken for granted comfort standards.

Further, as Chappells and Shove indicated, the normative expectations of comfort are dynamic and negotiated. Hence, there is always flexibility to what is understood as comfortable. The next section turns to an alternative approach, that of performativity, to thinking about interconnections between cars, bodies and space.

2.5 Performativity, embodied knowledge and car mobility

Performativity is a concept driving much research in the humanities and social sciences (Bell 1999; Latham 2003; Thrift 2004; Burkitt 2008). Butler (1990) argues that subjectivities are not secure and are only temporarily reinforced by being enacted. Elspeth Probyn (2003) extended this line of argument, suggesting not only that our sense of self does not pre-exist our performance of self, and so is fluid and uncertain, but also depends on the time and place. She termed this concept the ‘spatial imperative of subjectivity’ (p.298).

Hence, driving a car can be conceptualized as one way through which particular subjectivities are enacted *in* and *through* space. For example, Walker (2003) investigated the connection between car culture and young working class men in Western Sydney. She found that the car offered possibilities to perform and reinforce a particular style of classed masculinity. The car was used as a site for male bonding. Walker positioned this particular car culture as an attempt to reject the dominant social order where physical labour is not as valued as mental labour. Similarly, Dowling *et al.* (1999) discussed the gendered patterns of driving. They found that men and women in the Greater Sydney Region had different patterns of travel and travelled at different times. Women’s interpretations of their multiple subject positions as workers, wives and mothers played a significant role in how they determined their patterns of driving. Dowling (2000) examined how driving in suburban Sydney helps women with children define their role as a ‘good’ mother by the journeys they make with and for their offspring. The choice of their children’s school was not based on proximity, but on aspirations for their child’s future. Longer commutes to school were thus justified. Similarly, Dowling (2000) discovered a preference for children to be engaged in formal after-school recreational activities that necessitated the use of the car. This corresponded to the belief that suburban streets were not safe places for children to play, and thus this duty of care was enacted by driving, serving the dual function of ensuring their safety and enhancing their life chances. For many women with families, their driving can be understood as performance of being and becoming a mother.

Nigel Thrift (1999, 2004) further extended this line of thinking about performativity in 'ecology of place' by advocating for a body pedagogy. Thrift was specifically interested in *how* the physical and emotional attributes of the body interfaced with the physical and social worlds. His focus was less on how people think about the world, and more on what people do. His attention therefore turned to thinking about how the meanings of space are configured by the endless stream of moment-by-moment interactions that individuals encounter in negotiating everyday lives. For example, Bull (2001), Gilroy (2001) and Thrift (2004) have explored the highly personal responses to how the sensations of driving are associated with emotional attachment and feelings of personal liberty, pleasure and freedom. Bull (2001) illustrated the outcomes of car mobility in the spatial and temporal patterns of work and leisure. For example, Bull (2001) discussed how car mobility transforms time from the ordinary everyday, into a privatized escape of convenience, privacy, entertainment and comfort through climate control. Bull concluded that in the car the driver is insulated from the noise and pollution of the road. Gilroy (2001) reflected on the expressed love of the Afro-Americans for cars, aligning this with ideas of respectable domesticity and aspects of black freedom struggles. He argued that the car is positioned as a sign of liberation from apartheid, political freedom and public respect.

Thrift (2004) paid particular attention to computer technology and the ergonomics of car design. Car technologies, Thrift argued, are integral to reconfiguring the driving experience. The increasing technological innovations of control for example, ABS, or traction control, relegate some of the need for judgment to the car. New forms of hybridization are emerging as ergonomics seeks to find a more comfortable fit in the human non-human interface. Cars are becoming more human-like, tending to individual needs and maximizing the experience of comfort (Murphie and Potts 2003). The driving experience is transformed into a micro world of comfort and privacy. Thrift recounted that cars are viewed as enabling greater travel reach, encouraging feelings of greater freedom and independence.

Kaufman (2000), Sheller and Urry (2000), Motavalli (2001), Katz (2000) and Miller (2001) have all documented the many different types of intimate relationships that people have with their cars. For example Miller (2001) coined the term the 'humanity of the car'. Miller suggested the car is so integral to Western society that it is fundamental to how individuals regard themselves and engage in their daily activities. He suggested that the

level of socialization with cars is to the extent that it is almost impossible to separate being human from car ownership.

Katz (2000) also suggested drivers experience cars as extensions of their bodies. The driver and the car move and perform as one, within a system of signals and manoeuvres in a complex web of driver communication negotiated with other drivers. He likened the experience of driving in a private cocoon, heightened through music and driving ability. This resulted in feelings of pleasure and freedom.

Urry (2001) echoed the ideas of Thirft's 'ecology of place' as he examines the kinaesthetic sense of movement our bodies experience as we walk, sail, climb, drive or touch. Urry, (2001) highlights the importance of physical proximity and mobility in making sense of the world. He asserted that movement and physical proximity produce a particular understanding of the world through the body. He termed this a 'sense-scape,' where objects are not 'objective' entities but form reciprocal interactions between senses, mobility and the material world. In other words, the physical qualities are shaped by the senses of the body, at the same time as certain senses are triggered by the material qualities of the world. For Urry, mobility is crucial for how the sensual body begins to understand the world.

More recently, Thrift (2008) pointed out to the role of the car in sustaining a 'landscape of anticipation'. Speed and regularity of the car are taken for granted. Mechanical breakdowns are quickly fixed. Regular maintenance of systems seems vital to ensure the smooth connection of daily interactions. This generates a comforting sense of regularity. Disruption of routines is cause for annoyance. The car affords us the sense of order, convenience and speed in a frenetic go-faster world. The strong attachment we have to cars and the feelings of pleasure and freedom associated with them make it difficult to reduce their use.

Car mobility therefore can be regarded as a bodily experience that enables a variety of social and personal connections in and through the space of the car. The car demands particular ways of dwelling, travelling and socializing. Addressing the question of how to encourage people to drive less requires careful consideration of the sense of self and geographies that people forge through driving their cars. Tempting most drivers out of their cars remains difficult, even with increasing economic and environmental costs, because of the particularly intimate experiences people have with their automobiles.

Much work has already documented that people continue to drive their cars, even though they comprehend the environmental damage they generate as drivers (see Newman & Kenworthy 1989; Maxwell 2001; Miller 2001; Carrabine and Longhurst 2002; Stradling 2003). The data gathered documents the persistent driving patterns of commuters. Equally, there is a vast amount of research that documents perceptions and understandings of sustainable behaviours and beliefs about climate change (Arbuthnot 1977; Kenrick *et al.* 1990; Hinchcliffe 1996; Wilson 1996; McNaughton & Jacobs 1997; Berk & Favell 1999; Barr 2003; Johnson *et al.* 2004; Transport and Population Data Centre 2005; Edwards *et al.* 2006; Greenberg & Crossney 2006; Shannon *et al.* 2006; ACVS 2008; Hartmann & Apaolaza-Ibanez 2008; Zoellner *et al.* 2008; Blennow & Persson 2009; Olausson 2009; Rathzel & Uzzell 2009; Spoel *et al.* 2009; Sunblad *et al.* 2009). Yet, less well understood is *why* people continue to drive even though they are knowledgeable about climate change and evoke pro-environmental attitudes.

2.6 Conceptual Framework

According to Hulme (2008) climate change adaptation policies need to be re-framed in a way that makes them relevant and personally significant for different social groups. He argued that geographers are well positioned to address these questions by having conceptual tools that rethink human - environment relationships. Castree *et al.* (2008) agreed that climate change adaptation needs to be viewed from a new perspective in order to make it an integral part of different people's everyday lives. New perspectives and insights can help motivate individuals to act in more environmentally responsible and thoughtful manners.

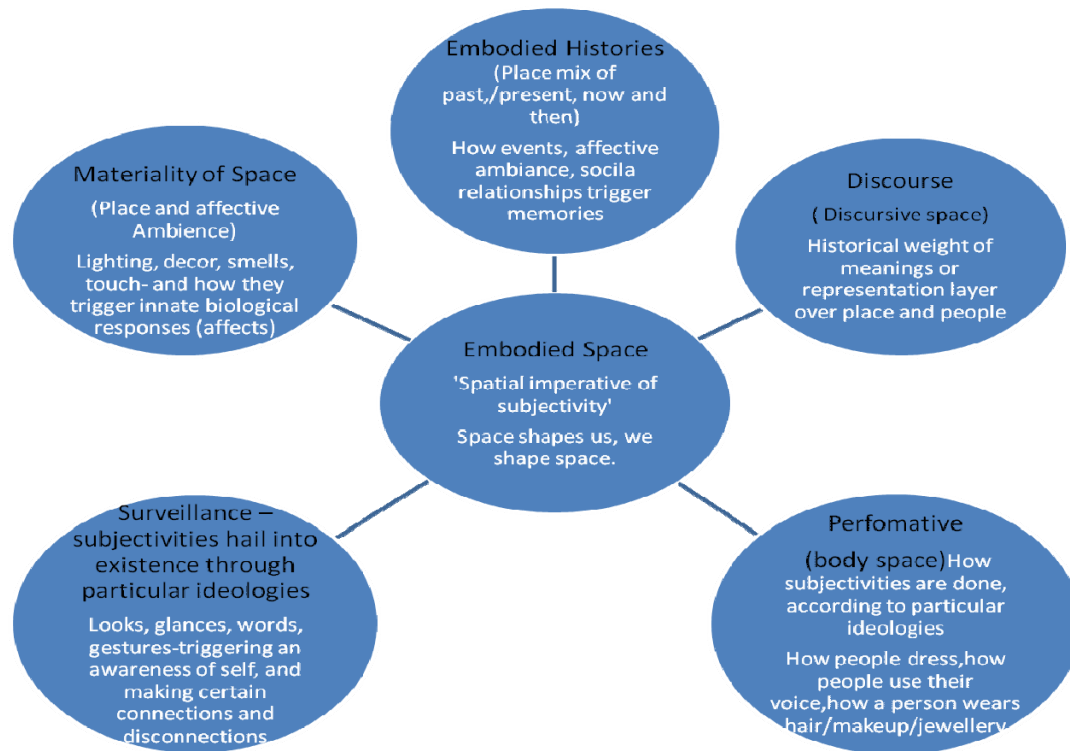
In response to the calls of Hume (2008) and Castree (2008), this thesis deploys a performative framework which acknowledges how bodies and space are mutually constituted. Hence, car spaces configure subjectivities, and at the same time subjectivities help configure the spaces of the car. Car mobility produces its own distinctive geographies. At one level, car mobility influences how a person may encounter the world including the ability to go further, to see more and to do more. Car mobility is underpinned by a vast array of supportive structures: the roads and freeways, repair and re-fuelling stations, traffic management systems. These all allow an imperceptible and incremental merging of the car with human bodies. Hence, at another bodily level, the car is imperative to how we *sense* and *make sense* of the world. In this thesis, three sets of

ideas underpin this understanding of the relationships between cars, bodies and space: Doreen Massey's (1993; p68) 'progressive sense of place', Elspeth Probyn's (2003; p298) 'spatial imperative of subjectivity' and Nigel Thrift's (1999; p320) 'ecology of place'.

Doreen Massey's (1993) concept of a progressive sense of space underscores the idea of space as not only fluid and dynamic but also intimately connected with time. Space/time is constantly negotiated and is in an on-going process of becoming; amorphous and unbounded. Building on these ideas, Elspeth Probyn (2003) offers the idea of situated subjectivities to shed light on how a sense of self is always configured in situ (Figure 1). Probyn, (2003) by thinking spatially extended Butlers' (1990) argument that identities do not pre-exist our performance of them, accentuating the profound uncertainty and insecurity of identities, only being made temporarily more certain by being enacted. She alerted scholars to how subjectivities and space are mutually configured through the interplay of personal histories, emotions, affective ambience and discourse/knowledge. Crucially for this project, the body is the site of the production of knowledge. As Carolan (2008) argued space is constituted with our bodies. In this project, how the driving body configures knowledge about the self, geographies of Burraneer Bay, Sydney, relationships with the non-human world, and understandings of climate change is examined.

Similarly, Nigel Thrift's (2002) 'ecology of place' understands bodies and space as an ongoing project constituted through movement and flow through the everyday. Following Thrift, space is configured through the flow of bodies, things, energy and information. Thrift (1996 1997 1999) asserts that body-space relationships are infused with desires, emotions, understandings and bodily affects. As Amin (2007) argues, a great deal of urban life is made up of the bodily interactions we have with people and things as we go about our daily business. Thrift's ecology of place acknowledges how the materiality of the car, bodies, driving practices and geographies are mutually constituted. They are ongoing; dependent on individual negotiation and renegotiation of social identities, desires and beliefs and expectations. The desire to drive is always contingent on how an individual's sense of self (and their embodied past) is woven into a particular array of connections, or disconnections in space and time.

Figure 2.1 Diagrammatic Representation of the Conceptual Framework.



2.7 Conclusion

The literature review has brought together ideas about the role of the car in contemporary Western societies. On the one hand, climate change science has identified cars as a key source of greenhouse gases. The universalizing discourses of climate change positioned the car as a discrete entity, a feat of technological engineering, a device of artificial character amongst other machines and tools. Climate change science initially divorced the car from any ideas of agency, positioning the car as a passive apparatus that can be picked up or put down at will. The science of climate change understood the car in terms of numbers, cubic metres of carbon emissions and fuel economy. Such an approach is imperative to measuring the role of the car in climate change. Yet, these measurements offer little insight into why individuals drive cars, and how they could be encouraged to drive less.

On the other hand, the ontology of car cultures advocated for the impossibility of separating the body from technology. Within a performative framework, cars can be

considered as extensions of the body. In other words, body techniques are integral to driving a car. Hence, the separation of machine and body seems impractical and unfeasible. Adopting this approach, the body becomes the site of knowledge production in a fusing of agency, intention and reciprocity between humans and machine. Hence, cars are conceptualized as not only having symbolic value, but also as helping to stabilize particular understandings of the self. Furthermore, the practice of driving is understood in relational terms between bodies and space. At the same time as particular forms of car mobility help stabilize particular understandings of self, particular geographies are configured through rhythms of car mobility, including understandings of streets, suburbs, cities, nature and climate change. The conceptual framework that followed explained the lens through which the project was conceptualized. The performative framework adopted in this project necessitated going beyond the conventional data collection methods of surveys, diaries and semi-structured interviews. In the next chapter, attention is given to the range of methods deployed in this project including 'drive talks'. Drive talks enabled possibilities to explore the geographical knowledge produced through the driving body, as well as insights into the performance of driving and the intimate space of the car interior.

Chapter3. Driving Methodologies for Climate Change Research

One aim of this thesis is to develop a methodology to unpack how attitudes and understandings of climate change may influence driving practices. Hence, the following chapter outlines the research strategies deployed to examine the relationships between driving, self, place and climate change.

This chapter is structured into four sections. The first locates the researcher within the project. Research does not come from ‘thin air’. Researchers do not drop into a project with pencils at the ready. Hence, it is crucial to examine the research-researcher relationship. The second presents the rationale for choosing a mixed method approach. Mixed methods are considered in terms of enhancing research rigour – or efficacy. The third discusses how the project was implemented. Attention is given to ethics, survey design and recruitment. The fourth and final section discusses methods of analysis. To begin, the chapter reflects on the personal process forging the topic.

3.1 Why this project?

The origins of this project came from teaching at a girl’s high school in Burraneer Bay. The school’s ‘Science Department’ took part in regular bush-care and stream watch activities and were involved in the ‘teach sustainability’ initiative of the University of New South Wales, Faculty of the Built Environment. The curriculum had a strong focus on ‘environmental sustainability’. This meant that the teachers were interested in integrating issues that promoted the protection of the non-human world, often understood as ‘natural systems’ or ‘habitats’. One idea behind these lessons was to encourage students to care, for example fostered by monitoring stream water quality. To care is to take an interest in the world, and does not necessarily rely upon a ‘green’ identity. According to Gruenewald (2008), Schneller (2008) and Ballantyne *et al.* (2001), this type of place-based education can have a sustained long term effect on environmental consciousness and environmentally sustainable behaviours. Yet, in my experience, at the end of each day, there was a long line of luxury vehicles waiting to pick-up the high-school pupils. I started

wondering if what they learnt at school transferred into changes in behaviour outside of the classroom. Did learning about caring for a stream extend to the practices of everyday family life?

3.1.1 How has the project changed?

Initially, I was interested in exploring the role of children as ‘drivers’ of consumption practices in family households. Research suggests young people have higher levels of knowledge about sustainability issues (Ballantyne *et al.* 1998). How do pupils transfer knowledge in households? Do adults listen and respond to the ideas brought home from school? Implementation of such a project required an enthusiastic and willing school partner and Science Department. Conversations with the principal at the high school where I was teaching suggested that neither the enthusiasm nor willingness for this project existed. Hence, the project was redesigned.

Redesigning the project was in part fashioned by conversations within my own friendship networks. These were comprised of middle class women of diverse origins, aged between 30-50 years old. Background reading for my ‘schools project’ pinpointed the dissonance between consumption and expressed environmental concern. In my friendship circles, I found myself positioned as an activist because I pointed out the consequences of our suburban consumption practices. Generously, my friends listened and empathised before moving the conversation onto what they regarded as more pressing issues like what they were going to do at the weekend. However, their empathy only seemed to underscore how ‘the environment’ was disconnected from their everyday lives.

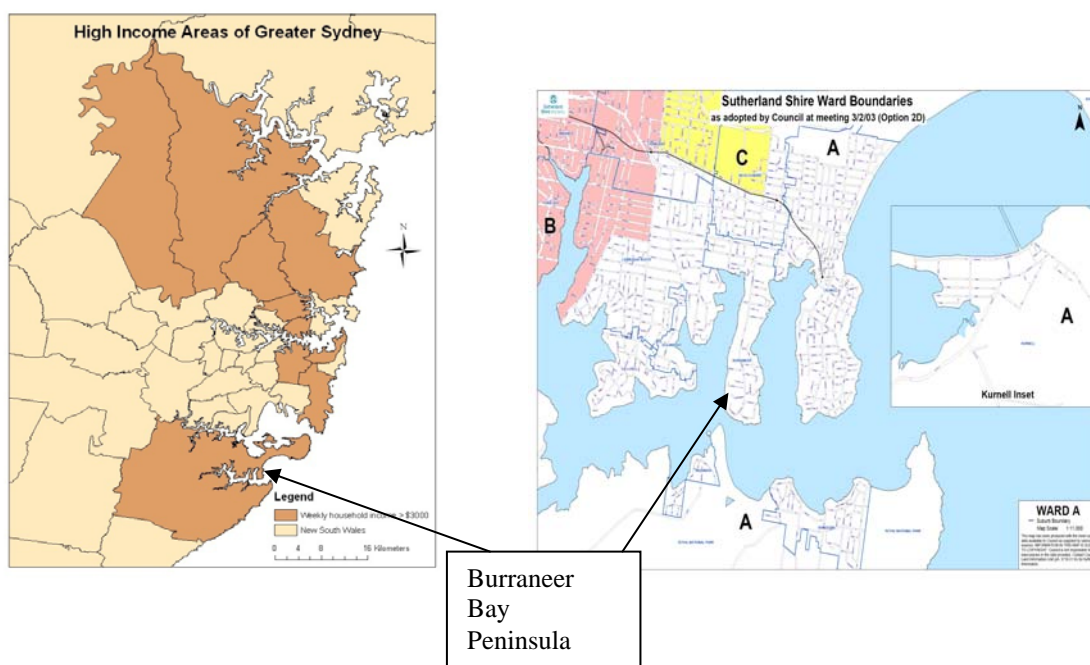
What can best be described as the ‘eureka moment’ occurred when I was in a designated ‘nature reserve’, camping with my family and a group of friends and their families. I was canvassing my friends, and their children, on their attitudes towards, and beliefs about, climate change. An old friend advocated that he thought reducing car usage was the best way to cut carbon dioxide emissions. As he finished speaking, he jumped into his huge, new four-wheel-drive and drove to the toilet block 150 metres away. What was preventing him from acting out his beliefs? How could people be made aware of this discord between espoused values and actions to support the values? What was the story?

3.1.2 Re-orienting the project

This project became fashioned to explore these questions within the broader context of Burraneer Bay, Sutherland Shire, Southern Sydney. The coastal suburb of Burraneer Bay located some 35km from the Sydney Central Business became the focus because of both its socio-economic composition, high-level of car ownership and reliance upon commuting by car to work (See Figures 3.1 and 3.2).

Figure 3.1 Location Map of Burraneer within the Greater Sydney Region indicating areas of high income. Source: ABS Data

Figure 3.2 Sutherland Shire Ward Boundaries. Source: Sutherland Shire Council



The socio-economic profile of Burraneer Bay enabled possibilities to explore the paradox arising from how affluent middle-class people often express the greatest concern for the environment, often have the highest-levels of knowledge about environmental issues, yet are responsible for producing the highest levels of GHG emissions because of their everyday practices (Lenzen 1997; Ropke 2005; Barnett 2007). To explore this paradox the project required both quantitative and qualitative data. On the one hand, this project required quantitative data to identify the types, trends and patterns of car use. On the other hand, this project required qualitative data to better understand *how* peoples' relationships with their cars influence their driving practices. In short, what are the reciprocal relationships between a suburb, automobility, environmental knowledge, environmental attitudes, households and identity?

3.1.3 Reducing the scale of the project

In the initial design of the revised project, I was enthusiastic about implementing a participatory style ‘intervention’, asking participants to replace one or several journeys by automobile with an alternative method of transport. Initially, I envisaged asking them to document their reactions to these different modes of mobility. I realised this was beyond the scope of an Honours Project when considering how much data this would generate, the potential problems of recruitment and time-intensive qualities of such an intervention. The intervention is discussed further in Section 7. 4 ‘Future Research’.

BOX 3. 1 My Motivation for this Project.

My motivation for this project is based in my early childhood experiences where nature was a prevailing force and environmentalism was a logical and practical consequence. I grew up on a mountain side in the wilds of far North Queensland. There was a waterfall in the back yard, snakes in the lounge room, tree frogs and geckoes in my room. The natural world has always been a central part of my being. The cyclones and floods, the rocks and the mountains. I was inspired to study science and education, with a view to promoting love and care for nature through the school system. The success stories are there in Bega, Eden and other coastal townships, communities taking steps to embrace their strong place-based attachments to grassroots sustainable policies. But what about the urban environment? We are an ecosystem too. We need to care about where we live just as much as those who live in rural areas. I have come to realise that promoting awareness of the need to care for nature is an uphill battle; even my own friends have many excuses for not being involved. Too busy, too messy, too tricky. I asked a girlfriend what she was going to do about global warming, she answered: ‘Buy a couple more air-conditioners’.

3.2 Why A Mixed Methods Approach?

The following section provides a justification for a mixed methods approach. Combining quantitative and qualitative methods enhanced rigour (Carr and Kemmis 1986; Creswell and Plano Clark 2007; Tobin and Fraser 1998). Following the advice of Bergman (2008) and Gilbert (2008), a mixed method approach was applied to provide complementary empirical data. As Bergman (2008) argues, different methods reveal different dimensions of a phenomenon, often producing multi-factored accounts rather than a single causal factor. On the one hand, quantitative data provided possibilities to describe, measure and model attitudes, relationships and trends. In this project, quantitative data was important

to provide measures of car types, motivations for driving, driving patterns, and attitudes towards the environment and knowledge of climate change. On the other hand, qualitative data provided opportunities to explore the ambiguous and often contradictory embodied knowledge. Cresswell and Plano Clark (2007) asserted that when quantitative data cannot provide an adequate exploration of the research question, qualitative research is needed to further understand the problem. In this project, qualitative data was important to provide insight into a number of questions. Why do people drive? What sorts of subjectivities are constituted through cars? What sort of knowledge is created about a suburb and climate change through driving? What meanings are given to the process of climate change and sustainable practices?

3.2.1 Research rigour and mixed methods approach

Efficacy, or rigour, is crucial to research. For qualitative research, Baxter and Eyles (1997) define rigour as comprised of four elements: credibility, dependability, transferability and confirmability. Table 3.1 provides a definition of each of these terms and outlines various research strategies.

Table 3.1. Criteria for evaluating qualitative research

Criteria	Definition	Methods employed
Credibility	Authentic representations of experience	<ol style="list-style-type: none"> 1. Purposeful sampling - Interview people who fit into an identified target group 2. Peer debriefing-Regular consultations with supervisor 3. Peer discussions, discussions with the Local Council Environment Department. Seminar presentations to the School and other students throughout research process, completion of a literature review. 4. Member checking - revisit interviewees to confirm that their transcripts a satisfactory representation of their concerns. 5. Positionality statements provided relevant to the topic 6. Triangulation - multiple methods of investigation, direct quotes from participants 7. Prolonged engagement- keep regular contact with participants
Transferability	Fits within contexts outside the study situation	<ol style="list-style-type: none"> 1. Thoroughly describe methodological and analytical strategies. 2. Literature review undertaken to set context.

Dependability	Minimization of idiosyncrasies in interpretation. Variability tracked to identifiable sources	<ol style="list-style-type: none"> 1. Interviews recorded with audiotape, transcribed shortly after. Notes made after interview to record general satisfaction or irregularities. 2. Work examined by supervisor 3. Member checking – revisit interviewees to confirm that their transcripts a satisfactory representation of their concerns.
Confirmability	Extent to which biases, motivations, interests or perspectives of the inquirer influence interpretations	<ol style="list-style-type: none"> 1. Employ critical reflexivity 2. Positionality statements provided 3. Research diary utilized 4. Reflective Journal utilized

Source: Lincoln and Guba (1985)

3.2.2 Ethics

This project received ethical approval from the Human Research Ethics Committee, University of Wollongong (Appendix 1). This application outlines the key ethical consideration of both Stage 1 and Stage 2. The most important ethical considerations are: protecting the confidentiality of the participants, making participants aware of the demands upon them, avoiding harmful or distressing lines of questioning, and informed consent to enable the inclusion and use of any photographs, diary material or direct quotes. Participants were offered a copy of any transcripts of recorded interviews. Participants were also made aware of who would be authorised to access the material and where, how and for how long the data would be stored. The participants were offered the use of a pseudonym for this project however all consented to the use of their names.

3.3 The Survey

The aim of the survey was twofold. The first was to measure householders' driving practices, environmental attitudes and climate change knowledge. The survey incorporated closed and open ended questions to collect information in five categories: classifications, behaviour, meanings, attitudes and knowledge. The second aim of the survey was to recruit participants to explore their driving knowledge.

The self-completion postal survey was designed through a process of iteration. There were approximately four draft surveys. Early drafts are illustrated in Appendix 2 & 3. A copy of the final survey is provided in Appendix 4. Taking the advice of Flowerdew & Martin (1997), to increase response rates and minimise response errors required following three overlapping key principles: (1) good design, (2) easily understood, and, (3) interesting to the participants. The length and layout of the survey was also influenced by the relatively small total population size of 600.

The survey needed to be easily understood. In practice this meant questions needed to be carefully worded in order to avoid technical or ambiguous terms that may be understood differently by the participants to the researcher. The survey combined closed and open ended questions. Questions were kept to a minimal length. Cohen *et al.* (2007) argue longer, more complex questions are a source of response error.

The survey also needed to be interesting. Home and driving are both topical issues. The survey title included the name of the suburb in the hope it would pique the interest of the participants. To sustain interest in completing the survey, attention was given to visual appeal, a simple to follow format, with plenty of blank space for the responses. An addressed return paid envelope was included to maintain interest in returning the completed survey.

The survey layout was designed to start with some simple, unthreatening quantitative questions about the types of vehicles in the household and the usual journeys undertaken. These questions seek to categorize participants by the patterns of regular driving practices undertaken as well as the reasons for the journeys. These questions were drawn from *The Behaviours and Attitudes to Water Consumption Survey* (Troy and Randolph 2006) and from *A Preliminary Survey of Household and Personal Carbon Dioxide Emissions in Ireland* (Kenny and Grey 2009).

Piloting is an integral part of good survey design. Piloting helps to reduce response error by ensuring that questions are easily understood, and to identify any ambiguity created by wording. A survey was piloted with 10 individuals. These include 5 Burraneer Bay residents and 5 teachers from a secondary school in this suburb. The pilot surveys provided a great deal of valuable feedback on how the survey was understood and this resulted in changes to wording and layout (see Appendix 2 & 3 for draft versions). More

space was provided for responses as the pilots proved cramped and difficult to read. Where questions were misinterpreted, the layout was adjusted to make questions easier to follow and understand.

3.3.2 Collecting attitudinal responses

The central part of the survey asked for information about attitudes and opinions. According to Parfitt (1997) these are the most difficult responses to collect. Hence a set of standardised questions were included in the survey. Likert Rating scales allowed the respondent to indicate if and how they agreed with statements providing a degree of sensitivity and differentiation (Cohen *et al.* 2007).

Attitudes towards climate change were measured drawing upon the *CSIRO Energy Consumption and Alternative Energy Sources Survey*. Measurements of environmental attitudes relied upon reproducing The New Ecological Paradigm (NEP). The NEP contains fifteen items covering five environmental dimensions. The five dimensions are classified as ‘reality of limits to grow’, ‘anti-anthropocentrism’, “fragility of nature’s balance,” “rejection of exemptionalism,” and “possibility of eco crisis”. There are three questions in each dimension and the total of scores are used to indicate a ‘pro-ecological worldview’ (Dunlap & Van Liere 1978; Dunlap *et al.* 2000). The NEP is widely used in environmental reports, including the State of the Future Reports –Future Leaders Survey 2008 (UK), The Household Travel Survey (Ministry of Transport 2006), Who Cares About the Environment? (Department of Environment and Conservation 2006), and The Neighbourhood Interaction and Participation Survey (Sutherland Shire Council 2007). The New Ecological Paradigm has been shown to possess predictive and known-group validity (Dunlap *et al.* 2000). This enabled comparability with previous work, and assured rigour given the previous testing of these questions as attitudinal scales.

3.3.3 Qualitative responses in the survey

Open ended questions are useful for investigating complex issues; they can provide the opportunity for a response that is more than a number or tick. Several open questions were included to allow the participants to answer in a more spontaneous manner without the limits of suggested responses. Participants were asked for their understanding of: climate change, the environment and their own driving concerns. Open questions in the survey

were answered more frequently than closed questions, particularly those seeking occupation (16 blank) and income level (7 blank). Participants were also asked to sketch their ideas about driving. The inclusion of the sketch offered an alternative form to the written word for expression of the meanings of driving (Nairn 2002). The sketches can highlight similarities and differences between people in their desires, acts and expectations (Waitt 2008).

3.3.4 Climate change knowledge and behaviour

Climate change knowledge was assessed by a standardized table, and by asking questions that called for explanation of the possible implications of, for example, how climate change could impact Burraneer Bay. A number of questions related to the behaviour of survey participants. Questions 10 and 11 were sourced from *Public Attitudes towards Climate Change and The Impact of Transport Survey* (The Department of Transport, United Kingdom 2009). The survey also explored changes to driving patterns within the last twelve months and offered a list of possible causes for the adjustment (Question 10 and 11). The final part of the survey sought the attributes of the respondent. Given the sensitivity of personal details they are usually left to the end of the survey (Cohen *et al.* 2007).

3.3.5 Survey distribution: the population of Burraneer

In total, 600 surveys were distributed over a two-day period in May 2009 (see Appendix 5 for distribution map). Each household in Burraneer Bay received the survey through a letterbox drop. Despite the close attention to ‘good’ survey design, in total, only 40 were returned with 1 incomplete or not properly filled in. This resulted in a total sample of 39. The response rate of 6.6 percent was lower than the expected 10 percent. One possible reason for this lower response rate is the burden of time to complete a four page survey. In a suburb of high full-time and part-time employment the burden of time may have been regarded as too great. According to the Australian Bureau of Statistics, Burraneer Bay has high rates of high full-time (47%) and part-time (26%) employment for both men and women (ABS 2006). Burraneer Bay is ranked seventh highest income area in Sydney, with weekly household income levels at \$3000 plus (ABS 2006). Another possibility is that the topic is not of interest or importance to Burraneer Bay residents, despite high car

ownership and low public transport use (ABS 2007). The survey being delivered in a clear window white envelope may not have had enough visual appeal to ensure completion. The survey may not have been clearly easily distinguishable from other advertising materials in mail boxes.

3.3.6 Who completed the survey?

The survey provided valuable information about the attributes of the respondents (see Figure 3.3 & 3.4). Socio-demographic attributes of respondents are strongly influenced by age, occupation, education and income. Nearly all respondents held a higher-level of education (7 participants held post-graduate qualifications, 9 with a bachelor's degree and 12 with a diploma, 4 with a trade apprenticeship, 3 with a year 12 level, and 4 with Year 11). The range of occupations included predominantly professionals, both employed and retired or semi retired (68%). By occupation, weekly income and age the respondents are characterized into two groups – affluent, mature aged retired professional men, and, affluent older professional men. There were 10 retired people, 3 self-employed people, 11 full-time employed, 5 unemployed, 2 full-time students, 6 employed part-time/casual, and 2 responsible for home duties. The age group of the participants ranged from 19 years old to 87 years old. There were a disproportionate number of men aged over 55 years of age. This is represented in Figure 3.3. In part, the lack of people aged less than 55 and lower income groups can be attributed to the demographic profile of the suburb. The suburb is characterized by a total of 25% of the population being in the age group 55-85 years old, 14 % of the population being in the age group 45-54 years, 28% of the population in the age groups 25-44, 7% being aged 15-19 years of age, 26% being under the age of 14. Interestingly, out of the total of 39 completed surveys, there were a greater number of men (23) than women (16). Normally, women are more likely to complete a household survey than men – suggesting driving was a topic of more interest to men than women.

Figure 3.3 Age and Sex of Participants

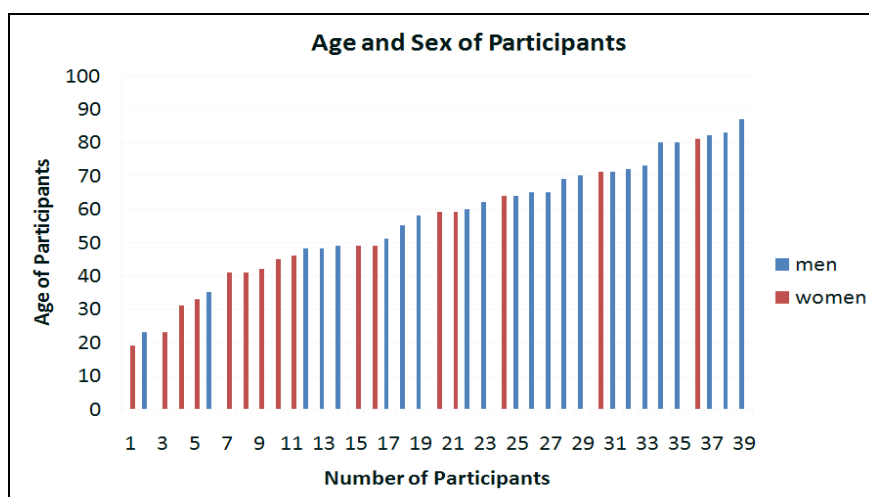
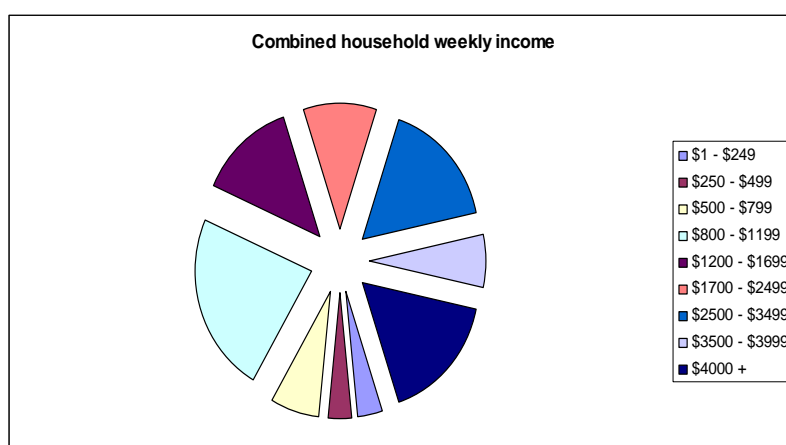


Figure 3. 4 illustrates the level of income reported by participants, 30% of respondents had income that was above the \$3500 weekly amount.

Figure 3.4 Combined Household Weekly Income.



3.3.7. Survey recruitment outcomes for Stage Two

Only 17 people gave their consent to be contact for future research. Because of the low response rate, all 17 participants were contacted. Only two respondents declined to participate further, three were not contactable. This meant that there were 12 participants in Stage Two, comprised of 5 women and 7 men. A table (Table 3.2) is included to provide a profile of the participants who were recruited for the second stage of the project.

Table 3.2. Participant Profile.

Participant	Age	Occupation	Education	Cars	Family circumstances	Weekly Fuel Bill
Jonathon Clark	48	General Manager	Bachelor/honours degree	4	Married, two university children living at home	305
John Riley	60	Retired	Trade/Apprenticeship	2	Retired, married, no children living at home	40
Mr. Brown	61	Company director	Trade/apprenticeship	2	Retired, married, no children living at home	70
Adrienne Matthews	46	Teacher	Post graduate	3	Married, children at home	220
Bruce Hicks	83	Engineer	Bachelor/honours degree	2	Retired, married, no children living at home	50
Maria Litterick	72	Teacher	Diploma	1	Married, no children at home	40
Krista Macklin	34	Naturopath	Post graduate	2	Married. Self employed	85
Chanel Ilkun	23	Veterinary nurse, employed part-time	Bachelors/honours degree	5	Single, no children, living with parents	240
Michael Breen	23	Waiter, Employed part time.	Bachelor/honours degree	4	Single, no children, living with parents	120
Mr. Fortesque	82	Retired Chemical Engineer	Bachelor/Honours Degree	2	Married, no children at home	34
Mr. Jarden	87	Retired Company Director	Year 12	2	Married, no children at home	110
Lauren Brown	19	Receptionist employed part time.	Current full time student, bachelors degree	3	Single, no children Living with parents	90

A participatory style research approach was used to encourage participants to select from a range of qualitative techniques discussed in the following section. The section endeavours to highlight the advantages and limitations of the individual methods as well as providing an explanation of the analytical procedures used.

3.4 Qualitative Methods

3.4.1 Semi-structured interviews

Valentine (2001) highlighted that interviews can produce a large volume of information very quickly, covering a variety of topics. She pointed out that the success of the interview is largely dependant on the listening skills of the researcher and the skill with which they

may or may not ask the appropriate questions. Also, the interview can only provide information about what people say they do, rather than their actual practices.

Interviews are used extensively in the social sciences to explore cultural understandings (for examples see Shostack 2006; Punch 1998; Limb & Dwyer 2001). Guided by the recommendations of Erickson (1998), Denzin and Lincoln (1994) and Duit and Confrey (1996), interview questions (see Appendix 6) were written to be open-ended and non-biased, allowing participants to comment on personal experiences without being 'led' by the questions. In semi-structured interviews, questions are devised to try to elicit responses that are important to the research focus. In this project the interview covered 7 themes: the car, weekly patterns of driving, likes and dislikes about driving, 'nature', climate change, walking and the future of Burraneer Bay. Unlike a structured interview, the semi-structured format allows for an amount of freedom for the researcher to probe more deeply into topics that may arise under each heading. The interviews were all conducted in a similar way, using a set of questions that covered various themes in order to minimize variables. This is not to say that the interviews proceeded in the same order, sometimes participants took the lead and eagerly talked about a subject that interested them in the normal flow of conversation. Sometimes the researcher had to ask questions to stimulate the discussion. It is important to recognise that an interview is an interaction between two people. Each person has a unique interest and personality at that particular time of life. The interview produced is a corollary of that interaction and a different participant or interviewer would have produced a different result (Shostack 2006). One advantage of having a second interview was the chance to question participants on something that they had written in their diary or ask for an explanation of a sketch they had provided or an earlier comment they had made.

Each interview was recorded and transcribed with the consent of the participants (transcripts and sound files are included in the electronic copy of this thesis). Recording enabled the researcher and the respondent to maintain a relaxed style of conversation without the need for detailed note taking. Another advantage of recording is the possibility to gather subtle nuances that may have gone unnoticed during the interview. Participants were given the option of the interview being conducted in their home or at a place of convenience. Most of the older participants chose to have the interview at home, while the younger participants opted for a local coffee shop. At the beginning of each interview the participants were given the chance to read the Participant Information Sheet (Appendix 7)

which outlined the aims of the project and the demands of the project. Participants were able to ask any questions about the project before signing the Consent Form (Appendix 8). Participants were informed that the research was interested in their experiences and that the questions were structured to produce a conversation. The themes of the conversation were introduced before each interview. After each interview notes were recorded that described the general circumstances, time and place of the interview as well as any reflections about the interview process. Circumstances surrounding the interview often resulted in the process often being far messier than the above discussion implies (see Box 3.2).

Box 3.2 Unplanned Events

Often, research plans don't go the way you expect them to go. While the ethic procedures were followed, they took on a different meaning in the context of interviewing Mr C. The first meeting with Mr. C. was arranged for 6.30 p.m. at a local coffee shop. As I was packing my bag with forms, paperwork and recorder in order to go to the interview, our dog Rusty ran across the busy road and was run over by a car. While I was dealing with the situation Mr. C. rang to say he was waiting at the coffee shop. I went to the interview shaken and upset, probably not doing a very good job at keeping the interview on track. I was appreciative of the fact that Mr. C. was very understanding as well as enthusiastic about the project and that I would have another chance to talk to him at another time. I felt keenly the need to be flexible about participants pulling out of an interview at the last minute because of unforeseen events. Participants calling off interviews at the last minute happened several times. Rather than being annoyed I was reminded of the impact of unplanned events. It was a good lesson about the messiness of everyday life and ethical research being more than a set of guidelines.

In addition, drawings were used in conjunction with interview material (See Figures 5.1 & 5.2). Primarily, drawings and diagrams are regarded as an alternative mode of communication to enable some participants to express their understandings, beliefs, attitudes, perceptions, views, and opinion within a space that is free from words (Mair & Kierans 2007). Intertextuality refers to the way that texts, or visual images in this case, support each other through the meanings that are assigned to them. One component of a sketch can uphold ideas of a competing or complementary component. In terms of intertextuality, sketches can support ideas that have been expressed in interviews.

In practice, many of the participants appeared to be unsure about how they should sketch their experience of driving. For instance, in the initial survey, of 39 respondents, 13 included a drawing, 9 drew a map, 7 provided a written response in the space provided and 10 left the space blank. During the interview, asking participants to draw their experience of driving elicited some hesitation. In total 5 sketches were drawn. The participants were

invited to explain what their sketch meant. For those who did draw a sketch, their discussion of their drawing provided a distinctly personal explanation of their driving experiences.

3.4.2 Social relationships in the interview situation

Awareness of researcher-participant social relationships is crucial when conducting interviews. Following the advice of Rose (2001), the researcher should recognise that social power relationships exist. Rose (2001 p201) also alluded to the possible influence of the ‘the specific context’ of the interview situation. The specific context of the researcher and participant relationship means that the context affects ‘what sort of talk is done’. In some cases participants positioned the researcher as a representative of the university, meaning that talk of climate change or sustainability had an air of officialdom rather than talk about individual experiences and feelings.

England (1993) advocated that the researcher should strive to find ‘betweenness’, rather than be positioned as ‘objective’, or necessarily identify strongly with the participant. Instead, betweenness is a process of negotiation, and sharing experiences between the researcher and the participant. The process of finding a position of ‘betweenness’ was facilitated by the unexpected experience of recognizing one of the participants (see Box 3.3).

Box 3.3 ‘Betweenness’

The process of negotiating betweenness is far from straightforward. The only interview that a position of betweenness was immediately apparent was the unexpected situation of arriving for an interview, and finding on the doorstep that I recognized the person from university. The language, bodily dynamics and conversation immediately changed by the point of connection provided by the university. We had both been at university together but didn’t know each other well. After some conversation about uni and mutual acquaintances, we moved on to talk about the project. It seemed that Michael was genuinely interested in the project; he himself was considering a return to study. Yet, throughout our conversation I sensed he was tempted to give me the answers I was looking for in an attempt to ‘help’ me with the project, rather than his own opinions and ideas.

A reflexive research diary was kept which outlined the relationship between the researcher and the participant. The research diary was important to document the challenges presented in conducting each interview, the social context of the interview, and the

dominant themes raised by participants. Reflecting on the dynamics of each conversation enabled reflection on the uneven social relationships underpinning the social interaction between the researcher and the participant. As Boxes 3.3 and 3.4 illustrate how reflexive accounts provide a means to render explicit the process involved in producing the data (Wagner 2002).

Covaleskj & Dirsmith (1990) recommended that researchers practice reflexivity in four ways by acknowledging:

- the researcher brings their own perspectives and presumptions,
- the researcher needs to reflect on their own understanding of everyday practices,
- recognising that the ‘research act’ impinges on a subjects’ reality and,
- the important difference between theory and qualitative research practice.

Box 3.4 The social terrains of the interview situation

Walking into someone’s house to interview them invites a reflection on what sort of person they might be, from the manner they display towards household members and the researcher, on their demeanour and behaviour. On entering Mr. Brown’s house, a magnificent panoramic view of the Bay, dotted with sailing boats loomed large, as indeed did Mr. Brown. Mr. Brown was ensconced in an enormous leather recliner that faced the view. He motioned for me to take my position in an adjacent identical chair, and dismissed his wife from the kitchen area saying that we didn’t need any tea or coffee. I assumed my position, almost prone, with the footrest high and recorder on. I floundered to sort out the paperwork, Consent forms and Participant Information Sheets, I felt flustered and at a disadvantage having no table to work on. Mr. B on the other hand, appeared relaxed, in control and self assured. Mr. B expressed his firm views about the environment and even went so far as to print out a recent newspaper article for me to take home that supported his views.

Most of the time, interviews were conducted with a warm and friendly atmosphere. Each participant was made aware that their contribution to the project was seen as valuable, and that the researcher was interested in their perspectives and reflections. Often the participants had children or grandchildren at university. The latter had influenced their regard for the project. Finding a position was facilitated by how these participants welcomed me into their household. At times I felt like a family member, meeting the dog, being shown around the garden and being given lovely morning and afternoon teas. Interviews in these households often ran over time as we chatted about other subjects cooking, gardening or children. At other times, the reception was less warm. Typically,

this was in households that held firm views about climate change as a matter of little personal concern. Finding a position of betweenness was much harder. These households tended to position me as an outsider. The older male participants were curious and a little wary of a jeans clad, middle-aged university woman. Their wives hovered nearby listening to the interview and rarely contributing. They questioned me about the type of research I was doing and the value of the research. These participants were far more reserved, and very guarded about revealing personal details; there was no sense of a free flowing conversation. The interview became more interrogative which resulted in a more formal atmosphere, and usually a shorter interview time. As a researcher I was never made to feel exactly welcome in their home, and this was also expressed physically (see Boxes 3.5 and 3.6).

Box 3.5. Research diary 17/7/09

Interview 9.30 with Adrienne Matthews. Turned up but no one home. Waited 10 minutes. Rang. Adrienne came back from Cronulla to do the interview. Sat outside on the balcony in the freezing cold because the cleaners were inside her house. The interview was quick. I was shivering. Answered all of my questions but had the feeling she was glad to get rid of me.

In these households there tended to be far greater physical and emotional distance between the participant and the researcher. In some cases I found it extremely difficult to maintain my equanimity during the interview and it was often with a sense of relief that I left the household. As Kim England (1994 p;85) said: 'Fieldwork is inherently confrontational in that it is the purposeful disruption of other people's lives.'

Box. 3.6 The social terrains of the interview situation(2)

Mr. J. greeted me in his pyjamas at the front door. He led me to the cluttered breakfast table and continued to slurp his *Weetbix* as he silently read over the Participant Information Sheet. I sat squirming uncomfortably watching a large slurp of *Weetbix* drying on the consent form. Mr. J. expressed his strong views about climate change being a 'load of claptrap'. I offered up some statistics that supported my opposing views only to be shouted down. I knew the theory of qualitative research espoused developing a 'betweenness' but in practice this was difficult to follow as I felt I was sometimes positioned as an outsider and 'opponent' to be overcome. I got the feeling that this could be Mr. J.'s motivation for taking part in the project.

3.4.3 Why solicited diaries?

Solicited diaries are increasingly a conventional tool for cultural geographers. A solicited diary is one that is specifically requested by the researcher for the purpose of the research (Bell 1998). Solicited diaries have been used in research to understand varied activities including shopping practices in the United Kingdom (Hoggart *et al.* 2001) and children's leisure activities in Bolivia (Punch 2001). The solicited diary is different from a personal diary in that, the participant understands that the diary will be read by the researcher and so it is written for an external audience (Meth 2003). It is likely that the diary will reflect what the participant understands to be 'what the researcher wants to read'. Therefore it is possible to understand the diary as being 'co-constructed' by the participant, the researcher and the research process (Bell 1998). Through diaries respondents are offered the opportunity to define the boundaries of their shared knowledge (Meth 2003). As outlined in Box 3.7, diaries revealed how some people positioned driving as a necessity others reveal the embodied pleasures of driving.

Box 3.7 Solicited diary entries

Mr. Brown bounds shared knowledge of driving as a necessity:

'It's hard to work out how my feelings may differ from one drive to another as driving to me is an essential part of life and you take it as it comes but it never bothers me.'

In contrast, Mr. Hicks bounds his shared knowledge of driving as an embodied pleasure:

'I have to admit enjoying the way the car goes up the ramp to the roof parking, there is a pleasure in the ease with which the car pulls up the slope. There is a pleasure in the control of a smoothly functioning piece of engineering. But then I enjoy any beautiful mechanical engineering to make any functional device, a sextant, a microscope, even a vernier caliper.'

'Chilly, but car is delightfully warm in sunny but cold weather. I'm beginning to think I DO have a love affair with my car, but it is not this car, just the modern car.'

A further significant benefit of using a diary is the more longitudinal insight over a certain period, in comparison to say, a one off interview. Elliot (1997) used diaries to supplement interviews with African women to generate understanding of fear of violence. The diaries revealed discontinuous reflections that were not necessarily a 'daily' or current account

but sometimes included historical background information. This is one advantage of the reflective diary as it can depict the fluid and changing nature of a person's thoughts and feelings in time. Elliot suggested that because the writing of the diary is done in private, there is a risk of decontextualization. Conversely, she acknowledged that because it is usually done in the home, that, as this is the site of many social relationships and realities, it can also potentially offer a highly contextualized account.

Following the advice of Meth (2003), Nast (1994) and others, diaries are deployed in this project because they offer the participants a chance to produce reflective accounts of their experiences in their own time and the possibility to express intimate thoughts, reflections and emotions that may be more difficult to articulate in an interview situation. These attributes of diaries over interviews are clearly illustrated by Mr Hicks (see Box 3.8).

Box. 3.8 Mr Hicks' Diary

Mr. H. Displayed a keen interest in things scientific. He told of his background in engineering and chuckled as he recalled having a Mass Spectrometer in his garage as part of his work in the local area. Mr. H. Seemed to be rather a nervous person and the interview seemed to stop and start, unlike an unsolicited conversation. The interview lacked in-depth insight although Mr. H. Was eager to contribute. The interview's lack of richness stemmed from my inability to establish points of connection with him. In contrast, his rich diary was filled with personal insights and witticisms. This was a clear example to me of how different people are able to express themselves through different means. Driving diaries clearly added another dimension to my understanding of the participants and their world.

3.4.4 Drive talk – situated driving subjectivities

Drawing on suggestions from Nigel Thrift (1997, 2008) that social action should be seen as a performance, this project implemented an experimental method of engaging with the participants through practical action. In an attempt to better understand how participants inhabit their world, it was decided to accompany them on a regular drive. Being-in-the-moment with the participants produced a knowledge that was based in physical experience, on several occasions, situations that they had described (tailgating, flashing of lights, sounding the horn) actually occurred during the 'drive talk'.

There were a large number of retired people in Burraneer Bay who agreed to take part in the interviews and the diaries. Very often they were enthusiastic about the project and

would have readily agreed to the suggestion of a ‘drive talk’. However, asking an older person to participate in the ‘drive talk’ could have presented some difficulties and even possible dangers. One of the prevalent themes for older participants during interviews was the need to concentrate on the road, and particularly what other drivers were doing. Drive talks were not deployed with participants where the risks outweighed the benefits (see Box 3.9).

Box 3.9 Possible Dangers of the drive talk

‘When I got to 85 I had to have my license rechecked. I failed the first one, because the female tester, she had a flap about going 51 kms in a 50 km zone that was speeding. That was her way of making sure I didn’t get my license, at least the first time. If you start running down the road, if you are going down the hill, she was saying ‘watch your speed, watch your speed’ but then you are not watching the road. A year later, when I took the yellow Merc. on that one too. I had to take one every year. She failed me on that one too. I had learned to watch the speedo on the road; I hadn’t had any accidents, only backed into things. I don’t drive and talk to people in the car. I don’t turn my head.’

The ‘drive talk’ with younger participants allowed a sharing of the private car space and offered rich insights into what the car meant to the participant. While participating in (seven) drive talks the participants offered ideas about driving pleasures, how they saw themselves in relation to other drivers and what the car said about them. The atmosphere in the car was more intimate than an interview situation and some participants seemed to show case their driving skills for the researcher’s benefit.

A list of prepared questions was used to cover a variety of themes about the car. This is attached in Appendix 8. Participants seemed to respond positively to the ‘drive talk’. The familiar interior of the car provided a quiet and private space for talking, more like going for a drive with a friend than being interviewed. The participants were driving through places that they were intimately familiar with, knowing the back streets and short cuts; they all agreed that it was relaxing to drive locally. The physical positioning in the car, of being side by side, was one that diminished the effect of the power relationship between researcher and participant. When driving, there was no need for direct eye contact, making conversation slow, easy and casual and giving time for thought while answers were being given. Some of the insights gathered from these drive talks included in-depth personal reflections were more valuable to the project than those collected in an ordinary around the table interview situation.

3.4.5 The management and importance of mixed methods

Mixed methods with twelve participants required careful project management. Interview times and attributes were entered into a spread sheet (Table 3.3). A note was kept of all correspondence. Before each interview familiarisation occurred with the survey questionnaires responses. Table 3.3 helped manage the project, given many respondents were enthusiastic but immediately unable to participate.

Table 3.3 Interview Schedule.

Participant	19/5	24/5		9/6	
3. Jonathon Clark	Phoned, ring back.	Rang and left message and number	Interview 6.30 pm at Gloria jeans Gynea. Mon 6.30 pm June 1st	Email to confirm drive time 1.30 at Gynea car park	Second interview 8/7
4. Kev Millar	Phoned, didn't want to participate				
5. Douglas Jarden	Set appt 9.30 TUES	Mr Jarden changed to Mon June 1 st at 9.30	Rang 13/6. Chatted about the diary. Call next week to collect.	Visited 7/7 picked up diary. Will meet for photos.	Visited 3 times in the week. Not home. Rang –not well.
6. John Riley	Gone to the US until 11/6. Happy to participate after this date	Rang 9/7 appt Tues 11.am 14/7	Email diary 1/8	2 nd interview 8/8 11 am Drive talk	
10. J. A. Brown	Set appt. 11.30 25/5 TUES. Ring on the morning to confirm	Changed to June 3 rd Weds at 11.30	Email diary received 5/6. Reply 5/6. Email sent 13/6 re diary	Mr Brown off cruising the islands back in 4-5 weeks.	Drive talk 31/8
21. Mrs Littrick	Set appt 10 am WEDS 27/5	Interviewed 27/5	Rang 9/6. Having eye surgery 19/6 call the following week. Still enthusiastic about the diary	Called 4/7. Can pick up diary next week.	Visit 7/7. Eye not good & flu. 2 nd interview 8/8
17. Adrienne Matthews	Exams, call back in two weeks. Happy to participate then	Rang 9/7 appt Fri 9.30 am, going on holidays	2/8 Didn't do the diary. Doesn't want to do another interview.		
18. Bruce Hicks	Email sent 27/5 email again	Reply by email, called 31/5 set appt for interview Tues 1.00 2/6/09	Rang 13/6. Will submit diary. Ring to arrange another appt.	Email contact regular. Rang Drive talk.	Second interview. 8/8
12. Mr. David	Shoulder injury	Rang 13/6.	Changed to tues	Rang next 6/7.	

Fortesque	. Ring back in two weeks	Arranged inter. Wed 17/6	3.30 pm	Next int. 17/7 3.30 p.m.	
31. Francesa Quartararo	Sent email 31/5	Rang and left message 10/7	No response to emails or voice messages.		
34. Chanel Ilkun 9527 4903	Called 27/5 Called 31/5	Interview Weds 3/6/09 9.30 am p.o. Gynea	Rang 9/6 set appt for drive talk 9 am Gynea PO	Rang 6/7.drive talk 4pm Gynea. 7/7.	Diary emailed 1/9
Mr Richard Alley	27/5 letter sent	No reply			
28. Krista Macklin	Rang 31/5 set appt for Tues 2/6 at Shell Rd. 2.30 pm	2/6 turned up for appt. Krista needed to reschedule.	Rang 9/6 left message.	Rang 9/7 appt Tues 14 th 1.30 interview	Diary emailed 9/8 Expecting baby.
27. Ken Alexander	Sent email 31/5	Email sent 9/6	Rang. Left message.	Not contactable	
35. Michael Breen	Sent email 31/5	Email sent 9/6	Rang 13/6. Set appt Weds 18/ 6 5.30 pm at home	Email contact. Drive talk 8/8 Diary picked up	
38. Lauren Brown	Rang 13/6. Left message with parents	Exams at uni till 26/6. Ring after that date.	Rang 9/7. Appt Fri 17/7 12 pm	Drive talk w/e 14/8 Rang 17/8 to reschedule	17/8 Lauren 9.30 -10 am. Drive talk.

One benefit of mixed methods became apparent because each participant had a preferred mode of communication. Some participants found their voice through different techniques, others were more restricted. A summary of the types of data collected from participants is presented in Table 3.4.

Table 3.4 Types of Data collected from participants

	Participant	Survey	Interview	Diary	Sketch	Photo	Drive-talk	Second interview
1.	3.Jonathon	✓	✓	✓	✓	✓	✓	✓
2.	5. Douglas	✓	✓	✓	×	×	×	×
3.	6. John	✓	✓	✓	×	✓	✓	✓
4.	10.Mr.Brown	✓	✓	✓	✓	✓	✓	×
5.	21.Maree	✓	✓	✓	✓	✓	×	✓
6.	17.Adrienne	✓	✓	×	×	×	×	×
7.	18. Bruce	✓	✓	✓	×	✓	✓	✓
8.	12.David	✓	✓	✓	✓	✓	×	✓
9.	34. Chanel	✓	✓	✓	×	×	✓	×

10.	28. Krista	✓	✓	✓	×	×	×	×
11	35. Michael	✓	✓	✓	×	✓	✓	×
12.	38. Lauren	✓	✓	✓	×	×	✓	×

Further, each provided different types of data. For example in the driving diaries, some participants provided almost entirely quantitative information about their driving (the number of kilometres travelled, the route taken) despite an explanation that the project was interested in their thoughts about driving, and accounts of their lived experiences. This could be due to some of the participants having certain preconceptions about what type of information a survey about driving by a University would be seeking.

Some participants were less reflective than others, unable to discern different feelings in regard to driving, simply saying that they never thought about it. Some participants understood the instructions quickly and thoroughly and undertook their diaries with gusto providing rich insights into their feelings about driving. On the other hand, some participants repeatedly wrote that driving was convenient yet provided no insights into how, or in what way, they considered it convenient.

3.5 Analytical Procedures - descriptive statistics

Analysis of data is one of the most crucial steps in the whole research process (Leech & Onwueguzie 2008). The survey was analyzed using two conventional quantitative techniques: descriptive statistics and content analysis. Descriptive statistics were used to categorize the socio-demographic attributes of participants, the types of cars they drive, weekly driving patterns, and the strength of environmental attitudes and levels of knowledge of climate change. Survey responses for closed questions were entered into an Excel spread sheet using a numerical coding system, which is included in Appendix 9. For each question it was then possible to calculate frequency distributions and percentages.

Information about the participants' beliefs and attitudes towards climate change and future environmental prospects was coded to indicate strength of agreement or disagreement with a Likert Scale. This provided an aggregate attitudinal outlook. Questions that generated strong agreement amongst the participants were selected as the most representative,

though care was taken to examine the responses that were not aligned. Statistics were presented in the form of percentage of the respondent number and some of these statistics were presented in the form of graphs. Interpreting the descriptive statistics the words of Forrest and Dunn (2007) were helpful. He advises that the data collected by surveys be viewed as an indicator of societal attitudes in light of the previous considerations. The results from this survey should be viewed not as a measure of quantitative proof but rather as an indication of the prevalent attitudes expressed.

3.5.1 Qualitative answers

A form of content analysis was used to analyze the open questions contained in the survey. Content analysis is a technique that relies upon quantifying word patterns. It is a research technique for making replicable and valid inferences (Rose 2001). One of the strengths of content analysis is that it works well with large data sets. Content analysis views the symbolic qualities of text and relates them to the wider cultural context through interpretation.

The responses to the open questions were entered '*verbatim*' into an Excel spreadsheet (Appendix 10). These responses were then entered into the program Wordle, a program that portrays words entered into the program in proportional terms. This provides a visual representation of the dominant trends of responses to open questions. However, as Crang (2001) points out, the number of times something is mentioned does not necessarily correlate to the importance attached to it. Hence the next section discusses the application of discourse and narrative analyses.

3.5.2 Discourse analysis

Qualitative research techniques should involve at least two, if not more, types of data analysis tools to triangulate results (Leech & Onwueguzie 2008). In this project a combination of discourse analysis, narrative analysis and content analysis was used on field notes, interview transcripts and diaries to interpret the empirical data. Analysis of the stage two data was based on the transcript and diary readings in order to distil each participant's interpretation of the use of the motor vehicle in the context of their daily lives. When using discourse analysis, representative or unique samples of language use are selected and then examined in detail. (Phillips & Jorgensen 2002). This emphasizes the

way that different versions of understandings emerge in conversation from the individual participant's perspective. Crang (2005) advocates for methods that do more than reduce information to 'data' but attempt to retain the qualitative elements of the information in order to create and maintain different forms of knowledge of our experience of the world.

Discourse analysis is a term applied to many different types of qualitative analysis. The type of discourse analysis applied in this project draws on the writing of the French philosopher Michelle Foucault. A Foucauldian discourse analysis is concerned with how particular ideas become naturalized as commonsense, while others are marginalized (Rose 2001). This type of analysis puts emphasis on *what* is said. As Doreen Massey (2001) notes: 'Changing discourses is part of changing the world'. Foucauldian discourse analysis is productively illustrated in geography in how individuals speak about nature; gender, race, and home (see Rose 2001; Castree 2005; Dunn 2001). The Foucauldian discourse analysis conducted in this project relied upon a series of steps or stages outlined by Waitt (2005).

3.5.3 Doing discourse analysis

The process for undertaking discourse analysis started with choosing the source materials or texts. In this project different texts were used, including interviews, conversations, correspondence, diaries, sketches and photographs. These provided a rich source of material for understanding how concepts are socially constructed. The understandings in one text did not necessarily have to reinforce or validate what was produced by another text, in fact they may throw up seemingly contradictory results. This caused difficulties in some cases over the choice of which participants to include and which to exclude. This only served to capture the complexities, contradictions, and ambiguities of human behaviour in our everyday lives. The choice of texts in this project was dependant on them displaying some richness in detail that depicted the participant's insights to experiences, attitudes and practices. The next step involved reflexivity. This meant that the researcher needed to reflect upon their own beliefs and how this positioned them within the project. In this project it was important to document how the age, ethnicity, class and gender of the participants, as well as their attitudes, impacted upon their relationship with the researcher and the research project as a whole. The relationships forged between researcher and participants are mutually constituted and contingent upon the life experiences of each, and how this colours their interpretation of events (Rose 1997). For example, understandings

of the suburb of Burraneer by a participant and resident for over fifty years cannot be the same as a researcher, who visits the area infrequently in order to conduct the research. It is important to suspend any preconceived assumptions in order to examine the texts with an open mind and avoid influencing the analysis (Rose 2001).

Next, the texts were examined in detail to try to establish the social circumstances affecting the production and circulation of the text. The people making the texts were residents of Burraneer, comfortable, mainly white with high car ownership and dependence. The texts were made as a source of information for the project, the University of Wollongong being the agency responsible via the researcher. Perhaps for this reason, some participants felt the need to provide mainly quantitative data about their driving practices, not valuing their own insights and frequently making pejorative remarks about their 'ramblings' or 'musings'. It was important to search the text for examples that revealed the social identities and relationships of the participants, how they understood and portrayed their world. For example, understandings of nature were sometimes portrayed within the nature/human binary. Nature was positioned as 'something out there'; going to visit nature was understood as a safari trip to Africa. In other cases, interacting with nature was understood as buying a bag of potting mix at the local nursery. How do these understandings arise and what are the circumstances involved in the production of these understandings?

The coding and organization of the data was conducted in stages. At first, descriptive codes were utilized to demarcate categories into four broad areas: content, practices, attitudes and experiences. Multiple codes were assigned to one section of text. Only then can emergent themes be highlighted through quotations from participants. Each theme illustrated how a particular set of ideas, or discourse, was deployed to make sense of the world. Yet these themes were often contradictory. For example, participant's discourse about climate change often conflicted with their family discourse.

3.5.4 Narrative analysis

With discourse analysis, there is the risk of de-contextualization as snippets of text are manipulated by the mechanistic processes of analytical procedures (Crang 2001). Jackson (2001) made the point that working from transcripts alone can distort meaning as the verbal intonations and body language can change the intended meaning. Sometimes this can result in the opposite meaning being recorded in the transcripts, for example when

something is said in an ironic or sarcastic tone. Hence, this project also deployed narrative analysis.

Narrative analysis is a term applied to a technique that pays close attention to not only what is said, but also *how* it said. It is a way of making sense of how a story is constructed. It is also concerned with what is not said, and how this can present a challenge to pre-existing understandings. Knowledge and understandings are embedded within oral narratives and have the potential to intersect with, and inform, current efforts to understand how the environment is conceived by individuals (Perks & Thomson 2006). Riley (2001) asserted that one of the advantages of oral narratives is that it allows a more socially enriched understanding of practice-based and place-bounded customs. The understandings contribute to discussion of environmental change and sustainable practices and to understanding how the process of change can occur within individual lives and communities.

3.6 Conclusion

One aim was to develop suitable methods to collect not only quantitative information about driving practices, but also the ways of knowing configured through driving. While the survey followed the principles of good design, the response rate was low. This was attributable to the lack of interest in the topic. Despite the low response rate, twelve participants were recruited for Stage Two. The second stage of the project relied on a mixed method qualitative approach involving semi-structured interviews, solicited diaries and drive-talks. These were conducted over a four-month period. The mixed method approach satisfied arguments that rigour in qualitative methods is in part achieved through the application of a range of data collection techniques. In addition rigour was enhanced by critical reflexivity and ethical considerations.

The next chapter provides an interpretation of the survey data using descriptive statistics and content analysis. Chapters 5 and 6 present the results from the application of discourse and narrative analysis of the empirical materials collected in Stage Two.

Chapter 4. What, where, and why do people drive private cars in Burraneer Bay and understandings of climate change.

This chapter is structured into three sections. The first section identifies what sorts of cars households drive and the relative importance of the private car in weekly travel patterns. Attention is given to the geographical implications of car mobility in configuring understanding of both metropolitan Sydney and Burraneer Bay. The next section outlines why people drive. Particular attention is given to differences between what men and women like and dislike about driving. The third section turns to climate change. Results are presented of participants' knowledge, understandings and attitudes to climate change as well as their willingness to change behaviours in response to climate change.

4.1 What did participants drive?

Cars and driving are integral to the lives of most residents of Burraneer Bay. ABS Census statistics suggest the suburb is characterized by high private car ownership rates per household (3 cars + ABS 2005) and low use of public transport. Respondents in the survey have a lower average number of cars than the ABS figure, at 2.5 cars per household. As illustrated in Figure 4.1 the mode and the median number of vehicles were 2 and 2 respectively. Nevertheless, these figures confirm the importance of car mobility in lives of residents in this suburb.

By type, vehicles were categorised into two groups, 'luxury' and 'standard'. Luxury vehicles were classified as those priced over \$60,000 e.g. BMW, Porsche, Audi, Mercedes. In contrast, standard vehicles were priced under \$60,000 and included models badged by Toyota, Ford, and Holden. The full classification lists are included in the Survey Coding Document included in Appendix 9. 34 % of respondents owned a luxury vehicle. Participant observation confirmed a large number of luxury and prestige vehicles. Commonly, households owned both a luxury and standard vehicle. In heterosexual households, the man often drove the luxury vehicle, while women drove the standard vehicle. By fuel type, of the 94 vehicles, only one was fuelled by LPG, and 5 were diesel. The average amount spent on petrol per week was \$46.47 but the range went from \$5.00-\$180.00

Figure 4.1. Number of cars owned

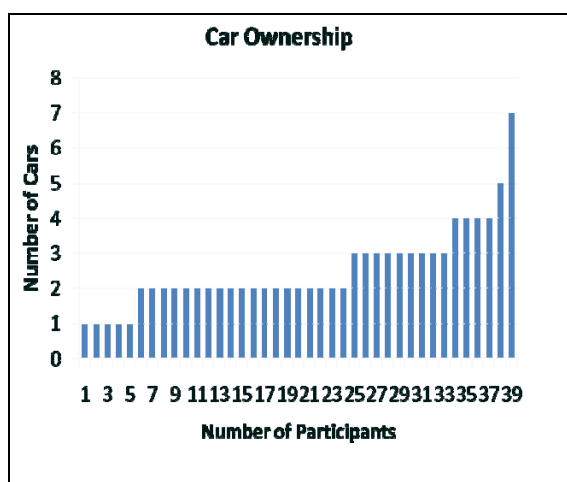
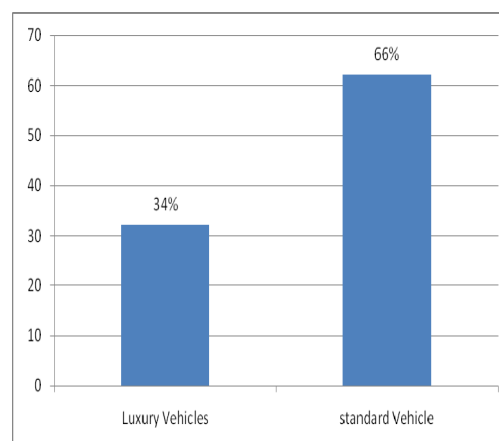


Figure 4.2. Types of Cars owned



Knorr Cetina (1997) suggested that cars should be considered as family members because of the kin-like relationships that many individuals develop with vehicles. Cars are often given a name and given a human-like personality. In an attempt to explore these kin-like relationships people may have with cars, the survey asked for nicknames. Nearly half of the respondents' cars had a nickname (see Figure 4.3). This confirms Miller's (2001) argument that the relationship that people have with cars is not only practical but also sometimes emotional. This suggests that cars should not be considered as inanimate objects. Instead, cars can help sustain a sense of self through enabling comfort, mobility and independence, and sustain place-based feelings of attachment.

Figure 4.3. Nicknames for the car.

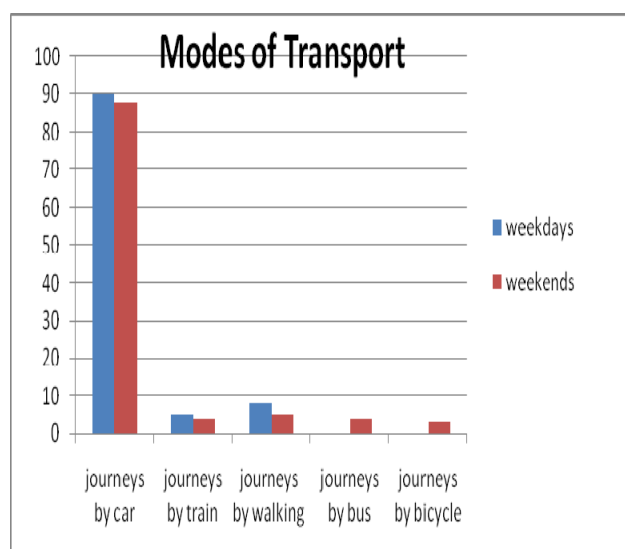


4.2 Where and when did participants drive?

Respondents recorded their weekly travel patterns. Participants identified their principal mode of transport and destination. Responses to this question are represented in Figures 4.4 and 4.5. The car was the key mode of transport during the week (90%) and the weekend (88%). In comparison – in weekly travel patterns very few people walked,

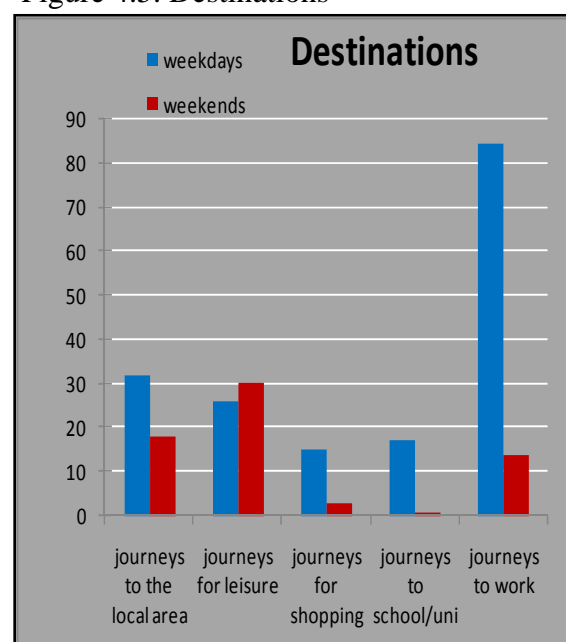
cycled or caught a train or bus. The people that walked were aged 34-73. They cited the beach as their destination (under 4 kms, depending on the location in Burraneer Bay). Walking was primarily a form of weekend exercise. Only one person took the train to the city every weekday, despite the train station being only a 6 minute (3 km) drive away. He cited the expense of driving and parking in the city as the reason for taking the train. The two cyclists aged 51 and 55, were members of households with 4 and 7 vehicles respectively. Cycling was a mode of weekend exercise. These statistics are supported by figures from the NSW Travel Data Centre (2006), as well as The Sutherland Shire Council Community Profile (based on information from The Australian Bureau of Statistics Census of Population and Housing, 2006). The residents of the Sutherland Shire have a larger percentage of car drivers (59.9% compared to 53.7%), and a smaller number of bus commuters (0.4% compared to 5.4%). than the Sydney Statistical Division (ABS 2006). Survey results confirmed the low use of public transport and the dependence on the private car.

Figure 4.4. Modes of Transport



Notes: Percentages do not add to 100% because respondents can provide more/less than one destination. Not all sections of questions were complete. The number of responses varied from day to day. The percentage of responses in Figure 16 were calculated on a daily basis and then an average was taken from the combined weekly responses.

Figure 4.5. Destinations



Work was the principal destination. However, two fairly distinctive patterns emerged when comparing data from employed and retired participants. Employed people had a round trip journey from home to their place of employment. From workplaces they often used the car to visit clients across Sydney. The car was used to access recreation spaces at Cronulla three to four times a week, particularly the beach. At weekends, the car was also used to participate in social and leisure activities, including drives 'through nature' in the Royal National Park.

In contrast, retired people in any day tended to make many single journeys to and from home. Purposes of journeys were not usually combined. Somewhat ironically, the car was used extensively to access Cronulla beach to exercise. Other primary uses consisted of almost daily journeys for shopping, doctor's visits, family contact, social outings, voluntary work and dog walking.

4.3 Implications of car mobility and the imagined geographies of Burraneer Bay

John Urry (2000) argues that different forms of mobility result in different understandings of place. Hence car mobility results in particular understandings of places through both regular driving patterns and more irregular driving trips – such as the road-trip. One implication of how regular car mobility influences how participants' understand the geography of their suburb in relationship to Sydney was explored through a sketch. Question 8 of the survey asked participants to provide a sketch of their experience of driving in Burraneer Bay. Rose (2001) warns that all visual images are socially produced, drawing on particular sets of ideas, for a specific audience. These sketches were produced by the respondents for a survey entitled 'Driving home to Burraneer Bay'. While acknowledging this limitation, these sketches do provide clues to how car mobility starts to layer boundaries over metropolitan Sydney.

Figures 4.6 and 4.7 present the sketches drawn by participants. Car mobility helps sustain an imagined geography of Burraneer Bay as seemingly a safely segregated space from the chaos and rage of the rest of Sydney. The sketches illustrate how the residents position their suburb against the Sydney region. Burraneer Bay is sketched as a sanctuary. Burraneer Bay is represented by happy faces, wide tree lined streets, dogs behind picket fences. Driving is depicted as long lines of cars, congested, stressful, angry faces and tailgating by four wheel drives. These sketches portray Burraneer Bay as a suburban, idyllic, haven cut off from the rest of Sydney. Historically, the suburbs as a haven against the perceived evils of the city has been a common myth in circulation since 1790 (Carlson 1991). Inner city life has long been depicted in Western discourses as an immoral and unhealthy place, forcing 'respectable' and affluent people to seek sanctuary forged by the myths of suburbia (Miller 2005). These understandings of metropolitan places are perhaps fundamental to how the residents of Burraneer Bay perform their subjectivities through

driving practices and in a reciprocal way, how these performance help maintain the suburb of Burraneer Bay.

Figure 4.6. Sketches 1.

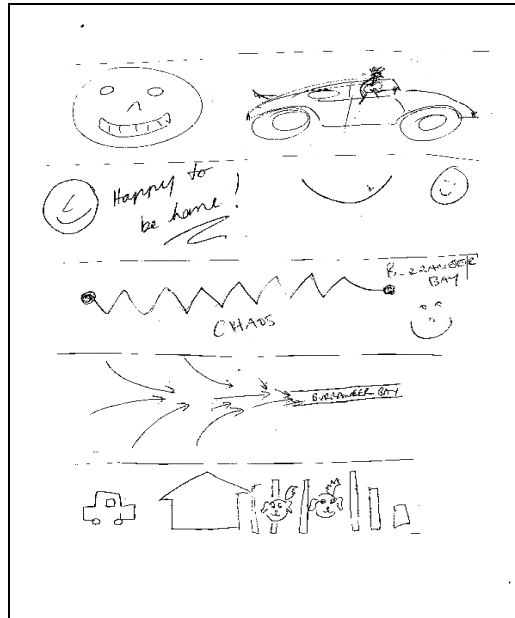
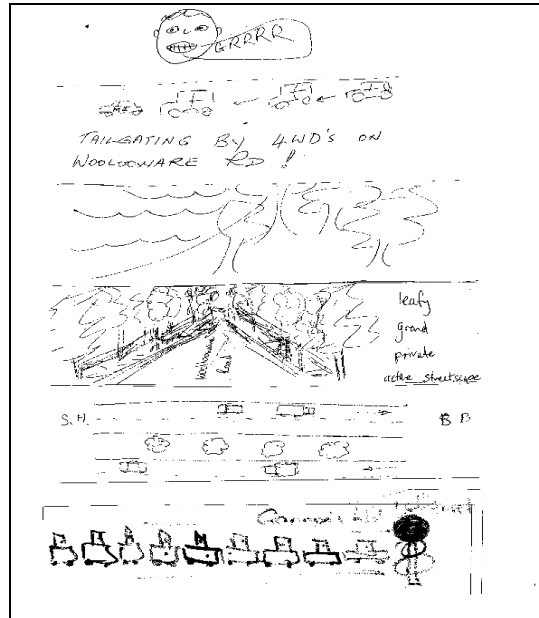


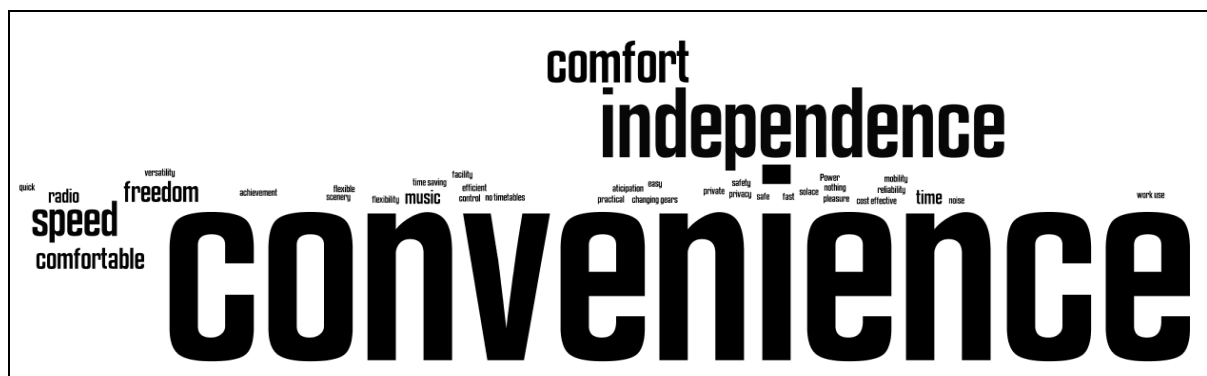
Figure 4.7. Sketches 2.



4.4 Why did participants drive cars?

Why did respondents drive? To explore this question the survey (Questions 4 & 5) asked respondents to state in five words or less their likes and dislikes of driving. Figure illustrates the results from a form of content analysis provided by 'Wordle'. Three key emergent themes are convenience, independence and comfort. These themes resonate with findings in the literature.

Figure 4.8. What do you like about driving?



(words in small type = Radio , flexibility , music , changing gears , no timetables , speed , easy , parking , versatility , time saving)

Figure 4.9 What women like about driving:



Figure 4.10. What men like about driving:



Schwanen (2007) argues that driving is a highly gendered activity. Reasons that men and women drive are distinguished by how the car fits into highly gendered routines of work and home. To explore this argument a Wordle content analysis was conducted on both men's and women's likes and dislikes about driving. Figure 4.10 suggests that most men liked the convenience, comfort and independence. Men's preference for independence may relate to ideas of personal freedom. Urry (2000) argued that automobility is a source of freedom, allowing people to travel to almost any destination, at any speed, by any route. This individual freedom allows the driver to stop or start the journey, free from the fetters of timetables, allowing an individualistic timetabling. The objective clock-time of public transport is replaced by personalized, 'subjective temporalities' that facilitate life through the use of the car (Urry p 192). Most men also indicated a preference for comfort. Thrift (1999, 2004) documented the relationship between car mobility and comfort in his exploration of the hybrid interface between man and machine. Similarly Katz (2000)

argued that the embodied experience of driving is profoundly physical and emotional, creating a merged entity, a human car.

In comparison, most women appeared to have a more practical outlook on the value of driving in their lives. Women value the convenience and speed of car mobility. Perhaps this is because women normally have greater responsibility for driving duties within a complex schedule of daily timetables for the whole family (Dowling *et al.* 1999; Skinner 2005; Schwanen 2007). In a study conducted in Sydney (Floro and Miles 2003) it was found that 18% of women overlapped activities and spent 42% more time caring for children than men. Car mobility becomes a convenient, flexible and speedy way to connect different activities of individuals in a household.

Overall, a Wordle content analysis suggests that participants did not like driving because of traffic. Congestion operates in opposition to convenience, comfort and speed. Inconvenience was generated by lack of parking. Distress was created by road rage. Discomfort created by tail gaters, 'bad roads, and 'bad' drivers. Interestingly, cost was noted as a dislike, particularly increasing cost associated with petrol, fines, speed zones and parking.

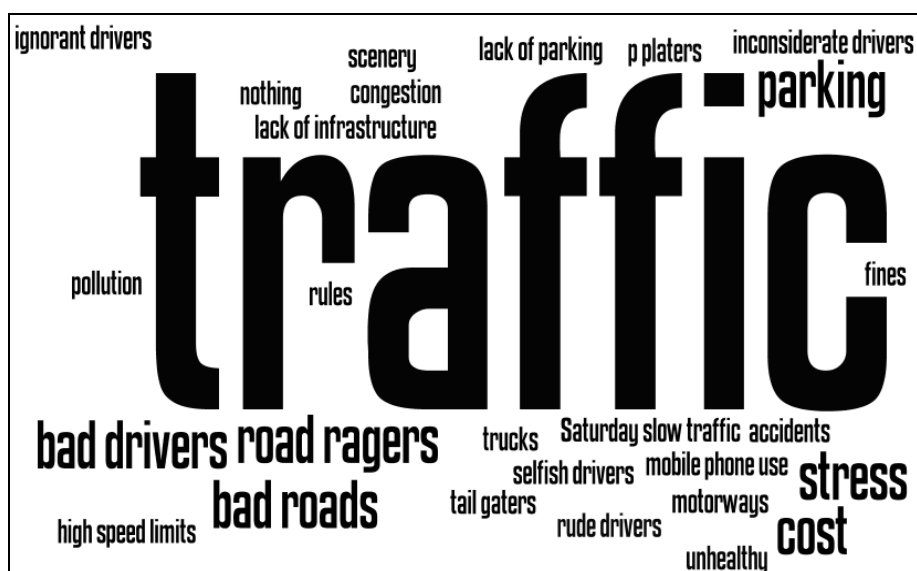
Figure 4.11. What do you dislike about driving?



Figure 4.12.What women dislike about driving:



Figure 4.13.What men dislike about driving:



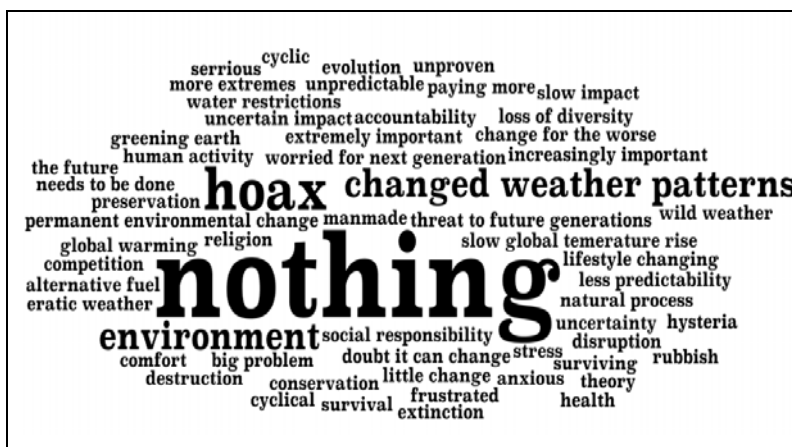
Again, working on the assumption the driving is a highly gendered practice, a Wordle content analysis was conducted for response of both men and women. Figure 4.12 suggests that women disliked driving because of traffic primarily, but also evident are concerns about cost. This is consistent with the most recent research that indicated one third of women are primarily responsible for household budgeting (Men are responsible for one third and one third employ a shared responsibility). Women mention lack of exercise as well as 'environmental pollution' 'emissions bad for life' illustrating a maternal caring attitude towards the health of themselves and family. This is consistent with research that says women *feel* the responsibility of managing all aspects of conducting family life more keenly than men (Hoschchild 1989, Skinner 2005). There is not much mention of the attitudes of the other drivers, only of general conditions on the road.

In contrast, men disliked driving for reasons that reflected other aspects of being ‘on the road’: ‘bad drivers’, ‘selfish drivers’, ‘rude drivers’, ‘tailgaters’, and ‘road ragers’. Most men suggested higher levels of aggressive behaviour or perceived aggressive behaviour encountered on the road. This could suggest longer periods on the road for work purposes; it could suggest driving at certain times of the day entails encountering different types of drivers. Men tend to rate other drivers in terms of their driving ability, though many of the attributes of what constituted a ‘good driver’ are arbitrary and contingent. Miscommunication through driving practices is one cause for the rise of aggressive behaviour amongst motorists (Katz 2000).

4.5 What did participants understand by climate change?

To explore participants’ understanding of climate change a number of open worded questions were deployed. Each respondent was asked to explain in five words or less the meaning of climate change (Question 5), sustainability (Question 6) and the future of Burraneer Bay (Question 7). Figure 4.14 illustrates the responses in Wordle to the meanings of climate change.

Figure 4.14. What does climate change mean to you?



A Wordle content analysis was conducted for both men and women to explore if understanding of climate change were gendered. A difference existed between what climate change meant to women and men. Figure 4.14 suggests conflicting understandings exist about the meaning of climate change. Amongst the participants the anthropogenic contribution to climate change is far from certain. Indeed, uncertainty is apparent in the use of language including ‘hoax’, ‘rubbish’, ‘hysteria’ and ‘unproven’. This is not

surprising given climate change remained a hotly contested scientific and political topic until 2007. Further, the Loissier Group assured that scientists who contested the science of climate change received wide media coverage in the Australian broadsheets, including the Sydney Morning Herald (Hodder 2007). Equally, there is evidence of those who accepted the scientific evidence of the urgency of the implications of human modifying the climate. These respondents understand climate change predominantly in terms of meteorology, including 'wild weather' and 'changed weather patterns'. Another understanding of climate change is framed by 'the environment' – including 'loss of diversity', 'permanent environmental change'. However, the most common response to what climate change meant was 'nothing'. This response illustrates Kirsty Hobson's (2008) argument that many people are overwhelmed by information and are choosing to 'switch off' from public debates.

Figure 4.15. What climate change means to women:

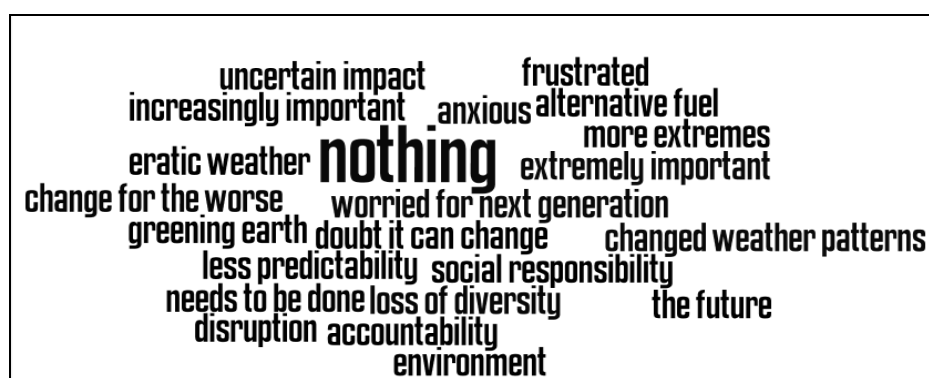


Figure 4.16 .What climate change means to men:



On the one hand, no women in this study understood climate change as a hoax. Some women understood climate change through a number of frames including social responsibility, biodiversity and meteorology. Further, other women framed climate

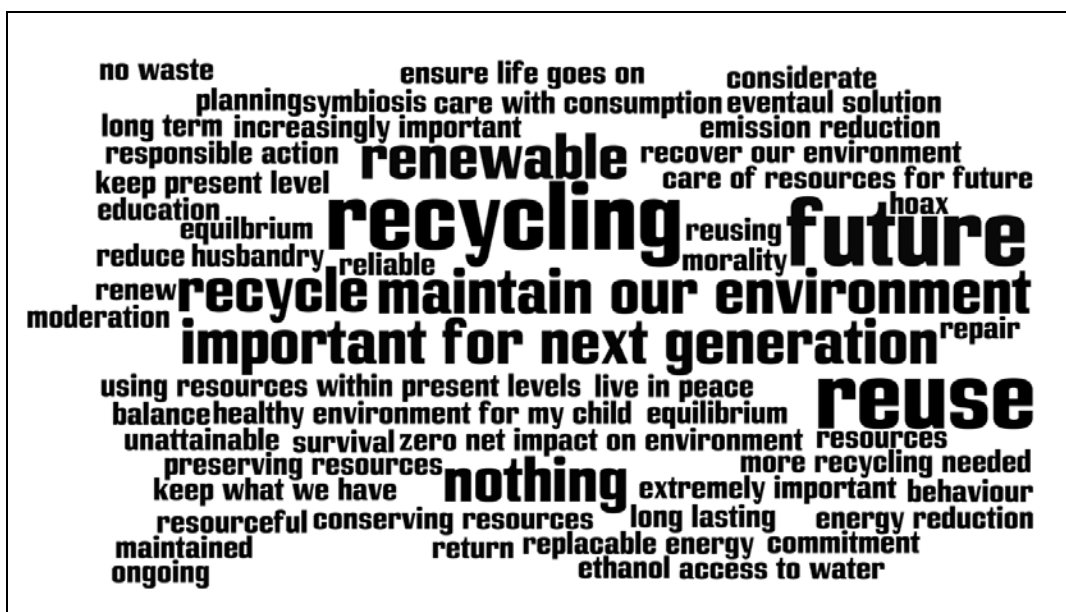
change through emotions of ‘frustration’ ‘worried’ ‘doubt’ and ‘anxiety’. Yet the most dominant frame of climate change was ‘nothing’. Climate change was emptied of meaning.

On the other hand, for many men climate change was framed as a ‘hoax’, ‘rubbish’ or ‘hysteria’. This indicated unwillingness amongst these respondents to accept the science of climate change. Other men framed climate change through the language of economics, global warming, changed lifestyle and environmental change. Hence, amongst men there was far less consensus over the meaning of climate change. Yet, again, overwhelmingly most men agree that climate change meant ‘nothing’.

4.6 Concepts about sustainability.

The respondents demonstrated their understandings of sustainability drawing on the current environmental terminology. The basic concepts of keeping present levels in order to ensure a future by responsible actions seemed to be a dominant understanding. ‘Recycling’ and ‘future’ were the most common responses. There were still some respondents that reported that sustainability meant nothing to them, again reinforcing the difference between ‘knowledge’ and ‘meaning’. It is possible to have knowledge and information about sustainability, without it having any relation to everyday life.

Figure 4.17. What does Sustainability mean to you?



A word cloud of responses to the question 'What is the most important thing you can do to help the environment?'. The words are arranged in a roughly circular shape. The most prominent words, shown in the largest font, are 'important for next generation', 'recycling', and 'reuse'. Other significant words include 'education', 'future', 'long lasting', 'responsible action', 'conserving resources', 'reuse', 'extremely important', 'maintain our environment', 'live in peace', 'increasingly important', 'behaviour', 'no waste', 'care with consumption', 'ensure life goes on', 'keep present level', 'reusing', 'nothing', 'return resources', 'reduce', 'repair', 'recycle', and 'reuse'.

[illegible]

Men framed their understandings in terms of the environment; 'Access to water', 'husbandry', ' symbioses' and 'zero net impact on the environment'. Their belief in a technological solution to the problems of climate change are reflected in 'emission reduction', 'ethanol', 'replaceable energy' and 'eventual solution'. This reflects ideas that a sustainable behaviour is not one which is enacted in the home, but is in the domain of governments and large corporations where the energy consumption is perceived to be the greatest (Hinchcliffe 1996). 'Moderation' and 'renewable' suggested ideas of a 'future'

that required no alteration to current lifestyle patterns, but requires ‘care of resources’ in a distant place.

4.7 The New Ecological Paradigm

This set of questions provided a measurement of the attitudes of the participants based on their level of agreement with a standardized table. The results are presented below.

Table 4.1. The New Ecological Paradigm.

To what extent do you agree or disagree with the following statements about nature? Please tick the appropriate box for each statement:	Strongly Agree	Somewhat Agree	Unsure	Somewhat Disagree	Strongly Disagree
1.We are approaching the limit of the number of people the earth can support.	10%	42.5%	17.5%	20.0%	10.0%
2. Humans have the right to modify the natural environment to suit their needs.	2.6%	35.9%	12.8%	41.0%	7.7%
3. When humans interfere with nature it often produces disastrous consequences.	27.5%	37.5%	12.5%	17.5%	5.0%
4. Human ingenuity will ensure that we do not make the earth unliveable.	17.9%	46.2%	17.9%	15.4%	2.6%
5.Humans are severely abusing the environment.	25.0%	47.5%	5.0%	17.5%	5.0%
6.The earth has plenty of resources if we just learn how to develop them.	20.0%	37.5%	25.0%	12.5%	5.0%
7. Plants and animals have just as much right as humans to exist.	45.0%	32.5%	0.0%	17.5%	5.0%
8.The balance of nature is strong enough to cope with the impacts of modern industrial nations.	5.0%	20.0%	10.0%	47.5%	17.5%
9. Despite our special abilities humans are still subject to the laws of nature.	50.0%	45.0%	2.5%	0.0%	2.5%
10. The so-called ‘ecological crisis’ facing human kind has been greatly exaggerated.	15.0%	37.5%	15.0%	22.5%	10.0%
11. The earth is like a space ship with limited room and resources.	15.0%	37.5%	15.0%	22.5%	10.0%
12. Humans were meant to rule over the rest of nature.	17.5%	12.5%	15.0%	37.5%	17.5%
13. The balance of nature is very delicate and easily upset.	30.0%	35.0%	17.5%	15.0%	2.5%
14. Humans will eventually learn enough about how nature works to be able to control it.	7.5%	22.5%	20.0%	37.5%	12.5%
15. If things continue on their present course we will soon experience a major ecological catastrophe.	12.5%	25.0%	30.0%	25.0%	7.5%

Agreement with the eight odd numbered questions and disagreement with the seven even numbered questions indicated pro-NEP responses. The overall results are grouped into

five main categories that reflected underlying values about human-environment relationships.

1. (Questions 1, 6, 11) Reality of limits to growth. Overall, the results indicate that respondents realized the limit to growth, yet endorsed the continued use of resources confident that it can be managed.
2. (Questions 2, 7, 12) Anti-anthropocentrism. Overall the results suggest humans are understood as entitled to rule over nature to make use of nature's resources. However, in contradiction to this view, there is also strong agreement that plants and animals have as much right as humans to exist.
3. (Questions 3, 8, 13) The fragility of nature's balance. The results show that respondents acknowledged the human impact on the environment but believe that it can cope with the industrialized world.
4. (Questions 4, 9, 14) The rejection of exemptionalism. Overwhelmingly the respondents agreed that humans are constrained by nature, yet there is a belief in technology as an answer to solve this problem.
5. (Questions 5, 10, 15) The possibility of eco crisis. The results reflect that respondents agreed that humans are abusing the environment yet do not believe that an eco crisis is imminent.

Overall, the beliefs expressed in this section of the survey give the impression that most respondents are in fact well informed about issues of climate change and hold some pro-ecological views. Yet, there remains the belief that problems will be solved without changing the present economic order. There is an expressed belief in economic modernization, that is technology and or the market has solutions to most environmental problems.

4.8 How did the residents imagine the future of Burraneer Bay?

Figure 4.20 How did the residents imagine the future of Burraneer Bay?

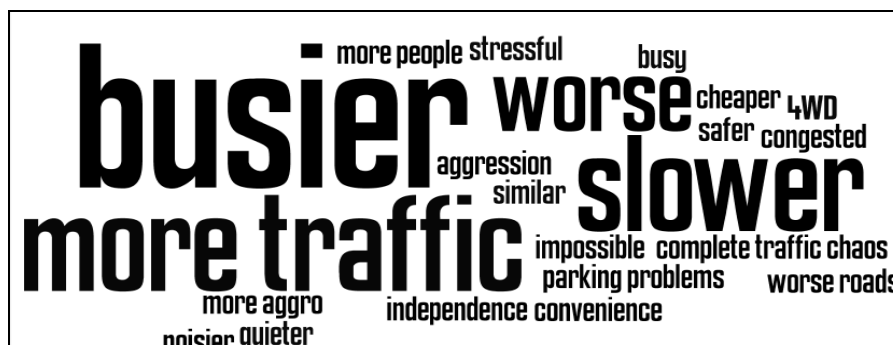


The question is considered in terms of men's and women's understandings.

Figure 4.21. How women imagine Burraneer Bay in the future.



Figure 4.22. How men imagine for Burraneer Bay in the future.



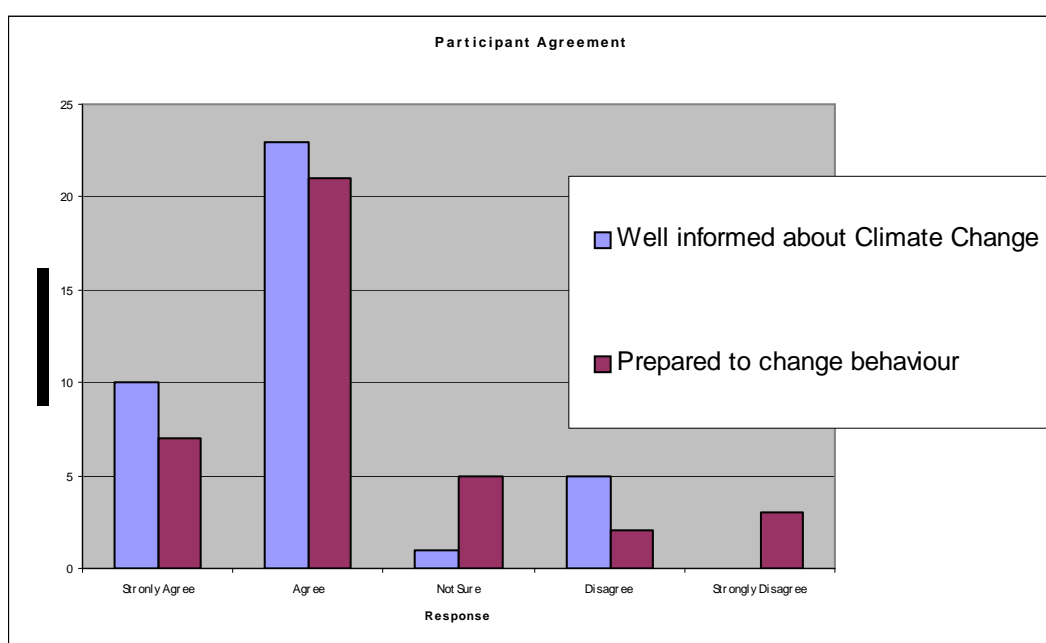
The majority of women envisage that Burraneer Bay will remain the same in the future. Some hope that the number of 4WD's will decrease. However, many predict an increase in the amount of traffic with accompanying problems of driving illustrated in 'stress' 'worse' and 'hectic'. Similarly, the majority of men agree the suburb will be busier in the future. They highlight the more aggressive understandings of driving in 'stressful', 'more aggro',

‘complete traffic chaos’ and ‘impossible’. Men illustrate how increased traffic would affect them personally by imagining more aggression, worsening road conditions and parking problems. Although, most were in agreement, some men suggested that Burraneer Bay will remain a refuge. There is a tension between the imaginings of a secluded suburb and the realization that continued car usage can only result in worse traffic congestion.

4.9 Willingness to change?

Question 13 of the survey explored the importance of environmental issues to the household, how they rated their knowledge of climate change as well as a willingness to change behaviour for environmental reasons. 79 per cent of respondents agreed, or strongly agreed, that their household was well informed about climate change, while 82 per cent asserted that their household was interested in climate change. Coupled with this, 79 per cent of respondents expressed concern for the environmental consequences caused by exhaust fumes and 77 per cent of participants acknowledged climate change is an important issue for Australia. 60 per cent of respondents were confident that there could be a solution to the problems posed by climate change, 20 per cent were not confident and 18 per cent were not sure. The respondents present a picture of a well informed and concerned community who would be willing to change their personal behaviour to combat the problems of climate change.

Figure 4.23. Level of agreement about access to information and preparedness to change.



Question 10 of the survey asked if there had been any change in driving behaviour over the last twelve months. Of the 39 respondents, one had increased driving as they had obtained a drivers license, four had decreased driving because of a change in working conditions and reasons of ill health. There were no changes in driving patterns for environmental concern.

4.10 Conclusion

The aim of this project was to develop suitable methods to collect not only quantitative information about the driving practices of the area, but also to ascertain how attitudes and beliefs influenced these behaviours. The survey provided valid statistical information that was in agreement with previous studies. The qualitative aspects of the survey collected insights that enriched the understanding of the quantitative data. It provided a more nuanced perspective of the respondents' attitudes towards the issues of climate change and sustainability. The survey also explored changes to driving patterns and the willingness to change future behaviour in regard to driving practices. The survey results indicated an overall agreement and willingness to change behaviour in regard to environmental concerns. However, the second stage of the project provided richer insights into how expressed concern and actual behaviour are unrelated on some levels. The high levels of agreement about changing behaviour expressed in the survey were countered by strong resistance expressed in the interviews of the second stage of the project. The theoretical aim of the second stage of the project was to conceptualize driving as a performance of identity. By implementing a range of ethnographic methods participants revealed information in diverse ways that allowed the building of theory to support this conceptualization. It was important to combine the different methods of both stages of the project to facilitate a realistic understanding of the attitudes and practices of the participants. The experience of ticking a box in a survey is an entirely different experience to the feeling the emotion of concern. The two stages of the project provided complementary data that in totality give an in-depth understanding of the issues explored. The next two chapters provide an interpretation of the data drawing on the outlined methods of analysis. Chapter 5 examines subjectivities of the driver's seat and the understandings of Burraneer Bay. Chapter 6 examines the micro-geography of the car interior and how it relates to wider understandings of climate change.

Chapter 5: From the driver's-seat – situated subjectivities and social geographies of Burraneer Bay



Jonathon and his BMW. *Source: Participant*

5.1 Introduction

The following results chapter presents an interpretation of the geographies of Burraneer Bay and climate change from the situated subjectivities of drivers. In other words, this chapter explores the geographical knowledge forged by car mobility. The chapter discusses how drivers are woven into an array of social life through points of connection and disconnection. How individual drivers are woven into this web helps forge their individual understandings of place, nature and climate change. Chapter 5 is divided into two sections. The first section explores the implications of the concept of situated subjectivities to examine the interconnections participants had with their cars. In other words, it explores how understandings of the self are forged through the automobile. The second section explores how driving rituals and practices sustain understandings of the car as a necessity of suburban life and sustains particular social geographies of Burraneer Bay.

5.2. Situated subjectivities

Our situated subjectivity is how individuals make sense of themselves through a web of interconnections that comprise social and non-human worlds (Woodward 1997). To share a subject position with another individual is to share knowledge that enables the forging of similar points of connection in the world. Situated subjectivities enable individuals to begin constituting social boundaries around collective groups that mark out not only our sameness, but also our difference (Gilroy 1997). Further, situated subjectivities are understood to be fluid and dynamic and performative. Situated subjectivities change within time/space circumstances. In other words, the reciprocal relationship to situated subjectivities, in terms of how subjects help mould space and space helps mould situated subjectivities (du Gay 1997; Butler 1998, 2002). Thus, situated subjectivities are renegotiated and redefined through everyday practices.

How do individuals maintain their sense of self through driving? Many authors have argued the symbolic value of the car is as a mechanism of social differentiation as 'sporty', 'casual' or 'sexy'. For instance, car brands are used to differentiate car owners. For instance, the Mercedes brand is commonly regarded a symbol of wealth or class, while simultaneously positioning other brands as 'inferior' (Veblen 1994; Steg *et al.* 2001). Purchasing a car brand operates within signifying systems, that allude to a particular 'lifestyle' or aspiration.

Through a performative framework the car is more than a symbolic marker of a particular 'lifestyle'. Instead, *how* and *what* a person drives is regarded as an expression of how subjectivities and geographies are mutually forged through commodities (Kneal & Dwyer 2004). The car is conceived as a mechanism that can forge both a sense of self and enable social relationships with others (social identity). Equally, the car is not just for use value as a form of transport, but in this chapter is conceived of as integral to forging an understanding of the self. Car mobility itself forges a particular knowledge that underpins particular points of connection and disconnection. In Burraneer Bay, the high rates of car ownership, and the low usage of public transport indicated the importance of car mobility in forging understanding of self in relationship to their everyday world. In Burraneer Bay, the car was positioned by many respondents as a 'necessity' of everyday life.

5.3 In the driver's seat: situated subjectivities of the car

Jonathon illustrated how being in the driver's seat helps forge a classed sense of self. Jonathon is a 48 year old General Manager of a large company who has lived in Burraneer Bay for five years with his family. He drove a BMW. Jonathon very clearly saw driving this car as one way to perform a particular classed identity. This is illustrated in a conversation during a 'drive talk' with Jonathon:

'The type of car you chose is definitely a projection of how you see yourself and how you want to be seen. The way I dress for business...I spend more money than I need to on shirts and things. I buy good quality shirts with French cuffs and cufflinks ... I like dressing well when I go to work, so I like the fact that I am driving a prestigious vehicle that has a beautiful finish inside and is very well made.

I guess I'd like to think I am someone who cares about their appearance and how they present themselves. I like to think of myself in the business environment as a hard working and committed person who values quality. You like to be seen to follow that through in everything that you do. The type of car that you drive is part of the persona.

All of us are guilty of having egos. You see a nice car like this as being a symbol of your success in life.'

Jonathon, Drive talk.

At one level Jonathon spoke about the car in the symbolic terms of a capitalist society. Hence, the car became a symbol of success, rather than a source of carbon emissions. For Jonathon, driving a BMW was related to ideas of class, quality, and appearance. He intimated that affluence brings higher quality and better design. At another level, the car mirrored back how he regards himself as 'a hard working and committed person who values quality'. This is an example of Gilroy's (2001) ideas where cars are used as a status symbol that allowed Jonathon to equate car worth with personal worth. Looking at the car he sees himself, regarding the car he drives as an extension of his 'persona'. He defined himself through how he conducted himself within the business world, 'hard working and committed'. Jonathon's work ethic entitled him to 'value quality' and to

drive a prestigious car. These ideas carry into his presentation of self. He described himself as someone who cares about appearance. For Jonathon, the car embodied his success in a capitalist society and communicated his appreciation of the ‘good life’.

In the same way, Mr. Riley spoke about his situated driving subjectivities. Mr. Riley, 60, is a retired tradesman who has lived in Burraneer Bay for 23 years. He drove a BMW and his wife drove a Nissan. In the story of purchasing his BMW, the car is positioned as ‘a bargain’. His friends were surprised at his choice. And, Mr Riley repositioned himself as normally a Holden driver. In telling this story Mr Riley clearly articulated how cars are regarded as an important mechanism by which friends and families constitute an individual’s identity. In this instance, there is seemingly a mismatch between the classed position of the prestige BMW and his own situated subjectivity, *‘It’s not me... this is not John Riley buying a prestige German car’*. His friends similarly find a discord in the fact that John Riley owned a BMW. Indeed, Mr Riley acknowledged this mismatch – as he talked about himself as ‘a pretty down to earth type of guy.’ In Australia, he associated this type of person with driving ‘just Holdens or Falcons’. Yet, he is willing to put up with the discrepancy in how regarded himself behind the driving wheel because of the BMW’s promises of comfort, quality and convenience. As Mr Riley explained:

‘I guess there is a kind of prestige driving a BMW...All my friends were amazed I bought a BMW. That ain’t me , normally I’m not a car person as such. I switch off, I have no interest what so ever. A lot of my friends have got nice cars and when I told them I bought a BMW they nearly all fell over backwards. They said ‘John Riley’s got a BMW!’(sounding surprised) ‘cause I’ve always had just Holdens or Falcons.’

‘It’s not me... this is not John Riley buying a prestige German car. I think I am a pretty down to earth type of guy... I usually don’t give a stuff what I drive, what brand or type or size. As long as it’s comfortable and it goes well. I’ve always thought the BMW was a bit too expensive for me. But it turns out it wasn’t. ‘

Mr. Riley, Drive talk.

In comparison, Mr Brown emphasized the car as a basic necessity, rather than for its symbolic value. Mr. Brown, 61, has lived with his wife, in Burraneer Bay for 23 years. He is a retired Public Company Director. He enjoyed his retirement by playing golf and

holidaying. During the course of this project he had several overseas trips. He owned a large boat and enjoyed leisure activities.

Theresa: What do you think about ideas that a car can say something about who you are?

Mr Brown: I'm not much of a believer in that sort of thing.

Theresa: Some people might see it as a sign of success in life if they have an expensive car.

Mr Brown: I don't know. I don't have any names for the car or anything like that. I just enjoy the car. It is nothing more than a very nice mode of transport to get around in.

Mr. Brown, Drive talk.

Mr. Brown preferred not to position the car as a symbolic marker. This can be understood as a reflection of the unwillingness of consumers to admit that their purchasing decisions are social statements (Hamilton 2005). During conversations it was often unclear whether this was 'impression management', in that he wanted to present himself in the best light, or whether this was his actual view, and was unwilling to elaborate. Indeed, Mr Brown did not require a car to secure his classed position given it was performed through overseas travel, his home and sports activities. Interestingly, Mr. Brown admitted that he was not particularly reflective when it came to driving.

'I s'pose the car for me is just a necessary mode of transport. You just think about it as one of the necessities of life.'

Mr. Brown , Diary.

For Mr. Brown the car is a basic necessity of life. Clearly he has never had to reflect on the costs of purchase and maintenance. Nor had he given consideration to the implications of his driving. This reflected Thrift's (2004: p. 41) argument about how the experience of driving has become part a 'technological unconscious'. In other words, driving a car is something taken for granted that doesn't require questioning or thought.

Box 5.1: Mr Brown's Diary Entry.

It's hard to work out how my feelings may differ from one drive to another as driving to me is an essential part of life and you take it as it comes but it never bothers me.

Mr. Brown's Diary

Clearly, Mr Brown has never reflected on driving, given ready access to a car has apparently been an integral part of his life for so long (Box 5.1). Like breathing, driving a car was a basic necessity. While he may not subscribe to the car having any symbolic value, he hinted how driving a car maintains particular classed subjects in Burraneer Bay. Car mobility as a basic necessity of living in Burraneer Bay became a mechanism to differentiate with those people who wish to catch public transport. Box 5.2 provides illustrations that a driving-subjectivity becomes a shared collective norm to the time/space rhythms of living in Burraneer Bay.

Box 5.2: The car as a necessity of life

'Having a car here, or having a car anywhere, is just a necessity of life. I know people use public transport but you wouldn't want to live out here if you wanted public transport'

Mr. Brown, Drive talk

'No, public transport would not get me to where I need to go during the day, within the timeframes I need to operate. ...It is just not a practical proposition.'

Jonathon, Interview.

'It is possible to live without a car but I wouldn't like to... at our age we are looking for comfort and safety. We want our car! Our cars!'

Mr. Riley, Interview.

In the driver's seat car mobility forges a particular understanding of Burraneer Bay that is underpinned by ideas of the car as a basic necessity of life, comfort, convenience and safety (see Chapter 6 for further discussion of these themes). In this construction of the

geography of Burraneer Bay, public transport is othered as out of place, not practical, uncomfortable and unsafe. Everyday driving practices help to reconfigure these ideas on about the social geography of Burraneer Bay on a daily basis. This is followed-up in the next section.

5.4. Car Mobility and the Social Geographies of Burraneer Bay.

The conventional social geography from the census of Burraneer Bay is characterized by relative homogeneity in terms of demographic characteristics, socioeconomic status and cultural values. The majority are English speaking, white, both parents born in Australia and in a high income bracket (ABS 2006). Alternatively, drawing on Massey's (1993) ideas of a progressive sense of place it is possible to conceptualize Burraneer Bay as an 'envelope of space-time' (p. 188). Burraneer Bay is constituted by shared ideas of history and geography that draw together a communal understanding. For instance, shared understandings of where and how certain affluent members of society demonstrate their economic status plays out in the choice of living on the Burraneer Bay Peninsula with its water views, waterfront houses and wide tree lined streets.

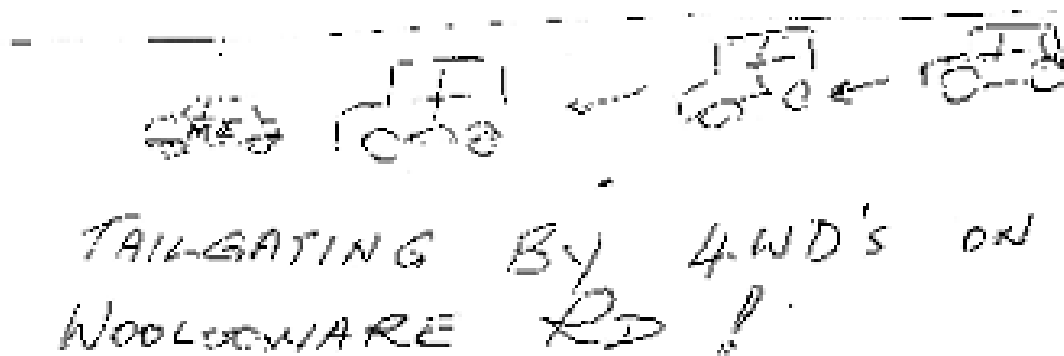
Objects are important in constructing 'localness'. Objects, like places can carry memories of people or processes that have passed through time (Urry 2000). The car is a particular object of significance, not only because of its inherent attached meanings, but also because from the driver's seat, car mobility produces a particular geographical knowledge that informs points of connections with place. Hence, what in part constitutes the imagined community of Burraneer Bay is the shared geographical knowledge forged through car mobility. As Latham *et al.* (2009) point out, these shared values and beliefs may be often unspoken but are implicitly understood. The next section explores how car mobility helped constitute understandings of the social geographies of Burraneer Bay.

5.5 The imagined community of Burraneer Bay drivers: exclusion and inclusion on the road

What style of driving is widely accepted on the roads of Burraneer Bay? What type of vehicle is accepted on the roads of Burraneer Bay? These two questions were answered together because the style of driving seems to be closely associated with the type of vehicle driven. Commonly, participants who drove standard vehicles expressed that they

were frequently harassed by drivers of large four-wheel-drives. This is an example of how the performative qualities of driving were used to generate social exclusion on the roads. The type of car one drives can instil a certain imagined position of power and authority. Driving becomes an embodiment of certain beliefs and values in regards to who belongs on the roads not only by *what* is being driven, but also *how* the car is being driven. This is illustrated in several sketches done by the participants. Mrs. Litterick's sketch is presented in Figure 5.1.

Figure 5.1 Mrs Litterick's Sketch of Driving Home to Burraneer Bay



Mrs. Litterick, 71, is a retired teacher. She and her husband have lived in Burraneer for 23 years and they shared a standard Holden Vectra station wagon. She explained her sketch during the interview:

This happens all the time. We have a lot of people in our street with four wheel drives. Because we are close to the boat club so a lot of people have them to tow their boats and trailers. There will often be a line of them and they tend to sit right on your tail and make you hurry. There is a 50 km restriction on our road. And I really don't like it. Here am I a little granny in my little car. It is 50 km. These people are sitting on top of you and they get very impatient. As I turn into here, coming down the hill. They are over the other side of the road.

Mrs. Litterick, Interview.

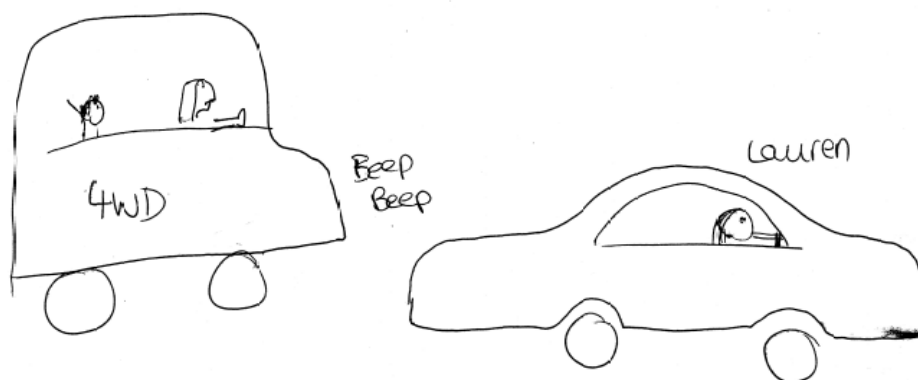
Here, tailgating is understood as a tactic of exclusion. Mrs. Litterick understood that according to the values of many four-wheel-drivers neither her, nor her car, belong on Woollooware Road. She understood being misplaced by many four-wheel-drivers because they give her the identification of a 'little granny', driving a 'little car'. Despite the 50 km, many four-wheel-drivers sought to drive at much faster speeds. During a drive talk with another participant, Mrs. Hicks, 84, the exclusionary tactic of tail-gating an older-aged driver was experienced first hand. Mrs. Hicks drives a Toyota Yaris.

'Stop winking at me! I can't go any faster! He is flashing his lights. I do get irritated with that. I am doing 45. He wants me to do 55. I will get out of his way. I'm not doing anything wrong, I'm being careful. Things like that... in my day I didn't get a toot.'

Mrs. Hicks, Drive talk.

Similarly, Lauren, a 19 year old university student, who has lived in Burraneer Bay all her life, sketched the tactic of tail-gating (Figure 5.2).

Figure 5.2 Lauren's Sketch of Driving Home to Burraneer Bay



Lauren explained her sketch by alluding to 'soccer mums'. These were identified as the mothers of young children on the road during the morning and afternoon rush hour. Understood as time-pressed these 'soccer mums' drive above the speed limit as they rushed from school to various activities. As Lauren explained:

I don't like four wheel drives generally. I find them a really big pain because of the way they drive. They tailgate you and at night they have their high beams up and sometimes it just seems they have their high beams up because they are so high.'

Lauren, Interview.

Sometimes I think they like intimidating people because they don't like the way you drive...cause it's not how they drive

Lauren, Drive talk.

Lauren goes onto explain why her particular car and style of driving is misplaced on the roads of Burraneer Bay.

Around here people tend to keep up with the Joneses – like if one person would get solar power and water tanks etc everybody would, if you know what I mean, the same with hybrid cars. At the moment four wheel drives are popular but if hybrid cars became popular then people around here would drive them.

Lauren, Interview.

Lauren demonstrated her implicit understanding of the shared values, and the expectations to conform to the norm. She understood that driving particular vehicles was a way to express belonging to the mainstream understandings of living in Burraneer Bay. Driving a four-wheel-drive became one way of performing the ‘community’ of Burraneer Bay residents. As Genis (2007) argued shared aspirations creates an imagined suburban elite, who may deploy tactics of exclusion. This imagined community is also illustrated in the sketches from the survey (see Chapter 4).

Michael also raised the concept of suburban aspirations and cars being a marker of spatial belonging. Michael is 24 and lives at home with his parents. Michael has spent all of his life in Burraneer Bay. He agreed with both Lauren and Mrs. Litterick on the prevalence of four-wheel-drives in Burraneer Bay and normative expectations about which cars belong on the roads. He argues simply by looking at a car you know ‘who drives it’ and ‘where they are from’. Michael expressed a form of sexism about why women should not be driving four-wheel-drives.

then you’ve got the mums picking up their kids from school in their giant four wheel drives. I think it is a bit silly, if you get a flat tyre, how are you going to change that when you are a woman? So I guess just from the look of the car you form an idea of who drives it, who they are, where they are from...

Michael, Interview.

Michael evoked a sexist assumption about women not having the skills to change a tyre when picking up their children from school. Driving a four-wheel-drive Jain (2002) argues the four-wheel drive enables women to enact their more feminine caring side by providing greater safety for their family.

Mr. Brown, driving at just over the speed limit acknowledged tail-gaiting. However, he quickly dismissed the practice as not common. Precluding his being harassed by other similar drivers are perhaps his larger, more prestigious car, as well as his speed and driving demeanour.

'see, I'm doing between 50 and 60... some people fly along here which is a bit annoying... sometimes you get someone up your bum. I don't think it's that common anywhere. Maybe that is just me who doesn't take any notice.

Mr. Brown, Drive talk.

Clearly, these results suggest there is an imagined community of Burraneer Bay drivers comprised of not fast, middle-aged drivers, sitting behind the wheel of four-wheel-drives and prestigious cars. Tail-gating is the practice through which this imagined community of road users is maintained along Woollooware Road. Where do these understandings of car mobility as a necessity of living in Burraneer Bay originate? The next section looks at the intergenerational patterns of car ownership and driving practices that work to limit the possibilities of considering alternative forms of transport.

5.6 Ritual - coming of age in a mobile society.

In Australia, it is commonly regarded as essential to become a licensed driver to become a fully fledged and functioning contemporary citizen. As Urry (2001) pointed out, car mobility is widely regarded as a fundamental human right and necessary for the maintenance of all aspects of family life, leisure, as well as for work and security. Benjamin (1969) offered that individual and collective memory can be maintained through rituals, ceremonies and festivals produced by society. In this context, becoming a licensed driver is considered a ritual. Learning to drive can be regarded in terms of rites of passage, to claim the entitlement to car mobility as an adult, something that is passed on in the family. Certainly, for the young people who had lived all of their lives in Burraneer, this was a familiar pattern. Their parents had encouraged and supported their efforts to learn to drive. Participants' parents had provided a car in which to practice, and financial support. In many cases, the running costs of the car, fuel, repairs, registration had been incrementally handed over to the young people. As they assumed responsibility for these costs, symbolically the car was handed over to the young person as a sign of their maturity and as an acknowledgment of their success. As Michael explained:

I didn't actually buy it (Nissan X-Trail). It was originally a car for mum. When I got my licence I was allowed to drive it. It was on me to pay petrol, rego. It was simply a matter of... you can have this car... you know what it has been through.

Michael, Interview.

In this way Michael's parents demonstrated that the car reinforces particular social practices. By encouraging and assisting him to become a licensed driver, they conferred upon him the full range of benefits provided by the car. Cars extend the abilities of people in that they can go further and do more. It allows freedom from the timetabling of public transport and offers the relative safety of door to door transport. In this way learning to drive may be regarded as a performance of familial care and duty. Similarly, Lauren inherited her car from her father.

It [Ford Fairmont] was dad's old car. They just handed it down to me.

Lauren, Interview.

She acknowledges that amongst her friendship circle in Burraneer Bay it is a common practice for children to be given cars by their parents.

Because it's a fairly affluent area kids usually get cars for their birthdays.

Lauren, Drive talk.

This type of intergenerational practice reinforces the idea of the car as fundamental to maintaining a particular social identity. The environmental consequences of driving are negated by the more pressing and overriding considerations of adulthood, personal safety and convenience as well as being enmeshed in ideas of familial care and duty. These ideas are further developed in Chapter 6.

5.7. Driving rituals, sustaining local connections- light sociality

Rituals and customs constitute the performative sites of communal and individual subjects simultaneously. The shared performances of patterns of behaviour produce a communal appreciation of belonging, and particular kinds of subjects which cannot be dissociated from the collective project (Fortier 1999). In other words, bodies and space produce each other. Urry (2000) highlights the importance of objects in constructing localness but also

points out the importance of informal places or activities that can constitute the basis of an imagined presence. Such activities and meetings allow the life of the community to be sustained, often adding to the coherence of implicit understandings of place. This coherence can be regraded as a mechanism to mark out a commonality from which otherness is imagined and kept at bay, a making of exclusionist borders.

When asked about a 'sense of community', participants often mentioned how they had come to know everyone, most of the participants recalled the annual street Christmas Party or Picnic. They saw the street party as important to catch up 'properly' with their neighbours. In a life underpinned by car mobility, contact was usually 'just a wave' or a 'quick chat'. The Christmas Party allowed a meeting place to exchange stories of the past year. They had a good knowledge of their neighbours, and their children and the patterns of their everyday lives. There was a shared belief in the neighbourhood being a safe place because the residents looked out for each other. For example Mr Brown explained that:

'Binaville Street and Portview Place for years they have been having a Christmas picnic in that little park. Everyone gets to know everyone and it's all very good. And we have never been robbed or had a problem.'

Mr. Brown, Drive talk.

Some people mentioned walking the dog as strategy to build a sense of community. Yet, most retired people positioned walking as a way to keep fit and as a social activity. Walking was never listed in the survey or spoken about as a means of transport. As Mr. Brown explained, walking was another way of maintaining local connectedness.

Yes we probably know them (other people in the community) better than anyone else. Yes, the days I'm not playing golf we walk the dog. You tend to see more of the neighbours, it gets you out and about. When I am playing golf Anne walks the dog.

Mr. Brown, Drive talk.

For some participants the car becomes implicated in walking and the process of maintaining local connectedness. For many older participants, walking the streets of Burraneer Bay was understood as 'uninteresting' and 'inferior' to walking along the esplanade at the nearby Cronulla beach. The car was positioned as enabling them to keep fit by giving them the choice about where they would exercise. It was very common to

drive to Cronulla, park and then go for a walk along the Esplanade. As illustrated by Mr Hicks, in some cases the car was almost inseparable from walking and exercising, further illustrating the extent to which technology has infused their unconscious.

Went for a walk (in the car).

Mr. Hicks, Diary.

Mr. Hicks is an 83 year old retired engineer; he lived with his wife and has two cars. Although he has a strong pro-ecological world view and a belief in the inevitability of climate change, he performed the typical patterns of driving of a retired person resident in Burraneer Bay. He made many short, local trips, sometimes several times a day and regularly drives to Cronulla to exercise. He positioned himself as a proponent of environmentalism amongst his friendship group, yet this does not translate into a reducing the number of cars he owns nor modified driving practices. The unspoken customs of place are inscribed onto his social practices and expressed through his driving practices.

Similarly, the intimate spaces of the car became important to maintaining friendships and place based connectedness to Burraneer Bay. For example, Mr. Brown shared his golfing passion with the friends he had made since moving into the neighbourhood. He recounted how they would travel in the car to golf weekly and of the friendship they shared through common practices. The sharing of similar experiences, overseas travel, and the time to indulge in golf and to follow other sports activities, allowed a sense of belonging and identity, even emotional satisfaction derived from shared social experiences

We will chat for an hours drive in the morning and we will chat all the way about something... foot ball or golf or you know... I've just been overseas...The guy there Lloyd (points to house) he's just been overseas. He'll talk about... he went to follow the cricket test and he'll give us an update how the cricket went in England... And he played at various golf courses, some of the flash ones, so we'll talk all the way, and on the way back we will talk about how bad our golf was.

Mr. Brown, Drive talk.

5.8 Conclusion

Configured by discourses of materialism, driving particular car brands in Burraneer Bay enabled some residents to express their classed identity. Particular types of cars were often associated with different categories of people and suburbs. Four wheel drives clearly belong on the street of Burraneer Bay, while smaller, slower, standard vehicles were often constituted as 'out of place'. At one level, driving performances enabled the making of geographical boundaries around which cars belonged on the roads, as illustrated through the exclusionary practice of tail-gating. At another level, driving allowed the performance of work, leisure, and familial identities. Obtaining a drivers license was positioned as a stepping stone to full societal citizenship and participation. Driving was assumed to be a right. Taking up the right-to-drive was associated with ideas of adulthood, empowerment and familial care. These seemingly innocuous driving practices as rituals help constitute the social geographies of Burraneer Bay. The next chapter extends these arguments by paying particular attention to how the embodied geographical knowledge configured through driving experiences works against drivers abandoning their car. In particular attention is given to the emerging themes of comfort, convenience and safety.

Chapter 6. Step into my car, step into my world of convenience, comfort and safety



Mrs. Litterick and her Holden. Source: Author

Drawing on the performative framework outlined in Chapter 2, this chapter is divided into two sections. From the situated subjectivities of the driving seat, the first section explores John Urry's (2000) ideas of the car as an intimate, private, hybrid space. This section presents evidence suggesting that car mobility is underpinned and informed by the desire for comfort, convenience and safety. The second section is wider in focus. It explores more generally how climate change is configured by how individuals negotiate their everyday lives by car. This chapter explores how understandings of climate change are always negotiated in situ.

6.1 Intimate car spaces: connecting with the car – disconnecting with the world

John Urry (2000) argues that the interior of the car offers a hybrid, intimate and private space where a highly sensuous interchange can occur between humans and machine. The car is implicated in changing human and non-human relationships through a fusing of intelligence and intentionality between the two (Thrift 2004). Dramatic improvements to car technology allowed the provision of not only greater safety systems including stability control, air bags, anti-skid brakes and collision avoidance, but also provided greater comfort. Listed, comfort technologies include climate control, cruise control, high quality sound systems, ergonomically designed seats, navigation systems, video sensor cameras

and automatic parking. The car is also a space where potentially aversive sights, smells, tastes and temperature of the world are kept at bay. The car illustrates a micro-geography configured by and for the individual. This is illustrated by Jonathon (Box 6.1).

Box 6.1 Jonathon's diary entry about cocooning

Traffic very heavy due to long weekend, but listened to radio and music. Thoroughly enjoyed being back in the smooth, quiet, cocooned comfort of the X5. Nice relaxing journey despite the traffic.

Jonathon, Diary.

Jonathon is able to 'relax', 'cocooned' from the intrusive sounds of traffic understood as 'noise' by maintaining an individualised private space. Here he can indulge his senses. From the comfortable car interior he can listen to his favourite music, at his preferred volume. As Katz (2000) explained, driving is a profoundly embodied experience, creating a fusion of human and car. She argues drivers experience the car as extensions of their bodies. Jonathon again illustrates the importance of fusion of car and bodies when talking about his experience of test-driving a so-called 'hybrid car' (Box 6.2).

Box 6.2 Jonathon's drive talk illustrating embodied driving knowledge

'Like I said to you, I did test drive the hybrid Lexus...it is really boring. The whole lay out of the car. I didn't really like the driving position in it. I just felt completely disconnected from the driving experience, it was all very smooth, it was almost like getting into an automatically driven bus or something. The nice thing about the BMW is that they still put sports suspension on it, you can feel the road a little bit more and the steering is very precise. You can have the performance of the engine if you want it to be a quite racy vehicle. I like the feel of this. I test drove the Audi as well... I like that very much. I just thought it [the Audi] was very ugly..... Well, Tina (wife) thought it was ugly. She has a big influence on what you buy. She loved the look of this car. She thought it was beautiful...'

Jonathon, Drive talk.

Jonathon was not prepared to drive a car that did not fulfil his desire to 'feel' a connection between the car and the road. Sheller (2003) recognised the transformation in how individuals sense the world, not only do we feel the car, but we feel *through* the car and *with* the car. Without this connection the driving experience, in Jonathon's words, became

‘boring’. In addition, he demonstrated the importance of appearance and handling in conveying a particular identity. The car is positioned as a lifestyle accessory within the discourse of consumerism and capitalism. Jonathon could not contemplate buying a car his wife found ugly. As Hamilton (2005) explained, it is not the product itself we are buying; it is the associated style, attitude and image.

Sociologist Knorr Cetina (1997) argued that the relationship of humans with objects is one of relational intimacy. Relational intimacy acknowledges the increasing relationships that humans have with objects in the non-human world, meaning that objects can have attributes once only reserved for other humans. For instance, Mr. Brown talked about a trip he took to an unfamiliar part of the city a few days ago.

I just put the navigation girl on and she tells me where to go. It is easy. Otherwise I never would have found it.

Mr. Brown, Drive talk.

This is an example of how some people position objects as experiencing, feeling, remembering beings. Mr. Brown anthropomorphized and feminized the technology of the car, it is not a satellite navigation device but it is a ‘*navigation girl*’. It is given a sense of agency; it can direct him, almost like a helpful friend.

6.1.1 Driving desires: safety, comfort and convenience

Three themes emerged about the desire to drive: safety, comfort and convenience. For instance, Mr. Brown understood comfort, along with silence and safety as basic requirements of mobility.

It [the car] has very comfortable seating; it[the seat] has about ten different adjustments for you to make to make the seat suit you. It [the seat] has got just about everything that goes in and out and up and down. It even has a massager thing for your bum if you want while you drive. Quiet and safe that is all a part of what you pay for with an expensive car. It [the car] has got to be all of those things.

Mr. Brown, Drive talk.

As evident in Mr Brown’s discussion of a car seat, there are increased social expectations about what is an acceptable level of comfort. As Elizabeth Shove (2004) pointed out, not

only do commodities meet consumer expectations of comfort, but at the same time they create new and increasing expectations. This is also clearly evidenced by car air conditioning. Ten years ago, car air conditioning was an optional extra, today it is a standard feature. In 2006, ninety two percent of registered vehicles in Australia had air conditioning (ABS 2006). In terms of environmental damage, car air conditioning accounts for ten percent of global CFC-12 use (Pacione 2009).

There were other ways for the inside of the car to be configured as safe and comfortable. For Jonathon safety arose from how the conventional norms of social engagement are relaxed by the 'car body'. For example, Jonathon explained how his conventional conversational rules are suspended when 'protected' by a car.

I think it is quite easy in the car to get ... the road rage sort of thing, someone cuts in front of you. You tend to find yourself getting very wound up. You can shout. It does change you, because you are in command of this vehicle. We all have this false sense of insulation in your car. If you shout at somebody or do something you are protected.

Jonathon, Drive talk.

This quotation also illustrates the contradictory attributes of car mobility. The driver is simultaneously *controlling*, and *controlled* by other drivers and driving conditions (Bull 2001). Also, helping understandings of the car interior as a both private and safe are notions of spaces beyond the windscreen as disorderly. For example, Mr. Riley spoke of the car interior as a comfortable, private and safe space.

'You are in a comfort zone. You think no one can get me. I am protected from the outside world. I am safe. It kind of disconnects you.'

Mr. Riley, Interview.

The desire for protection, as Mr Riley explains operates as point of disconnection from the spaces and pulses beyond the windscreen. Mr. Riley, when contemplating an upcoming road trip on his own to Queensland, underscored the possibilities of separation from the everyday by configuring the inside of his car as a holiday space. He looked forward to driving alone. His wife is flying to Queensland.

It's a little holiday in your car by yourself.

Mr. Riley, Drive talk.

Car mobility allows a certain type of 'dwelling' (Heidegger 1962). Mr. Riley is able to feel safe in his car space, to feel comfortable enough to dwell in the space to the point where he can even holiday in the car interior. Urry (1999) proposed that the car is regarded as a home away from home. This has implications for sharing the space with others. For example, when Mr. Riley was asked about his thoughts on car pooling he clearly couldn't imagine how it would work.

Everyone's' car is their own personal property, their own comfort zone. I want to get in and listen to the station I listen to... I want to go to work when I want to go. And come home when I want to. I don't want to have to wait for somebody...I don't have to talk to that person. I don't need to make conversation. I am happy just to sit there and think about my own little thoughts.

Mr. Riley, Interview.

Mr. Riley understood the interior of the car as an oasis of privacy, a part of his personal territory that he could choose to share or not with others. He regarded the car as enabling him to configure time to suit his personal schedule, not conforming to the imposed rhythms of public transport, nor needing to wait for someone else. Great pleasure was derived from the ability to territorialize space and seemingly control time.

Three important points arise about the desire for car comfort in the context of climate change. First, bodily comfort allows people to remain seated in the driving seat for longer. Second, bodily comfort facilitates the blurring of boundaries between the inside of the car and bodies. Third, 'cocooned comfort' works towards disconnecting people from the bodily discomforts beyond the windscreen. Disconnection from the outside world and the illusion of a safe personal micro-geography has implications for climate change mitigation and adaption. In short, driving desires for comfort and safety help remove considerations of deleterious implications of carbon emissions generated by driving. For instance, Mr. Hicks's diary entry illustrates how the comfort of driving mobility works towards disconnecting people from the world beyond the windscreen. Again, the intimate spaces of the car become a source of comfort through the driver regulating the sounds and temperature.

Box 6.3 Mr Hick's diary entry on comfort and excluding the world beyond the car

Light drizzle; what a comfort it is to go door to door (almost) by car, low heat on, listening to 2RN. Warm, quiet and comfortable. With the car windows closed, it almost excludes the rest of the world.

I do enjoy the way our car effortlessly powers up the ramp to the roof parking!! Come on electric cars with non-coal power charging, then I won't also feel so guilty reveling in the convenience of a car with climate control on, and news/CD playing.

Mr. Hicks, Diary.

Mr. Hicks acknowledged the guilty pleasures of car mobility in an era of climate change. But guilty pleasure is not going to eject Mr. Hicks from the convenience and comfort of the driving seat. Rather than giving-up driving he sought a technological fix in the electric car. A study by The Australia Institute (Hamilton *et al.* 2005) found that guilt doesn't actually motivate people to change their behaviour, they either learn to live with the guilt or they deny that they experience feelings of guilt. The next sub-section discusses the implications of the desire for convenience.

6.2 The convenience of car mobility

Instantaneous time underpins many expectations in contemporary society. This is in keeping with the general concept of time-space compression that proffers that the world is both 'shrinking' and 'speeding up'. The speeding-up of time/space relationships is exemplified through the proliferation of mobile phones, computer blogs, emails, on-line bookings, fast-food restaurants, drive-throughs, digital photographs, instant approvals and a long list of others. 'Instantaneous time' has resulted in increasing variation in an individual's time-space path (Urry 2000 p129). Thrift (2004a) argued that the landscape of anticipation has also changed because of time/space compression. Society is full of expectation that the flow and bustle of the city should continue uninterrupted, any breakdowns need to be repaired quickly, road blocks cleared, accidents removed, allowing the ceaseless movement of people, things and ideas to resume. Increased mobility is commonly understood as a basic necessity in many individuals' everyday lives to negotiate just-in-time the distances between child care, shopping, education, home, leisure and work (Dex and Smith 2002).

6.2.1 The inconvenience of the bus and train schedule

Public transport creates a very different time/space mobility rhythm to the car. Buses and trains run along specific routes following a specified timetable. Buses were an unknown quality amongst respondents. Many participants like Adrienne, Mr Riley and Mr Brown claimed never to have caught a bus.

There's no buses that come down my street but I have no idea about schedules and that sort of thing. They do come down Woollooware Rd. but I have no idea of schedules.

Adrienne, Interview.

'There is a bus here that we have never ever used. I've got no idea how often it comes around. I see it.'

Mr Riley, Interview.

People who live down here – there's a couple of buses come down here – it's just about an impossibility – you can't just decide to go somewhere and I have never been on a bus.

Mr Brown, Interview.

As illustrated by Mr Brown – public busses did not fulfil desires for either spontaneous or instantaneous mobility. For Mr. Brown it was unthinkable to ask people to use public transport. He lamented the abysmal state of public transport in Australia in comparison to Europe. Instead, Mr. Brown suggested that building better roads was more of a priority and a better investment.

They have enough trouble paying for the freeways or whatever you call them. They can't even pay their way so what chance have we got with a good railway system. I don't know how you expect people to drive less and get on with their lives. Ask people to drive less? For what reason are we going to do this?

Mr. Brown, Interview.

For Mr Brown the convenience of the car is a more compelling argument than a social responsibility to the environment. Mr Brown notes how the car has become essential for

people to ‘get on with their lives’. The next section illustrates how the car operates as a personal ‘time machine’ for desynchronised household lives.

6.2.2 Individual time, personal mobility and maintaining social networks

John Urry (2000: 128) argued that the individuation of time-spaces has created a system where time-spaces of households are increasingly ‘desynchronized’ from others. In other words, each individual has their own rather than a household rhythm. How the car generates individual time and desynchronized lives is illustrated in Jonathon’s four-car household. Jonathon was adamant that the car was integral for him to become and maintain his position as a company manager in Sydney. His wife needed a car to participate in competition tennis held at various locations. His two sons each had cars to drive to university because public transport was just too slow. In this household, one important barrier to using public transport was the longer travelling times, but also the recognition of the validity and entitlement to an individual mobility (Erikson 2008).

Mrs. Litterick, retired, aged 72, illustrates Nigel Thrift’s concept of a ‘landscape of anticipation’. Even within her voluntary work she anticipates the need for instantaneous responses for civic responsibility.

... and also at my time of life now I do have friends that are disabled etc it’s nice to be able to say “Come out for a cup of coffee and I will pick you up” and my little pastime is work with the St. Vincent de Paul Society and we do a lot of home visiting and it enables me to do that... so when someone phones and asks me to do this now, I can ...so if I was waiting for someone else to get me, or waiting for the bus I don’t think it would work at all.

Mrs. Litterick, Interview.

Mrs. Litterick configures visiting a person by bus as creating too much waiting time – and detracting from the pleasures of her home visits.

Time is commonly regarded as a commodity in capitalist societies. As the familiar saying goes, time is money. Hence, time as a valued commodity, must be saved through fast, efficient, cost-effective transport. For many respondents, the desire for convenience is underpinned by their experience of ‘saving time’. For example, Michael drives to visit

friends that live less than 500 metres away. He drives to visit them because it saves time.

As Michael explains:

I drive to a friend's place, simply for convenience. I've got a lot of friends on the other side of the station. You can walk all the way up there and then have to go all the way around to get there, and walking is longer than driving.

Michael, Interview.

The longer time spent walking is regarded as wasted, rather than a possibility for exercise, relaxation or alternative form of transport. A three minute drive is narrated as fast and convenient. The difference between the times is only seven minutes. So clearly it is not the actual measured clock time that is valuable, it is the *felt* time. This reflects ideas by Sherratt (2005) that time slows down, or speeds up, because of our experience of time through an assemblage of mood, emotion, activity and place.

Sheller & Urry (2000) and Urry (2002) have explored how different modes of transport involved various combinations of emotions including pleasure, expectation, fear, kinaesthetics, convenience, boredom, slowness, comfort, speed, danger, risk, sociability, playfulness, health, surprise. They have illustrated how emotions are central to how time is both experienced and valued. Lauren illustrates the importance of felt train time.

I have missed trains by minutes and have to wait half an hour for the next one and that really really frustrates me because when you have a car you can go when you want to. You are not stuck to time tables.

Lauren, Interview.

She experienced waiting for a train for half an hour as frustrating. Waiting for thirty minutes is understood as a constraint to her freedom and mobility. Instead, the car offered a time/space that is crafted for her individual pleasure. The car provides a door-to-door service. In comparison, the train ride is not a smooth and seamless journey, it required changes, walking and waiting. Driving for thirty minutes may become a source of pleasure, while frustration may simmer from waiting thirty minutes at a station. The car is configured as convenient through allowing immediate access to transport, offering possibilities to reconfigure space/time. As Urry (2000) pointed out, the car has allowed an individualized time, one that is independent of timetables and the day to day 'clock time'. The car provides a seamless journey, very different to the stop start of public transport, the need to wait, to get on and off buses and trains, and to walk to the destination.

6.3 Driving Desire for Safety

In addition, convenience is closely aligned to discourses of personal safety and cleanliness. Beale and Bonsall (2006) argue that because individuals are concerned about safety, they are reluctant to use public transport. Their argument of inter-generational car dependency is in part configured by the desire for personal safety. For example, during conversations Lauren revealed that her parents are reluctant for her to use public transport because of safety concerns. Several times in her diary Lauren (19) expressed a view that using public transport is unsafe.

SATURDAY 25TH JULY

I drove a car-load of my friends to the pub at night. I'm always designated driver, mainly because I don't like catching public transport at night because it's not that safe nor reliable. Plus I don't like waiting around train stations.

MONDAY 27TH JULY

I was dropped at Cronulla Station to catch a train into uni. The train is cheap, which is why I use it. Plus I don't need to find parking if I catch the train. Though, it takes almost twice as long as driving, they're often dirty and sometimes I feel quite afraid as there is no security and people on the train can be quite scary.

Lauren, Diary.

Similarly, Mr. Riley evoked the train as unsafe at night.

I suppose you feel slightly unsafe on the train – you see some people get on the train who worry you. That's the detraction of getting a train I think – you feel slightly unsafe. Driving your own car you feel safe and comfortable.

Mr. Riley, Interview.

City Rail is positioned as dirty, uncomfortable and dangerous, not as an alternative form of transport that can help to decrease the emission of GHGs. Other participants tap into the discourse of dirt and disgust at City Rail transport.

'If the train was air conditioned it's not too bad... but they are disgusting'.

Mrs. Litterick, Interview.

'I don't know what the cost would be – I've got no idea what the cost benefits would be and they are so filthy. I can't stand them because they are so filthy.'

Adrienne Matthews, Interview.

Adrienne is on leave from the education sector and is studying at university. She drives her BMW to work, but also has a scooter for short local trips and for light shopping. She tends to avoid using public transport, though admits that if without a secure parking space the train became more attractive. The car was positioned above the train as the more logical choice based on considerations of personal safety and aversion to dirt. The car becomes a purified site, in contrast, public transport places the body at risk of defilement.

Older participants often employed an aligned safety, with comfort in an ageist discourse to justify the convenience of car mobility. For instance, Mr Riley framed older aged persons' driving as a right that rather than a privilege.

We are all spoilt now. It is possible to live without a car. At our age we are looking for comfort and safety and everything. We want our car! Our cars!

Mr. Riley, Interview.

Mr. Hicks agreed that public transport would not be an acceptable form of transport. Mr. Hicks expresses a pro-ecological world view, but desired comfort, convenience in transport. Indeed, he positioned in his life cycle that car mobility was an entitlement.

'For someone of my age would be a ridiculous hardship' (using public transport.)

Mr. Hicks, Interview.

The driving desire for safety allowed the residents of Burraneer Bay to continue to drive their cars. The car was constituted as a purified space. In contrast, public transport is positioned as dirty, unreliable and unsafe. This form of aversion served to reinforce car mobility.

6.4 Driving and Embodied Knowledges of Nature

How is the car implicated in discourses and practice of nature? In this section evidence is presented to explore how participants' car mobility facilitates the enactment of particular

understandings of nature as somewhere always ‘out there’. When nature is constituted as removed and distanced from everyday life, then the urgency of anthropogenic climate change is always distanced (Hume 2008). While the participants expressed a diverse set of understandings of nature, none thought of the interconnectedness between humans and nature. Instead, some understood nature as a garden commodity. Buying a bag of potting mix from the local garden centre was given as an example. Others understood nature as ‘out there’, not evident in Burraneer Bay. These participants often lapsed into a discourse of nature being found in places where humans are seemingly absent - the ocean at nearby Cronulla, the ‘bush’ in the Royal National Park, or in colonial understandings of the African continent. Hence, car mobility became essential in the processes of transporting, locating, and experience nature. Further, these places were valued for leisure activities. As Urry (2001) suggested the appeal of the geographical and ‘ontological’ distancing allows the separation of these seemingly natural places from work, domestic routines and the everyday.

For instance, Mr. Riley explained his understandings of nature as a place configured by driving to the Royal National Park, then walking along paths witnessing plants and non-human animals.

Mr. Riley: To me it's going to the national park and walking through the trees, animals and birds – to me that's nature.

Theresa: Is there nature around Burraneer Bay?

Mr. Riley: No..

Mr. Riley, Interview.

For Mr. Riley there is no nature in Burraneer Bay because of the human presence. Nature is seemingly a distinct entity, separate from human activities. Yet, Mr Riley is able to connect ideas of environmental impact with driving. He has just returned from a trip to the USA and attributed the smog in Los Angeles to cars.

*‘Los Angeles is shocking; you can't see the sun until after lunch. The smog...
...So many damn cars on the road in California’*

‘I can't see any evidence of it (air pollution) personally. It seems to be good in The Shire. We go on the bridge every morning and it looks nice and clean and clear.’

Mr. Riley, Interview.

However, for Mr Riley seeing is believing. The ‘clean and clear’ qualities of the Sutherland Shire air reassure Mr Riley that there is no need for concern. Hence, Mr Riley’s scepticism about climate change is underpinned by his need for physical evidence and ability to cordon off places as discrete rather than interconnected.

Similarly, Mr. Brown understood nature as place devoid of humans. Indeed, Mr Brown drew upon European colonial ideas of nature as a seemingly primitive place that requires travelling back in time.

... there’s nothing better than going back to nature. Last year we went to a Game Park and saw the movement of the wildebeest and zebras in Tanzania. It’s the most incredible thing – they’ve got no drought problems. When we go there its all green and its all green grass thereabouts. Can’t understand it at all.

Mr Brown, Interview.

The privilege of Mr. Brown’s wealth has allowed him to visit Africa, Indonesia and Antarctica. Mr. Brown dismisses ideas of drought in Africa, ‘because he has seen it for himself.’ This is an example of Urry’s (2002) assertion that physical presence is often essential to ‘see the place for oneself’ in order to know what it is really like. In a similar way he rationalizes that because he hasn’t seen any change in Burraneer Bay in 23 years climate change must not be happening. Climate change has become an abstract universalised concept that has no connection to his everyday life. Dunlap *et al.* (2000) assert that the environmental impacts of climate change are becoming more dispersed and less directly observable and more ambiguous in origin making it harder for people to make the connections between home and away. Hence, Mr Brown is very sceptical about climate change:

‘Climate change!! That’s all bullshit I think. I reckon – you look out here - they talk about water rising and all that stuff – we have lived here for 23 years and boats racing to Hobart for many, many moons and the water level might have changed by a millimetre or something. ... Anyway this global warming what difference is it going to make to the world what the Australians do – we are so far isolated – whatever we did will make no difference in China or America.

Mr. Brown, Interview.

Like Mr Riley, Mr Brown dismissed climate change by drawing on lived experiences that counter arguments of sea-level rises and an Australian geography configured by isolation rather than interconnections.

Jonathon illustrated the performance of nature as a leisure lifestyle. For Jonathon nature was performed through daily walking and swimming rituals at Cronulla Beach as well as kayaking and boating at Burraneer Bay. These activities all produce a sensuous interchange with the physical world. Rodaway (1994) argues the body's movement through space might be conceptualised as mediated by both the bodily sensations of the physical world (affect), and a socially mediated appreciation of the interaction (emotion). As illustrated in the works of Gil (1998), Groz (1992) and Valentine (2001), the highly sensuous nature of the body is imperative to understanding how nature is experienced. However, this section is more concerned with how the car is implicated in the making of the nature leisure time/spaces. For Jonathon the car was integral part to making the nature leisure time/spaces. This is illustrated by his driving sketch.

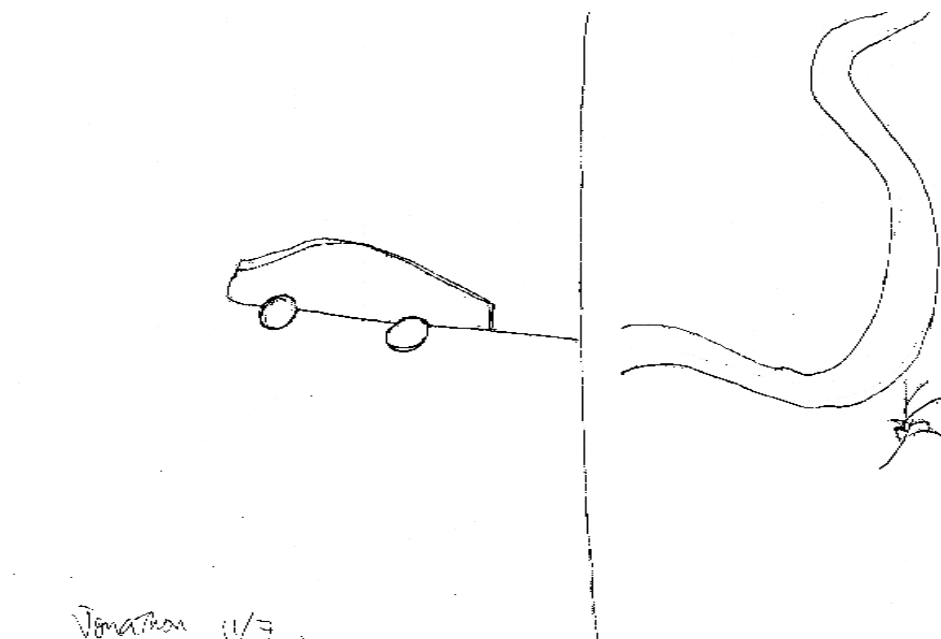


Figure 6.1 Jonathon's sketch of his driving experience.

Jonathon explained his driving experience sketch as a sleek sports car, on a winding road through the beautiful scenery of the trees and the mountains. He divided his sketch into two parts, one of the car and its occupants; and one of a road through nature. The car allowed him to physically separate work and home places from natural places. The car is complicit in his understandings of nature, allowing him comfort, convenience and easy access to these 'far off' leisure spaces.

In summary, Jonathon constitutes a particular type of nature from his desire to be young, fit, healthy and relaxed. He is motivated by his understandings of how an escape the city to relax in a particular 'nature' enables him to be corporeally alive and rejuvenated. His need to escape to a pristine nature is held in tension with his need to maintain the image of success through driving his sports car.

6.5. Driving and Climate Change

Mr. Hicks positioned himself as well informed about climate change. He sees himself as a lonely dissenter among his social group. He put his faith in the technological solution to environmental problems rather than contemplating changed lifestyle patterns. Perhaps because of his engineering background, Mr. Hicks is critical of the qualifications of the politicians and agencies responsible for policy decisions and framed the problems of climate change in the light of insufficient technical knowledge and expertise.

Another problem is common in our society is legislation made by non-experts in evaluating technical issues, politicians are often the wrong people to make important technical decisions, their prime skill is often just the gift of the gab so they get elected, and then they make the big decisions etc.

It seems silly for non-specialists to hold strong opinions on complex technical matters which they do not have (and know they do not have) expert knowledge

Mr. Hicks, Diary.

However even expert knowledge of, and technical understanding of climate change has not modified the driving patterns of Mr. Hicks. Throughout his diary he referred to 'guilt trips' in the car because of his multiple journeys for pleasure that made him more reflexive of his emotional attachment to his car.

Beautiful afternoon, so made a "guilt" trip down to Cronulla for an ice cream on the hill overlooking the sea, a beautiful view always a source of pleasure. ...I'm beginning to think I DO have a love affair with my car, but it is not this car, just the modern car.

Mr. Hicks, Diary.

For Michael the history of the discourse of climate change seems irrelevant.

For me that is my entire life so it is a long time. So it has already affected me. Hybrid cars, companies going carbon neutral, that sort of thing is happening all the time. But because I haven't seen any positives or negatives, then to me it is essentially that it hasn't affected me yet.'

Michael, interview.

His subjective position is based on the need not to make any decisions about climate change. He acknowledges the logic behind the science of climate change by recognizing the effects of rising population and increased production. But there remains an obduracy to dwell in the comfort of the present rather than contemplate the possible disasters of the future. In this way the future is 'colonized' into an extended present of the individual where there is no urgency for action.

I think climate change is something that is happening. It is probably going to happen whether we try to stop it or not. There are probably ways to slow it down, but realistically if the population keeps increasing and we keep using up all the resources like we are. A high population, you are producing more, so you are churning out more greenhouse gases, adding to the climate change effect. For me there is research on both sides, and I personally like to choose the argument that suits me better. The effect of climate change at the moment is not that significant. Me, I still don't have a long term outlook on things. I'm just looking at where my next pay-cheque is coming from. So that is about as far ahead as I look.

Michael, Interview.

A parallel view is expressed by Lauren as she explains the concept of climate change as 'overrated'.

Lauren. I think it's political personally, I did an assignment on it on it last semester and I don't know it's hard to explain – I think it's overrated. I think it is just the earth's natural cycle. I am not too concerned about it – I know a lot of people my age are but I am not.

Theresa. So there wouldn't be anything specifically that you would do for reasons of protecting the environment?

Lauren. Maybe a water tank – that's all. I wouldn't change my driving habits, drive a hybrid car or anything I don't think.

Theresa. Do you think your family feel the same? In the same vein?

Lauren. Yes, I do. We've got big cars here.

Lauren, Interview.

She dismisses ideas that climate change is anthropogenic in origin and normalizes it by calling on the ecological discourse of cyclic natural behavior. She further explains the lengths that she would be prepared to go to out of environmental concern. For Lauren, a water tank provided a solution to her duty to conserve water, conserving water is normalized as a regional activity rather than pro-environmental behavior with global effects. The car is positioned as an intractable part of life, not only would changing patterns of driving be inconvenient but driving a hybrid car would not be a preferred option. Lauren has previously demonstrated and expressed an understanding of trends and norms of the area and this can be viewed in the light of reluctance to go against those trends.

Jonathon vigorously addressed climate change mitigation in his workplace.

Obviously I am well aware of the whole impact of greenhouse gases and everything else. It is interesting at work at the moment... you set me thinking... you sent me the survey and then you rang about following up ...I said to you a moment ago that I do love my car and I really enjoy driving that car, but do I really need it a 3 litre, 6 cylinder, 2 tonne car? No I don't ... I could get around in a Honda Jazz or something similar. But I do enjoy driving that big car I love the comfort of it and everything. But by the same token, there I am at work busily working with all my colleagues to achieve to ISO 14000 for our company, we are going through all the things we need to do to make sure we are not using the wrong chemicals, we are recycling waste and doing everything we can to reduce our impact on the environment. And where you really got me thinking is , hang on, I am doing all of this and I am jumping in this 2 tonne vehicle that burns up a lot of fuel. It certainly burns up a hell of a lot more than I could do. I could travel around far more economically...

Jonathon, Interview.

The cost of climate change is understood in terms of the car. In a rational way, Jonathon questioned his need to drive a large, prestigious vehicle, acknowledging that he could maintain his mobility in a much more sustainable manner. But for Jonathon the prestigious car was too integral for his sense of self and mobility underpinned by safety, comfort and convenience.

There is a contrast between the legislative surveillance within the workplace and absence at home. For example, under his management, the company addressed climate change adaptation policies by changing cardboard box packaging to biodegradable shrink wrap to reduce the impact of packaging. The benefits derived from these corporate practices fit with the ideology of good corporate citizenship, rather than from an individual responsibility perspective. By drawing on the ideology of economic rationalisation the foundations of capitalism are maintained. Yet at home, he is able to indulge his desire for a large powerful and prestigious car without considering environmental consequences because of the lack of surveillance.

6.6. Understandings of sustainable practices

Most residents when asked about their ideas of sustainable practices had firm views on what that entailed. Water conservation was an important practice as well as recycling household paper, plastic and glass. In general these practices were positioned within ideas of neighbourhood pride. Mrs. Litterick explains:

Yes, we are very water conscious. Rubbish – I get so cross with people who walk along the street and throw bits and pieces of rubbish over the fence and into the garden. Keeping the area pleasant is important.

Mrs. Litterick, Interview.

For Mr. Brown, an acknowledged climate change sceptic, there is a disconnection between ideas of local civic duty and wider understandings of sustainable behaviour. In the geographic discourse of Burraneer Bay, ideas of appearance, neighbourhood pride and ‘duty to country’ fuse together and are represented in the acts of water conservation, recycling and participating in ‘Clean up Australia Day’.

We have a water tank. We probably try and do the right thing - we put the papers on one thing etc. -we are quite fanatical about doing all these things. We see

people around who don't do the right thing and we used to go out in the boat on clean up day and pick up smashed glass from parties on the shore and various places. We care about all that.

Mr. Brown, Interview.

This shared understanding of community pride enables Mr. Riley to 'other' people who live in communities where pollution and degraded environments are in evidence. In one way it illustrates that concepts of large scale climate change are not understood in terms of global interconnectedness, more that they are viewed through a personal perspective at the local level.

I went to China last year for the Olympic Games, Cars, people everywhere.

Looking from here, I seem to think they don't care as much as we do (about the environment)

Mr. Riley, Interview.

Drawing on the ideas of Virilio (1986) who proposed that the increasing desire for speed in life results in the erosion of our sense of time, space and consciousness, sustainable practices are not viewed in terms of energy consumption only in terms of convenience.

Adrienne: 'I make sure I recycle and all of that, I don't use a dryer because my dryer broke and I am not getting another one, yeah but I don't go out of my ways I just do what I can do to recycle.

Theresa: Do you think you would be willing to change your behaviour if it (climate change) became a threat to you?

Adrienne: Yes, depending on what it was and if it worked into my schedule with what I do when I was working. You are so busy you do things for convenience – if it's convenient I will do it. That's just being honest.

Adrienne, Interview.

Adrienne expressed the view that sustainable behaviour must be convenient and 'work into her schedule'. Adrienne positions the pace of working life as the reason for her reluctance to engage in more sustainable practices. This business-as-usual attitude discounts the urgency of adaptation measures.

6.7 Conclusion

The car satisfied desires for a mode of mobility underpinned by bodily comfort, convenience and safety. Car comfort, convenience and safety are not static, rather constantly elevated by technologies. The rising benchmark of comfort has only increased the blurring between the bodies of the driver and the car. Embodied knowledge of driving configures the pleasures of the car as a personalized and purified space. The interior of the car gives the driver the illusion of being in control of both time and space, despite the presence of traffic and car regulations and pulse of rush hour. Hence, the perceived flexible rhythms of car mobility are as important as the possibility to territorialize the car as a private, intimate space. In contrast, aversion to public transport is configured through experience of rigid timetables, disgust and dirt. Aversion to riding public transport must in part be understood in terms of the potential of bodies to be penetrated by dirt. Equally, the rhythms of public transport are regarded as disciplining movement, seemingly robbing individuals of their presumed right to travel anywhere, at anytime.

Another implication of car mobility is how it helps constitute embodied knowledge that works towards the separation of humans from nature. Car mobility helps confirm ideas that the car transports people to a nature that is located 'out there', in places seemingly devoid of people. For respondents in this project, places of nature included the sea at Cronulla and the Royal National Park. Car mobility helped to configure a geography that bounded natural and urban places as discrete. This works against thinking about how humans are implicated in climate change. Indeed, respondents most reluctant to accept climate change spoke as if nature and human were discrete entities. Further, they called upon the lack of physical evidence to justify their scepticism. Climate change was configured by these respondents as problem for other places, not Burraneer Bay.

Chapter 7 Conclusion



Burraneer Bay Marina. Source: Author

This chapter is divided into four sections. The first three sections return to the aims. An evaluation is given of how effectively the aims were addressed. The final section turns to make three policy recommendations and outline future research directions.

7.1 The Theoretical Aim.

The theoretical aim of this thesis was to conceptualize driving as the performance of situated subjectivity that is constructed *in* and *through* space. To do so, the thesis drew upon three concepts, Doreen Massey's 'progressive sense of place', Elspeth Probyn's 'spatial imperative of subjectivity', and Nigel Thrift's 'ecology of place'. This enabled thinking about the spaces of the car as imperative to forging the situated subjectivity of the driver. Further, the situated subjectivity of the driver was conceptualized as producing particular geographies through enabling various connections and disconnections, inclusions and exclusions. Thinking spatially allowed the micro-level personal preferences embedded in the respondents narratives to be examined and related to wider cultural concepts. This performative framework demanded thinking about how desires and enactments configure car space, and how spaces of the car in turn inform particular desires and enactments. Driving was conceptualized as imperative to sustaining particular relationships with the world, subjectivities, routines, the pulse of everyday lives and geographical knowledge. This generated insights into how individuals respond to the process of climate change. The embodied knowledge produced by driving is understood to reinforce and maintain particular dominant discourses of car mobility.

The ideas of Katz (2000), John Urry (2003) Daniel Miller (2001), Mimi Sheller (2003) and Nigel Thrift (2003) were central to conceptualizing and interpreting the embodied geographies of the car and driving. They highlighted that car consumption is not based on simple rational economic choices but is infused with emotional and sensory responses to driving as well as a way of maintaining patterns of kinship, sociability, habitation and work. These ideas constitute driving as far more than just a way of getting from A to B. Rather, they are bound up in ideas of a networked society, where mobility is considered a right, rather than an entitlement. Particular styles of automobility and dispositions towards driving become naturalized within certain locales as a right.

7.2 The Methodological Aim - reflections.

The methodological aims were addressed by a mixed method approach that was deployed in two stages. The first stage relied upon a survey. The survey measured and qualified the driving practices of Burraneer Bay households. Data was collected measuring the levels of car ownership, types of cars owned, the common driving destinations and temporal car use rhythms. The second stage deployed a range of qualitative methods including solicited diaries, repeat semi-structured interviews and 'drive talks'. Participants were recruited through the survey.

Reflecting on the survey, a number of issues are raised. The survey data provided insights to the time-space paths and motivations of the participants in their everyday driving practices. The survey used standardized questions and a number of standard scales to gather the respondents' knowledge about climate change, willingness to change behaviour because of climate change, and attitudes towards the environment. The survey also gathered a significant amount of qualitative information through sketches and open worded questions.

However the survey was limited for meaningful inferential statistical analysis because of the low response rate to the survey of around 6 per cent. This low rate occurred despite following all the advice of good survey design. Perhaps, the low response rate is a case of climate change 'burn out'. Future research on climate change may have to consider the use of deception to encourage participation. This raises ethical issues. However, deception is admissible if bias is introduced into the research and respondents are debriefed adequately after participation. Nevertheless, the low response rate may itself be indicative

that many thought a project on driving and climate change was not a pertinent or relevant issue.

Accounting for the low response rate is always hypothetical. It may have been length the survey imposed too great a time burden for those in full-time or part-time employment. Certainly participants who consented to participate in Stage Two had more free-time to devote to the project. It may have been general disinterest. Interestingly, response rates to the survey and consent to participate in future research were higher amongst men than women. Apparently a project on driving was more appealing to men than women. The differential return rates suggest the gendered dynamics of the car.

The second stage of the project examined how respondents negotiated their daily lives within the discourse of climate change. This aim was addressed by the use of qualitative and quantitative methods, in a mixed methods approach, which is outlined in Chapter 3. Interviews, diaries, sketches and drive talks provided more in-depth understandings. Reflecting on these qualitative methods it was crucial to understand that combinations of different types of data collection were suitable for different people. Some respondents were more reflective and some offered more insights than others. The use of a suite of methods over a four month period allowed the researcher to use different forms of data to develop a rich, picture of the respondents' opinions and behaviours. Building a rapport with participants was essential to reveal the intimate relationships people have with their cars, and their personal understanding of a heavily ethically loaded topic of climate change. While acknowledging the limitations of this project, the small sample size and the low response rate, the research has still generated insights to the cultural resistance to stopping driving in the name of climate change.

7.3 The Analytical Aim – key findings

Chapter 4 presented the survey results. These results confirmed many of the trends found in previous environmental attitude and climate change surveys. Overall, residents in an affluent suburb, with high levels of education, and above average levels of car ownership are: well-informed about climate change; expressed a strong commitment towards the environment and; expressed a high level of willingness to change their behaviour because of climate change. More specifically, content analysis suggested fundamental differences in common words used to describe both driving and climate change between men and women. Men were generally more sceptical about the reality of climate change while

women were more accepting. The residents were in agreement that humans were generating environmental damage by their actions, yet did not envisage an eco-crisis as imminent. There was a shared belief that technology could provide the solution to environmental problems without the need for upsetting the present economic order. Generally, they believed that economic growth should and would continue, and that the natural environment could cope with the impact. Overall, the evidence of the survey suggests a level of optimism. While the residents of Burraneer Bay presently have high levels of car ownership, and high levels of car dependency in their everyday lives there is generally a high level of awareness of climate change, pro-environmental attitudes and an expressed willingness to change behaviours because of climate change. Evidence from the qualitative research provides a very different interpretation in relation to personal everyday mobility.

The qualitative methods generated richer understandings about how the car was positioned within individual lives. Chapter 5 discussed what participants *think* about the car. Their narratives suggested that the car was more than a symbol of class, age, gender or libido. Evidence illustrated the role of the driver's seat in producing a particular situated subjectivity and making a particular social geography. In Burraneer Bay, the streets were dominated by four-wheel-drive and prestige vehicles, driven in particular ways. Narratives demonstrated how driving is a way of not only making subjectivities, but also a process of territorialization. The tactic of tail-gating was commonly deployed by drivers of four-wheel drives to harass slower drivers in smaller standard vehicles. Further, models of cars and car mobility were integral to producing shared understandings of what constituted the 'local' geography through sustaining particular imagined geographies, everyday rituals, rites-of-passage into adulthood and social networks. Evidence from all the narratives positioned the car as a necessary part of life in Burraneer Bay.

Chapter 6 explored the embodied knowledge of car mobility. Attention turned to *how* driving configures particular embodied relationships with the car. The evidence revealed the interior of the car as a private space. Results confirmed arguments of car interiors as highly intimate spaces. Attention to the embodied geographies of cars revealed three mutually related themes: comfort, convenience and safety. For some, it was the ultimate comfort zone, enabling an indulgence of the senses, music and an ambient temperature, locked into a quiet space. For others, the embodied geographies were articulated as convenient through enabling the reconfiguration of time and space. The car enabled them to travel anywhere, at any time. Participants' narratives illustrated how the car is

instrumental in reconfiguring experiences of time. The residents of Burraneer Bay drove their cars for convenience; it saved them time that would otherwise have been 'wasted'. They wanted instantaneous time, quick responses, that could not be satisfied by the use of public transport. Finally, the embodied geographies revealed a sense of safety. The safety of the car was articulated as allowing them a journey that was free from dirt and disruption, or risk of danger. The car interior was configured as purified space. In contrast, public transport was often spoken about in terms of disgust and filth. The final section of Chapter 6 illustrated how car mobility produced particular understandings of 'nature' that reconfigured boundaries separating humans from nature. In short, the embodied knowledge of car mobility worked against understandings of the interconnections between humans and the non-human world. The embodied knowledge of car mobility appeared to work in the opposite direction, cocooning individuals in their seemingly private, safe, convenient and comfortable worlds.

In summary, the embodied driving knowledge of car mobility configured geographies underpinned by:

- Sense of disconnection from the outside world. This entailed a separation from the affects (sights, sounds and smells) beyond the windscreen and car doors.
- Sense of connection to the interior micro world. This included the experiences of safety, privacy, enjoyment, relaxation, and comfort.
- Car mobility facilitated understandings of 'localness'. Car mobility enabled people to configure particular geographies through regular travel patterns to work, pursue hobbies, sports and interests, and remain connected to friends and family.
- Driving is the performance of a particular subjectivity. How particular vehicles are driven in particular way not only maintains a particular sense of self, but also operates to territorialize place through inclusionary and exclusionary practices.
- Culturally negotiated understandings of nature. This acknowledged that nature was constituted from the situated subjectivity of the driver's seat.
- Culturally negotiated understandings of public transport. Public transport was configured as the 'other' to the private car through deploying the binaries of safe/dangerous, dirty/clean, unreliable/convenient, comfortable/uncomfortable.

These practices and understandings as embodied performances, influence conceptions and beliefs about the wider issues of climate change. Driving was positioned by participants as a source of pleasure, a right, as an essential part of contemporary life. There seemed to be little appeal in the idea of reducing driving for environmental reasons. This was partly because of the understandings of climate change. For some people climate change was

fiction. It was normalized as a natural cyclic stage of the earth that was no cause for concern. Others acknowledged the reality of climate change, yet relegated the responsibility for action to the government or to technology generally. For most people, climate change was understood to be disconnected from daily life, it was an empty concept, it was a problem for other people in other places, in another distant time. Ideas of reducing consumption, for example driving less, were not considered to be in the realm of sustainability. Instead, the cultural norms of personal freedom, safety, and individual entitlement far outweighed the need to even *think* about changing behavior out of environmental concern. The evidence from this thesis suggests that embodied knowledge of the car operates against the science of climate change or calls for collective responsibility.

Each day the residents of Burraneer Bay are involved in the individual performance of subjectivities. The car is integral to performing normative ideas of success that are embedded in the capitalist system of production and consumption. The individual patterns of time-space mobilities weave a collective pattern that is re-enacted on a daily basis on the roads. The emotions of pleasure and the desire for comfort maintain shared understandings of what the car enables. The space of the car not only defines who they are, it produces them. Not only do bodies make space, but bodies in cars make space. The collective driving patterns configure the space of Burraneer Bay as a place where climate change is invisible and the car the only logical transport choice.

7.4 Policy Implications and future research

These results present three potential policy implications and future research directions;

1. Making driving more uncomfortable and inconvenient
2. Making public transport more comfortable and convenient
3. Challenging ideas of what is comfortable and convenient.

In order to make driving more uncomfortable and inconvenient governments would most likely have to impose more taxes and costs on to car drivers. This type of financial penalty will not stop some people from driving because of their wealth. For others with fewer resources, when the cost of driving becomes prohibitive, they will be forced to use public transport or active transport. Alternatively, governments may consider changing the physical driving environment to discourage people from driving. For example, a general lowering of speed limits, speed bumps, roundabouts and changes to the layout of roads and road surfaces can reclaim the road space from cars. In some parts of Europe and America road signs have been removed to create a situation where car drivers are unsure

of their rights (Engwicht 2005; Gilman & Gilman 2007). As a result, pedestrians and car drivers negotiate the road with greater regard to each other. Future research could investigate the implications of road constructions for car use and understandings of streets. For instances, the opening of the extension of the Northern Distributor in northern suburbs of Wollongong would appear to work against encouraging people to leave their cars at home when travelling into the city centre.

In regard to ideas of public transport, the logical argument is to increase the comfort and convenience of public transport. This is a costly exercise. Yet, given the importance of comfort and safety it is not unreasonable or frivolous. Evidence presented here suggests in Sydney there is still scope for marketing strategies to change peoples' perceptions of public transport or indeed change the interior structure of trains. For example, State Rail may consider the reintroduction of a 'classed travel system' to address the issue of convenience comfort and safety. These already exist in the United Kingdom and Japan. Travelers can pay to enjoy greater comfort and security. First class carriages could offer the use of a free computer terminal, or allow phone recharging. Alternatively, offering public transport as a free service could result in greater uptake by the public. Trial schemes in Europe have resulted in moderate increases in the use of public transport in some cities (Steenberghen *et al.* 2006; Beale & Bonsall 2006). However, residents of Burraneer Bay are unlikely to take up this option given how they constitute public transport as the 'other'. Future research may seek to explore further the implications of 'classed' and 'free' modes of public transport in encouraging individuals to leave their car at home.

Finally, challenging concepts about the comfort and convenience of public transport offers an opportunity to evaluate the possibilities for renegotiating acceptable levels of comfort and convenience. The literature points out how concepts of comfort and convenience are negotiated and renegotiated to determine what is socially acceptable. This presents the opportunity to examine and explore negotiated concepts of comfort and convenience through participatory style action research. To further explore how comfort and convenience are negotiated, future research could adopt an intervention style approach by asking regular car users to utilize forms of public transport over a two-week period. Participants would be asked to document their lived experiences of using public transport. This would provide another helpful starting point to thinking about overcoming the resistances to public transport mobility in Sydney and to envisaging a future with different mobility options.

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